

School of Linguistics and Applied Language Studies

Wellington Working Papers in Linguistics

Volume 26, 2025

ISSN 2230-4681 (Online)



VICTORIA UNIVERSITY OF
WELLINGTON
TE HERENGA WAKA

Wellington Working Papers in Linguistics

Volume 26, 2025

Edited by Prapatsorn Tiratanti

School of Linguistics and Applied Language Studies
Te Herenga Waka Victoria University of Wellington
P.O. Box 600
Wellington
New Zealand

Published 2025

ISSN 2230-4681 (Online)

CONTENTS

Lynn Melrose	Investigating Surprisal Theory and Code-Switching in an Afrikaans-English Comprehension Task	1
Sara Gilbert	Using Social Markers to Aid Perceptual Learning for Understanding Dysarthric Speech	36
Elena Heffernan	Stress Markers and Stress Position: How do They Influence English-Speaking Listeners' Perception of Speech Rhythm?	81
Alex Margaret Mitchell	"Why Would I Be Believed?": Il/legitimacy in Experiences of Endometriosis	108
Ashleigh Hume	Career Identity Construction through Relational Talk	155
Christina Fallone	"Your Edits are Soo Friggin Good": K-pop Fandom Identity Co-construction on a YouTube Channel	191
Juliette MacIver	"The Elderly... Just Give You So Much Time" A Sociocultural Analysis of Time in Aotearoa New Zealand	252
Sofia Morrell	Chick Lit, What Fits?: Revealing the Neoliberal Boundaries of a Genre	302
	Policy Guidelines	328
	Contents of Volumes 1–25	329

Editorial Note

After a gap of two years, it is my pleasure to present Volume 26 of *Wellington Working Papers in Linguistics*, featuring intriguing postgraduate research from the School of Linguistics and Applied Language Studies at Victoria University of Wellington. This volume includes selected master's research dissertations (30-point and 60-point) completed between 2021 and 2024.

The contributions in this volume highlight the diverse research interests within our School. Lynn Melrose investigates surprisal theory and code-switching in bilingual comprehension through a psycholinguistic lens. Two prosody studies by Sara Gilbert and Elena Heffernan explore the use of markers to aid the understanding of dysarthric speech and the influence of stress markers on English speech rhythm perception, respectively. This volume also showcases interesting research on identity. Alex Margaret Mitchell critically explores narratives of legitimacy in endometriosis experiences; Ashleigh Hume examines career identity construction through relational discourse; and Christina Fallone extends the identity topic to the internet sphere, analysing identity co-construction in K-pop fandoms. Further broadening the scope of discourse analysis in this volume, Juliette MacIver offers a sociocultural perspective on temporal constructs in New Zealand, and Sofia Morrell investigates the neoliberal boundaries of the "Chick Lit" genre from a discourse perspective.

These contributions reflect the authors' dedication, their academic passion, and the vibrant research culture at LALS. I would like to thank all the authors for their hard work on this volume, and I extend my gratitude to the Ian Gordon Trust for providing the funding.

Prapatsorn Tiratanti
February 2025

Investigating Surprisal Theory and Code-Switching in an Afrikaans-English Comprehension Task

Lynn Melrose

This study explores the relationship between lexical predictability, word surprisal, and code-switching behaviour within language comprehension. Extending previous findings that in instances of heightened surprisal language speakers tend to engage in code-switching as a strategy to manage increased cognitive load, the current study investigated the hypothesis that code-switching is also linked to surprisal and increased cognitive load in bilingual comprehension. Employing a Maze comprehension task involving 42 proficient Afrikaans-English bilingual speakers to test the hypothesis, it was found that at points of high surprisal, both accuracy rates and reaction times were affected. Additionally, this study highlights the presence of a cognitive switch cost associated with code-switching in the comprehension of sentences. The results suggest that high cognitive effort and potential language inhibition play essential roles in language switching during comprehension tasks. Despite the extensive focus on word surprisal and code-switching, research looking at the interaction of these factors among behavioural tasks is limited. This study not only addresses this gap but also extends the exploration of word surprisal as a determinant of code-switching, thereby advancing our understanding of cognitive mechanisms, such as sentence processing within bilingual settings.

1. Introduction

Code-switching (CS) is a natural and common linguistic phenomenon observed among speakers of more than one language. Intra-sentential CS, the type explored in the current study, occurs when a speaker alternates between two or more languages within a single utterance or conversation (Poplack, 1980), for example,

Meantime** het sy op haar IK-toets **gecheat (von Meck, 1998)
'Meantime she cheated on her IQ-test'.

*Dis verkeerd want ons betaal om hier te wees en **it is actually their duty to be here** en om vir ons klas te gee* (Stell, 2009)
'It's wrong because we pay to be here and it is actually their duty to be here and to give us classes'.

Code-switching has been the subject of extensive research in linguistics and many factors have been shown to affect a bilingual's propensity to CS. Among others, variables related to the participants taking part in the conversation such as power dynamics between participants, social roles and relationships, proficiency (e.g., Blom & Gumperz, 1972), the level of production difficulty of relevant words (e.g., Gollan & Ferreira, 2009), the linguistic context (e.g., Clyne, 1991), a speaker's specific memory limitations (e.g., Eppler, 2011), the emotional state of the speaker (e.g., Dornic, 1978), cognitive load (e.g., Grosjean, 1982), and the type of information that is being conveyed (e.g., Myslin & Levy, 2015). Amongst the latter,

predictability has also been correlated with code-switching (Myslin & Levy, 2015) and has been determined using calculations of word surprisal (e.g., Calvillo et al, 2020).

Surprisal theory was first formulated by Hale (2001) and Levy (2008) as a theory of syntactic parsing. According to this theory, probabilities are assigned by comprehenders to all likely syntactic parses of the present sentence, and this probability distribution is incrementally updated with every incoming lexical item. Levy (2008) managed to show that if there is an assumed established relationship between high-level syntactic parses and low-level lexical intakes, the measure of the probability shift over syntactic parses prior to and subsequently to encountering a word is precisely comparable to the surprisal of that word—given the preceding context, its negative log probability, $-\log P(W|C)$. Furthermore, Hale (2001) and Levy (2008) demonstrated that increases in word surprisal were correct predictors of localised increases in processing difficulty (see also Demberg & Keller, 2008). As a result of these findings, the authors suggested that surprisal could provide a pivotal link between the underlying mechanisms of incremental sentence comprehension and behavioural measures of processing difficulty.

As code-switching involves the act of switching from one language to another, many psycholinguistic researchers have sought to investigate whether or not this switching process incurs a processing cost (e.g., Heredia & Altarriba, 2001). However, the focus of most of this research has been on production. When investigating this, studies using naming tasks have found that when bilinguals switch between languages, they demonstrate significantly slower reaction times (RTs) due to lexical retrieval (Meuter & Allport, 1999). In other words, a cognitive cost is incurred when a bilingual speaker switches from one language to another. More recent evidence from tasks that took place in a more natural scenario, with the aim of eliciting more voluntary language switching, demonstrated that bilinguals may still require extra time to switch from one language to another even when given the freedom to name trials without cues (Gollan & Ferreira, 2009). This suggests the likelihood of switch costs of CS.

When it comes to language switching, a further key finding is that words with higher surprisal are more likely to be code-switched (Calvillo et al., 2020). This relationship is rooted in expectation-based theories of sentence processing (Hale, 2001; Levy, 2008), which suggest that sentence and word processing difficulty depend largely on how predictable the current linguistic material is, given its specific context. Empirical evidence supports this claim, as predictability, operationalized by information-theoretic surprisal, has been shown to be a strong predictor of processing difficulty in both neural and behavioural measures (Demborg & Keller, 2008; Shain et al., 2020; Smith & Levy, 2013). Specifically, when word surprisal is high, cognitive load tends to be high as well because less predictable words demand more cognitive resources to process (Hale, 2001; Levy, 2008). As a result, when cognitive load is high, speakers are more likely to engage in code-switching. This link between cognitive load and code-switching has been observed in studies such as Grosjean (1982) and Gollan and Ferreira (2009), where bilinguals exhibited slower reaction times and greater switching frequency under high cognitive load conditions. Therefore, high word surprisal can be seen as a predictor of both increased cognitive load and a higher likelihood of code-switching.

In computational linguistics, surprisal has been recognised as a key phenomenon relevant to language models. Based on their ability to define the conditional probability of a word given

its context (Oh & Schuler, 2023), surprisal-based language models (LMs) are frequently used to model and evaluate cognitive sentence processing. In their 2020 paper, Calvillo et al. used word surprisal values, calculated with a language model, to investigate the effect of surprisal on the probability of code-switching (CS) within a sentence (intra-sentential CS). Their results showed that incorporating word surprisal improved the accuracy of their statistical model for predicting code-switching (CS).

Across a multitude of cognitive domains, adequate perception and decision making is dependent on our ability to capitalise on statistical regularities in the surrounding environments (Brothers & Kuperberg, 2021). This role of context is of specific importance during language comprehension, as comprehenders are required to rapidly determine meaning from often ambiguous and noisy signals. Human sentence processing is incremental and predictive, meaning that sentences are processed, word by word, and maintain an element of prediction for likely continuations based on the context (Eberhard et al., 1995; Frazier, 1987; Tanenhaus et al., 1995). When it comes to the accuracy and speed of this comprehension, evidence suggests that the predictability of a word is one of the strongest predictors (e.g., Kuperberg & Jaeger, 2016; Staub, 2015). Moreover, the level of effort that is required for this process is based on the predictability of a word, given its context, and this itself has often been quantified as ‘word surprisal’ (Hale, 2001; Levy, 2008). Thus, word surprisal measures the predictability of a word within its context. This is typically calculated by taking the negative log-probability of a word (w_i) conditioned on a window of previous words (t), shown as:

$$\text{surp}(w_i) = -\log P(w_i | w_{i-1}, \dots, w_{i-t})$$

Therefore, given the context, the more likely a word is to appear, the lower the surprisal value, and the higher the surprisal value of a word, the less likely it is to appear in the given context. As a consequence of this, the more surprising a word is deemed, the longer the time it takes to integrate (e.g., Balota et al., 1985; McDonald & Shillcock 2003a, 2003b; Wilcox et al., 2020), and the higher the cognitive processing cost (Hale, 2001).

A large number of studies have recognised these empirical facts and investigated word surprisal as a predictor of incremental processing time (e.g., Demberg & Keller, 2008; Goodkind & Bicknell, 2018; Hofmann et al., 2022; Meister et al., 2021; Smith & Levy, 2008, 2013; Wilcox et al., 2020), and processing difficulty during comprehension (Levy, 2008; Smith & Levy, 2013). Early behavioural evidence for the relationship between word predictability and processing time comes from Rayner and Well (1996), who used a reading comprehension task to measure reading times for high-, medium-, and low-predictability words. In this study, word probability was operationalized using cloze probability, which is defined as the proportion of participants providing a specific word in an offline sentence completion task (Taylor, 1953). Rayner and Well (1996) found that more predictable words elicited faster reading times and reported stronger contextual effects at the lower end of the probability scale (low > medium = high).

However, Rayner et al. (2006), using eye-tracking measures with the same sentence materials, found a different pattern of results: reading time benefits were only observed for high-predictability words (low = medium > high). This discrepancy may stem from task

differences, as the two studies used distinct methodologies—self-paced reading in Rayner and Well (1996) versus eye-tracking in Rayner et al. (2006)—and different measures of reading behaviour may highlight varying aspects of word predictability effects.

Finally, the relationship between word surprisal and cognitive processing extends to code-switching phenomena, where high-surprisal words have been shown to increase cognitive difficulty in both language production (Calvillo et al., 2020) and comprehension (Boyce & Levy, 2023).

To address gaps identified in prior research, Smith and Levy (2013) conducted a study aimed at elucidating the relationship between lexical predictability and reading times. Their analysis included reading times from two naturalistic corpora: eye-tracking data from the Dundee Corpus (N = 10 participants; Kennedy & Pynte, 2005) and self-paced reading data based on passages from the Brown Corpus (N = 32 participants). To quantify predictability, they used trigram co-occurrence measures, estimating the conditional probabilities of each word given its preceding context. Employing mixed-effects regression modelling, the study explored the relationship between predictability and reading times across a broad probability range (from 10^{-1} to 10^{-6}). Their findings revealed a consistent association: higher word probabilities correlated with shorter reading times in both datasets. This highlighted that even small variations in word probability can significantly influence reading behaviour.

Although these findings by Smith and Levy (2013) have been referenced by many researchers as strong evidence for surprisal theory, potential limitations of their methodology have been noted. Firstly, the limits of a ‘naturalistic’ corpus-based approach were debated due to their lack of experimental control. It is possible that there may have been other confounding factors affecting the reading times, and even with the use of statistical controls, such as regression models, it can be difficult to directly establish conclusions due to measurement error (Westfall & Yarkoni, 2016), collinearity (Friedman & Wall, 2005), and the existence of unaccounted confounds (Christenfeld et al., 2004).

Due to the lack of experimentally manipulated contextual predictability in Smith and Levy (2013), it has been suggested that the observed relationship between trigram probability and reading times may have been overstated or misleading (Brothers & Kuperberg, 2021). As an example, it is possible that as a result of the presence of measurement errors, the trigram probabilities may have ‘mimicked’ the effects of word frequency, simply due to shared variance (Westfall & Yarkoni, 2016), meaning that both trigram probabilities and word frequency correlate with reading times for related reasons, but not necessarily because trigram probabilities independently influence processing. As a result, the effects attributed to trigram probabilities might actually reflect word frequency instead, leading to potential misinterpretation of the data.

When it comes to obtaining behavioural data, the most widely used methods to date are those of eye tracking during reading (Rayner, 1998) and self-paced reading (Mitchell, 1984). In eye tracking, the movements of a participant’s eyes are monitored by an infrared camera whilst they read materials presented to them on a screen as a way of measuring how long participants take to read/fixate on each word, how often they refer back to previous words, and eye movements between word fixations. This method of behavioural data collection

yields high-quality data but necessitates the use of expensive equipment and a person to operate it. In self-paced reading, a participant sees the first word of a sentence and is then required to press a button for the successive word to appear. In non-cumulative versions of this method, the previous word disappears at this point. The time between these button presses is recorded, and this constitutes the reading time (RT) of each word. This process is much simpler to implement than eye-tracking; however, it typically yields less accurate data, with the effects of processing difficulty only arising on words following the target, known as the ‘spill-over’ effect. Furthermore, self-paced reading suffers with the same issues as eye-tracking when it comes to difficulty in accounting for possible inattentive participants (Boyce et al., 2020).

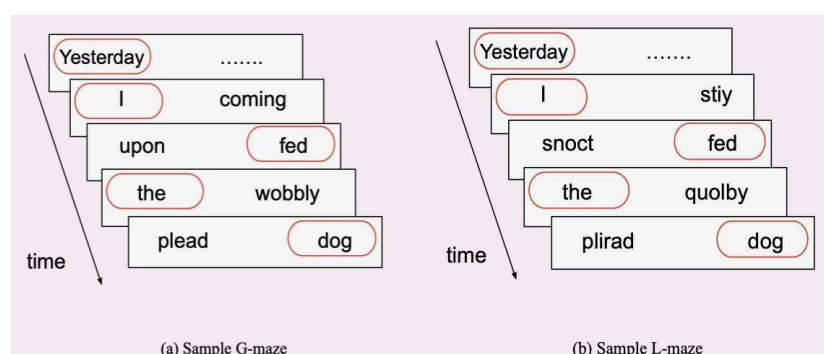
Another less widely used study method for experiments on language processing is the Maze task (Freedman & Forster, 1985; Guerrero & Elliott, 2009). In Boyce et al. (2020) study, they found that in comparison to self-paced reading, the Maze task conveyed higher sensitivity in detecting processing difficulty differences as it requires participants to make decisions between two words at each point in the sentence. This forced choice requires more cognitive effort and context integration than self-paced reading, and allows the Maze task to detect incremental processing difficulties.

The Maze task is a method of measuring incremental processing (Forster et al., 2009) and works by having participants read a sentence word by word, but with the addition of a forced choice: between a correct and incorrect word, at each word position. When it comes to the choice, the correct word is a word that would allow for a legitimate continuation of the sentence, whilst the incorrect word is a distractor word that would not allow for a legitimate continuation (Boyce et al., 2020). This can be seen in Figure 1.

In order to choose a word, a participant must press the corresponding button (key on the keyboard). If the response is correct, then the trial continues with another Maze step; if not, the trial is terminated and no more words for that particular sentence will be shown. There are two versions of the Maze task that have been tested: Grammaticality Maze (G-Maze), and Lexicality Maze (L-Maze) (Boyce et al., 2020). The difference between these two is that G-Maze uses real distractor words, but the words are anomalous given the context, whilst L-Maze uses nonce distractor words (see Figure 1).

Figure 1

Sample examples of each Maze task, in which participants see two words at a time and have to select the word that continues the sentence. After which, they see the next pair of words.



When looking at published results on well-researched sentence comprehension paradigms, there is empirical evidence of RT data from Maze tasks that illustrates differences in incremental processing difficulty that is largely consistent with the data from self-paced reading or eye-tracking methods, and is interpretable within the major theories of sentence processing (Boyce et al., 2020). For example, in their study using both G-Maze and L-Maze, Forster et al. (2009) found that among transitive English relative clauses (RCs) with full RC noun phrases, for subject-extracted RCs (for example: *the banker that irritated the lawyer played tennis*) there were faster RTs at the verb of the embedded clause than for object extracted RCs (for example: *the banker that the lawyer irritated played tennis*), and this result was consistent with well-established eye-tracking (Traxler et al., 2002) and self-paced reading (Grodner & Gibson, 2005) results. However, there were differences regarding the precise localisation of reading-time effects across eye tracking, self-paced reading, and Maze (Staub, 2010). The reasons for Maze evoking qualitatively similar RT differences have been rooted in the experimental participants' process when engaging with the selection of a correct Maze continuation (Boyce et al., 2020). This process involves:

- (a) identifying each candidate word,
- (b) determining the plausibility of each candidate in the context,
- (c) deciding on the correct candidate,
- (d) initiating and fulfilling the motor actions required to press the correct corresponding key and,
- (e) concluding the integrating of the chosen candidate into the context to continue processing (Boyce et al., 2020).

Each stage of this process takes time and effort. It is plausible that some stages may occur simultaneously (such as (d) and (e), for example), although, regardless, the process overlaps substantially with that proposed for regular and self-paced reading. The most notable difference with Maze in comparison to self-paced reading is the forced choice between candidate words. Forster et al. (2009) hypothesised that this need for a choice between candidates induces highly incremental processing in Maze: as a means of accurately discriminating between the correct and incorrect continuation, considerable context integration is necessary ((b) above); words that are more difficult to integrate will yield slow RTs on the candidate itself, minimising spillover to subsequent words. Although, as Boyce et al. (2020) point out, in cases where the correct candidate is guessed without thorough integration, when it comes to the following choice, the participant will be poorly prepared, which potentially could lead to some sort of spillover effect. To address this, self-paced reading (SPR) is often analysed using a multi-word spillover region, which is effective if the location of the slow-down is already known but less useful when the goal of the experiment is to pinpoint the exact location of processing difficulty. To promote more careful reading, SPR (and eye-tracking) can be paired with comprehension questions (Boyce et al., 2020). In comparison, as the Maze task is incremental, it does not need to include a mechanism to combat possible spillover effects.

With the improved localisation that Maze brings, some of the complexities that come with interpreting RT measures in eye-tracking or self-paced reading should be reduced (Boyce et al., 2020). On the contrary, the effect that variability in distractors could have on RTs is of concern. The specifics of the decision process ((c) above) may determine this variability. It is

possible that readers try to integrate the two words in parallel, making their choice based on the first word that integrates sufficiently (Boyce et al., 2020). In these instances, the time taken for successful trials should be based solely on the word that is easier to integrate (albeit perhaps longer than integrating in isolation if parallel processing strains resources); the identity of the distractor would not be of concern as long as it was notably more difficult to integrate. The act of choosing may additionally involve further direct comparison between the candidates, feasibly similar to the diffusion decision model (Ratcliff & McKoon, 2008), that portrays the possibility of the distractor's properties and its relationship with the target (such as relative surprisal values) affecting RT measures.

In summary, behavioural data collection methods in psycholinguistics include eye-tracking, self-paced reading, and the Maze task. The latter, using forced choice between correct and incorrect words, measures incremental processing difficulty (Boyce et al., 2020). Comparative analysis of Maze data with traditional reading measures shows consistency in detecting processing difficulty differences, albeit with differences in localisation of effects (Boyce et al. 2020; Forster et al., 2009). Understanding language comprehension's incremental and localised nature aids in measuring reaction times, essential in comprehending differential processing demands (Boyce & Levy, 2023).

In addition, in recent years, numerous new prospects for data collection in psycholinguistics have emerged with the onset of 'crowdsourcing' internet sources such as Prolific (Peer et al., 2017), and Mechanical Turk (Paolacci & Chandler, 2014), which allow the extensive recruitment of diverse populations. Due to this, crowdsourcing has become widely used in the field of experimental psycholinguistics as a means for data collection, including in self-paced reading and the Maze task (e.g., Enochson & Culbertson, 2015).

2. The Present Study

This study aimed to explore the relationship between points of high surprisal and code-switching within a bilingual comprehension task. It sought specifically to examine the simple and interaction effects of surprisal and code-switching on comprehension in an Afrikaans-English comprehension task. To achieve this, a comprehension-based methodology renowned for assessing incremental sentence processing intricacies, the Maze task, was employed.

Whilst prior research has extensively examined code-switching phenomena in production tasks, limited attention has been given to word surprisal's role in conjunction with code-switching occurrences in a comprehension bilingual setting. Utilising PsyToolkit, the Maze task experiment was implemented online to collect data for detailed statistical analyses of accuracy rates and reaction times (RTs) concerning specific target words. This approach allowed us to dissect the impact of word surprisal (as likelihood), code-switched and non-switched words, and participants' language proficiency.

The main objectives of this paper were to explore the effects of code-switching (labelled below as Switch) on accuracy rates and on RTs, and how these effects are impacted by sentence processing difficulty as determined by the surprisal value (likelihood) of the switched word and by participants' language proficiency.

This study anticipates contributing nuanced insights into the cognitive mechanisms at play during code-switching instances, particularly the interplay between word surprisal, sentence processing difficulty, and language-related factors in bilingual comprehension tasks.

3. Methods

A Maze task was constructed using the supplementary materials from Wang (2015) as a basis for the creation of the sentence stimuli. The Maze task was run using PsyToolkit (Stoet, 2010, 2017), and 52 participants were recruited directly into PsyToolkit through crowd-sourcing and from a group of Stellenbosch University acquaintances to engage with the Maze paradigm. A sample set of 4 sentence stimuli is included in Appendix A.

3.1 Materials

Four groups of stimuli were created for the Maze task, each containing the same 40 sentences, with each sentence in a different condition in each group (see Table 2). Using a design inspired by Wang (2015), the 40 sentences were constructed by the researcher and adjusted and changed to fit with Afrikaans syntax and grammar, and to exclude any possible Afrikaans-English cognates, as these have been shown to facilitate faster response times (Dijkstra et al., 2019). Each of the 40 sentences had four possible conditions for the target word; likely non-switched (referred to below simply as ‘likely’), unlikely non-switched (referred to as ‘unlikely’), likely switched, and unlikely switched (see Table 1 below). This resulted in a total of 160 experimental stimuli.

Table 1

Design of sentences by target word condition, i.e., crossing Likelihood and Switch

Sentence	Target word condition			
	Likely	Unlikely	Likely switched	Unlikely switched
1	a	b	c	d
2	a	b	c	d
3	a	b	c	d
4	a	b	c	d

The complete set of sentence stimuli was divided into four groups of the same 40 sentences each; A, B, C, and D, by Latin square rotation (each sentence was only seen once, in one out of the four conditions) as seen in Table 2 (see Appendix A for a sample set of sentences from Group A).

Table 2*Design of stimuli rotation across the four groups*

Group	A	B	C	D
Sentence	1a	1b	1c	1d
	2b	2c	2d	2a
	3c	3d	3a	3b
	4d	4a	4b	4c

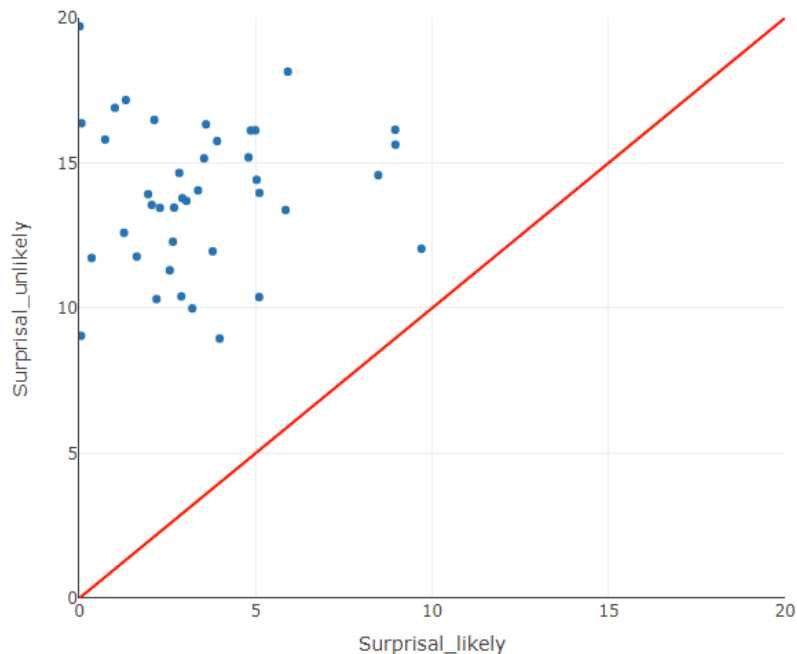
The *likelihood* condition was determined by calculated lexical surprisal values of the English target words. These values were calculated using the Python tool *PsychFormers* (Michaelov & Bergen, 2022) via the *transformers* (Wolf et al., 2020) package, trained on the GPT-2 Large language model (Radford et al., 2019). GPT-2 Large is the large version of GPT-2 with 36 layers and 774M parameters, pre-trained on large English internet-scale datasets (WebText) using a casual language modelling objective. There is an extra-large version of GPT-2, although some papers have reported that the larger the models, and the more layers and parameters, the more surprisal estimates diverge from human-like behaviours and expectations (Oh & Schuler, 2023). As the purpose of determining these values was for use in designing a comprehension task, the extra-large version of GPT-2 was not considered favourable over GPT-2 large.

The surprisal values for the target words in their test sentence contexts were obtained from the large language model. A paired t-test comparison was used to compare the surprisal of the English likely and unlikely target words. The mean difference of -10.42376 was highly significant ($t = -18.74$, $df = 77.92$, $p < 0.0001$), confirming that the surprisal values were higher for likely than for unlikely target words. Figure 2 plots the surprisal values for each target word pair by likelihood condition, with surprisal values for likely words on the horizontal axis and for unlikely words on the vertical axis. As can be seen, all points lie above the leading diagonal, showing that the presence of a higher surprisal value in the likely condition was true for all word pairs.

It is important that other properties of the target words that might influence processing do not differ across pairs. Analyses of word frequencies and lengths were therefore carried out. Word frequencies were generated through a kgram model that used data from Leipzig's South African English and Afrikaans corpora. Word lengths were in letters, as the targets are presented visually. Summary statistics are presented in Table 3, together with the surprisal values. The frequencies of likely and unlikely targets did not differ ($t = -0.671$, $df = 65.80$, $p = 0.505$), nor did their lengths ($t = -0.322$, $df = 78$, $p = 0.749$).

Figure 2

Surprisal values for each English target word pair, showing the value for the likely word on the horizontal axis and for the unlikely word on the vertical axis



As it was only possible to obtain surprisal values for the English target words and not the Afrikaans target words due to the scarcity of Afrikaans corpora containing code-switching, the Afrikaans target words were based on the best possible translations of the English words, given the context. Thus, the *switched* condition refers to whether or not the target word was in English (non-switched) or code-switched to Afrikaans (switched). In the switched conditions, an Afrikaans distractor word was used to avoid priming participants to choose the Afrikaans target word as a means of continuing the sentence in the task.

The distractor words were manually chosen based on the criteria that they would be grammatically unsuitable in the context of the sentence and would not allow for sentence continuation. For the cases of the Afrikaans words, both the target words and distractors were reviewed by three different, fluent, Afrikaans-English bilingual acquaintances, with the intent of constructing grammatically correct switched sentences.

For each sentence context used in the experiment, a word pair was selected where one word was likely and the other unlikely, as determined by the surprisal values obtained from the large language model. Figure 2 plots the surprisal values for each target word pair, with surprisal values for likely words on the horizontal axis and for unlikely words on the vertical axis. As can be seen, all points lie above the leading diagonal, showing that the presence of a higher surprisal value in the likely condition was true for all word pairs. The words in the likely condition had significantly lower surprisal values, as determined by a matched-pairs t-test. The means, standard deviations and t-test results are shown in Table 3.

It is important that other properties of the target words that might influence processing do not differ across pairs. Analyses of word frequencies and lengths were therefore carried out. Word frequencies were taken from the Leipzig English and Afrikaans 2020 Web corpora. Word lengths were in letters, as the targets are presented visually. Summary statistics and the results of matched-pairs t-tests for Frequency and Length are also presented in Table 3. Neither the frequencies nor the lengths of likely and unlikely targets differed significantly.

As it was only possible to obtain surprisal values for the English target words and not the Afrikaans target words due to the scarcity of Afrikaans corpora containing code-switching, the Afrikaans target words were based on the best possible translations of the English words, given the context. Frequencies and lengths of Afrikaans word pairs in the likely and unlikely conditions were also compared, and the results are also included in Table 3. It can be seen that the pairs of Afrikaans words did not differ in frequency or length.

Henceforward, the *switched* condition refers to whether or not the target word was in English (non-switched) or code-switched to Afrikaans (switched). In the switched conditions, an Afrikaans distractor word was used to avoid priming participants to choose the Afrikaans target word as a means of continuing the sentence in the task.

Table 3

Key characteristics of English and Afrikaans word pairs, by likelihood condition

	<i>Likely</i>		<i>Unlikely</i>		t-test		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
English Word Pairs							
Surprisal	3.50	2.45	13.92	2.53	-19	39	<0.0001
Frequency (per million words)	604	620	727	983	-0.7	39	0.5
Length (in characters)	5.8	1.7	6.0	1.7	-0.4	39	0.7
Afrikaans Word Pairs							
Frequency (per million words)	716	1136	511	814	1.0	39	0.2
Length (in characters)	6.3	2.6	6.4	2.1	-0.05	39	1.0

A total of 52 Afrikaans-English bilingual participants took part in this research. 41 of the participants were recruited using the Prolific platform, whilst the remaining 11 were a group of acquaintances from Stellenbosch University recruited directly into PsyToolkit. The participants recruited through Prolific were each paid £3 for roughly 20 minutes of work, as determined based on Prolific's suggested payment rates (Prolific, 2023), whilst the group of acquaintances consented to participate voluntarily and without compensation for their involvement in the study. The group of participants recruited from Stellenbosch University were recruited as a means of obtaining a more even distribution across the four Maze task groups. Participants were recruited based on demographic data in Prolific and on the PsyToolkit pre-screening as being older than 16, bilingual speakers of Afrikaans and English, having normal or corrected-to-normal vision, and being based in South Africa at the time of the experiment.

For undetermined technical reasons, there was no experimental data for five of the 52 participants, who were then excluded, leaving 47 participants. Additionally, data from one participant who did not report themselves as being a bilingual speaker was excluded, as well as data from four participants who did not see the target words more than 50% of the time, consistent with random guessing behaviour (Boyce & Levy, 2023). Each sentence was terminated as soon as a participant chose the wrong word for the continuation of the sentence, meaning it was possible for a participant to not even get to the point of seeing the target word. After this exclusion, 43 participants remained and from here, distributions of RT and accuracy by item and by participant were checked. One further participant was excluded because their accuracy (0.59) fell outside the interquartile range for the entire set of participants (IQR 0.68 – 1.00). The distribution of the 42 remaining participants across the four Maze task groups can be seen in Table 4.

Table 4

Distribution of participants (n) across the four groups, A, B, C, and D

Group	<i>n</i>
A	10
B	10
C	10
D	12

3.3 Ethics

The Victoria University of Wellington Human Ethics Committee approved this research (reference number: 0000031218). In accordance with this, the participants who were crowd-sourced were only identifiable by their Prolific ID (an identifier provided by the Prolific platform), and the voluntary participants were assigned a participant ID by PsyToolkit. If they

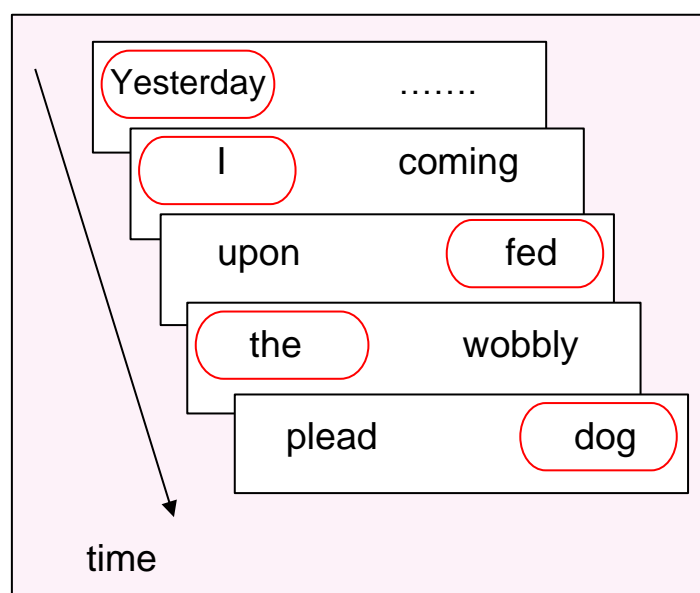
elected to receive a summary of the study, then their email addresses were accessible to the researcher but stored separately from their data.

3.4 Design & procedure

The Maze task experiment was constructed and implemented in PsyToolkit (Stoet, 2010, 2017), following a standard G-Maze design, as in Forster et al. (2009), Wang (2015), and Boyce & Levy (2023). In the Maze task, the first word of each sentence is given, and then from the second word onwards the participants are required to choose the correct word to form the sentence by pressing either the 'A' or 'L' key on the keyboard. The 'A' and 'L' keys correspond to the word either on the left ('A'), or the right ('L') of the screen. The times that the participants take to choose each word at every trial of the sentence are recorded (RTs) by PsyToolkit and used for analysis. Figure 3 below (repeated from the left-hand side of Figure 1) provides an illustrative example of this task. Note that this particular example was not used in the experiment.

Figure 3

Maze example. A participant reads a sentence word by word, choosing the correct word at each trial (words marked in red ovals show the correct sentence path that would need to have been followed by the participant; however, in the actual experiment, the correct sentence path was not marked). If they make a mistake, an error message is displayed, the trial is ended, and the participant moves on to the next sentence.



To familiarise the participants with the task, three practice sentences were administered before the main task began (see Table 5). All the participants received the same three practice stimuli. Participants were made aware of when the practice stimuli were going to begin and when they had completed them, before moving on to the task. All the participants taking part in the experiment saw the sentences in the same order, although with each in their different

conditions (see Table 2). See Appendix A for the practice stimuli that were administered, and sentence stimuli by group.

All practice stimuli were administered in the same order and condition for each participant. The set of stimuli that each participant received was one out of four pseudo-randomised ordered lists: A, B, C, and D, with no more than three responses with the same key ('A' or 'L'), or three of the same conditions in a row. To determine the order for the sentences to appear in the task, an online number generator was operationalised, while the continuation word's position (left or right) was randomised using the *PyGellermann* tool (Jadoul et al., 2023). Both these orders were then checked and edited to ensure limited sequences of similar choices (no more than three in a row). This method ensured an even distribution of participants across the four groups of ordered lists, maintaining randomisation, while minimising potential biases in the presentation sequence.

Table 5

Group A example sequence for the experiment order

Block	Sentence number	Condition type	Item on left-key response	Item on right-key response
practice	1	likely	distractor	target
practice	2	likely-switched	distractor	target
practice	3	likely	target	distractor
1	32b	likely-switched	target	distractor
2	15c	unlikely	target	distractor
3	1a	likely	distractor	target
4	28d	unlikely-switched	target	distractor
5	13a	likely	target	distractor
6	31c	unlikely	distractor	target

The experiment was completed by participants online using PsyToolkit, on either a desktop or laptop. Before beginning the task, the participants were provided online with an information sheet and asked for their informed consent, which was then followed by the task instructions, also online. Following the instructions, the participants completed the three binary-choice practice Maze sentences, before completing the forty main binary-choice Maze sentences. Each participant completed only one of the four versions of the Maze task. A small break occurred before each stimulus and was ended either by the participant pressing the spacebar to move to the next stimulus or by a timeout of 1.5 seconds. Each word pair within

a stimulus remained on-screen until the participant responded or until the timeout of 7000 milliseconds (ms). If the participant chose the incorrect continuation word, an ‘incorrect’ message appeared on the screen, the trial ended, and the participant moved on to the next sentence. The advantage of this is that it is very likely that the participants who do contribute RTs understood the sentence up until the point of error (Boyce & Levy, 2023). Upon task completion, the participants were then presented with an online questionnaire which sought to obtain demographic and language background information, and with the option for comments regarding the task experience. It was optional for participants to provide their email addresses if they wished to receive a copy of the study report. Finally, the participants that were recruited from Prolific were provided with a code to enter for payment, whilst the participant group recruited directly into PsyToolkit were redirected back to the University’s website. The experiment took participants an average of 22 minutes.

3.5 Modelling approach

The data was analysed using mixed effect regression models to investigate the relationship of likelihood and switch on the accuracy and speed (RT) in responding to target words. A set of predictor variables was determined and then used in initial modelling, in which they were tested for significance, leading to a final model with the most significant predictors. Predictors for the target word only were analysed. The data processing and analysis were conducted using R (R Core Team, 2023)¹.

3.5.1 Predictors

A set of several fixed effect predictor variables was created in order to predict both accuracy and RTs on the target words. This included:

- likelihood,
- switch,
- language proficiency in English and Afrikaans (MR1 and MR2, based on factor analyses of questionnaire data for each language),
- propensity to code switch (also based on questionnaire data),
- the interaction between the variables listed above,
- lexical frequency,
- word length,
- age,
- dominant handedness,
- education,
- and the sequential position of the word in the sentence.

¹ Furthermore, the R-packages *buildmer* (Version 2.11: Voeten, 2023), *car* (Version 3.1.2: Fox et al., 2023), *carData* (Version 3.0.5: Fox et al., 2022), *emmeans* (Version 1.8.9: Lenth, 2023), *kableExtra* (Version 1.3.4: Zhu, 2021), *lme4* (Version 1.1.35: Bates et al., 2023), *lmerTest* (Version 3.1.3: Kuznetsova, 2020), *psych* (Version 2.3.9: Revelle, 2023), and *tidyverse* (Version 2.0.0: Wickham, 2023) were used.

Experimental ‘design’ factors

Likelihood: Words that are unlikely given the context are considered to be less accessible, and thus, a catalyst for longer RTs and lower accuracy. The likelihood of the target words was based on the calculated English word surprisal values, where the lower the surprisal value, the more likely the target word. The surprisal values, the negative log probability of the English words given the previous words in the sentence (n) were calculated using the pre-trained GPT-2 Large language model (Radford et al., 2019), in Python with PsychFormers (Michaelov & Bergen, 2022) – $\log P(w_i | w_{i-1}, \dots, w_{i-n})$.

Switch: At points of low accessibility, code-switching is more likely, so at points of code-switching, RTs could be faster and have higher accuracy than that of high surprisal non-switched words. *Switch* is whether or not the target word is in English (non-switched) or Afrikaans (switched). The switched words are the closest direct translations of the English likely and unlikely target words.

Experimental ‘implementation’ factors

Target word number in the sentence: Processing times for a target word may be affected by its sequential position in the sentence.

Item factors

Lexical frequency: It has been widely attested that the frequency of words affects word processing. Words of a lower frequency are considered to be less accessible and are, therefore, likely to have longer RTs and lower accuracy. The lexical frequency of the target words was calculated using a k -gram language model trained on the Leipzig English and Afrikaans 2020 Web corpora (Goldhahn et al., 2012), in R (R Core Team, 2023). These frequencies were then converted to positive logs before being introduced into the logistic regression model.

Word length: Longer words are considered to be less accessible and result in longer RTs and lower accuracy. For word length, the number of characters forming the target words was used.

Participant factors

Language proficiency: The more proficient a speaker is in English and/or Afrikaans, the more automatic their word recognition is likely to be in that language, leading to higher accuracy and faster RTs. The language proficiency ratings in English (MR1) and Afrikaans (MR2) for each participant were collected in the questionnaire data on a 1–7 rating scale, where 1 = *very poor* and 7 = *native-like*, for proficiency in listening, speaking, reading, writing, and overall for each language. To reduce the dimensionality of the eight proficiency scores, an Exploratory Factor Analysis (EFA) was conducted using the Minimum Residual method (Paige & Saunders, 1975). The analysis revealed that these eight scores could be effectively reduced to two factors: **MR1**, representing English proficiency, and **MR2**, representing Afrikaans proficiency. The two factors explained 77% of the total variance (39% for MR1 and 38% for MR2). The factor scores

for each language's proficiency (listening, speaking, reading, and writing) were then used in the analysis to assess the relationship between proficiency and reaction times.

Propensity to code-switch: The more often a speaker code-switches, the less affected they might be when they encounter a switched word, and the better their accuracy and faster their RTs might be. Propensity to code-switch was determined by ratings given in the questionnaire data, where participants were asked to select how often they code-switch in conversations from a scale of *very frequently*, *frequently*, *rarely*, and *never*, which was then factored for analysis and assigned a number of 1–4, where 1 = *very frequently* and 4 = *never*.

Age: In the case of RTs, it is possible that older participants might be slower. The age of the participants was collected in the questionnaire data as birth year, which was then scaled to normalise its range and improve its numerical stability and interpretability in the model.

Dominant handedness: If the target word is not on the key (left, 'A' or right, 'L') that corresponds with a participant's dominant hand, they might have slower RTs and lower accuracy, as established in previous research (Chouamo et al., 2021; Dexheimer et al., 2022).

Interactions

The following interactions were also tested: likelihood and switch; likelihood, switch, and language proficiencies; likelihood, switch, and propensity to code-switch; and lexical frequency and word length.

Random effects

Random effects were included to account for individual differences in processing patterns at both participant and item levels. In addition to by-participant and by-item intercepts, by-participant slopes were included for switch and by-item slopes for likelihood. The inclusion of these random slopes was based on the expectation that participants and items would be affected differently by the predictors, allowing the model to better reflect the hierarchical nature of the data.

For all of these predictors, only the target words were investigated and not the preceding or succeeding words in the sentence stimuli.

3.5.2 Exclusions

In the Maze task, every distractor word was designed to be a grammatical non-fit for sentence continuation. However, although great care was taken in the process of constructing the distractors, in three cases the distractors turned out to be grammatically acceptable continuations. As a result, these three stimulus sets (24, 27, and 37) were excluded as known faulty items, leaving 37 sentences and 1554 observations. Distributions of accuracy results by item and participant were subsequently checked, and all remaining items and participants were within their respective IQR (items, 0.74 – 0.98; participants, 0.68 – 1.00). Furthermore, items that had timed-out (RTs > 7000ms) data were also excluded, leaving 1325 out of a total

of 1554 observations. Only target word data seen was analysed for accuracy and the correct target words for RT data. See Table 6 for a summary of observations by response type.

Table 6

Proportions of target word observations by response type, before and after timed-out and missing data were removed

Correct	Error	Timed-out	Missing
0.727	0.125	0.024	0.124
After timed-out and missing data is removed			
0.85	0.15		

3.5.3 Model specification

Before finalising the predictors to be included in the model, the influence of several factors was examined: education level, dominant handedness (handed), and code-switching frequency.

For code-switching, participants with less frequent code-switching behaviour showed a slight increase in errors. For education level, errors appeared to increase with higher education levels up to postgraduate education, where a decrease in errors was observed. Inspection of error rates for left- and right-handed participants showed no effect of handedness. Among these variables, only code-switching frequency was included as a predictor in the model. Although education level showed some variation in error rates, it lacked both theoretical relevance and statistical significance for predicting responses to code-switching in this study. In contrast, code-switching frequency was deemed a more relevant and potentially interactive factor to include.

Furthermore, the possible relationship between lexical frequency and word length was investigated before model inclusion. The lexical frequency data was logged ($\log\text{Freq}$) and using *cor.test()* from the *psych* library (Revelle, 2023), the correlation of word length and lexical frequency was tested, which showed a significant correlation between the two ($r = -0.326$, $t = -4.338$, $df = 158$, $p < 0.00001$). As a result, only lexical frequency was included.

Before analysing, the RT data were first transformed due to their heavily right-skewed nature of distribution. After exploring a number of transformations, the best fit to a normal distribution was provided by the inverse square root transformation ($RT^{(-1/2)}$). For the purpose of analyses, these transformed RTs served as the dependent variable. For graphing purposes, the values predicted by the model were back-transformed to milliseconds.

The initial models for both accuracy and RT data included a full set of fixed effect predictors and a set of fixed effect covariates—see the formulae in (1). Both Switch and Likelihood were

explored as simple effects and as an interaction, as well as in interactions with the MR1, MR2, and Codeswitching fixed effect predictors. The fixed effect covariates were lexical frequency (*logFreq*), the number of the target word in the sentence (*Target_word*), and participant age (centred and scaled) (*scaled_age*).

$$\text{accuracy} \sim \text{logFreq} + \text{Target_word} + \text{scaled_age} + \text{Switch} * \text{Likelihood} * (\text{MR1} + \text{MR2} + \text{Codeswitching}) + (1 + \text{Switch} * \text{Likelihood} \mid \text{PROLIFIC_SHORT}) + (1 + \text{Switch} * \text{Likelihood} \mid \text{sentnum})$$

$$\text{transrt} \sim \text{logFreq} + \text{Target_word} + \text{scaled_age} + \text{Switch} * \text{Likelihood} * (\text{MR1} + \text{MR2} + \text{Codeswitching}) + (1 + \text{Switch} * \text{Likelihood} \mid \text{PROLIFIC_SHORT}) + (1 + \text{Switch} * \text{Likelihood} \mid \text{sentnum})$$

(1)

The random effect structure that was explored included intercepts for participants (*PROLIFIC_SHORT*) and for stimuli (the sentences in all their four conditions (*sentnum*)), as well as by-participant and by-stimuli slopes for *Switch* and *Likelihood*. The fixed and random effects structures described above, provided the maximal model for model building using *buildmer* (Voeten, 2023). *buildmer* makes use of a process of forward selection followed by backward elimination in order to select the best models for the data. Once *buildmer* returned the best models for the data, linear mixed-effect models were run for RT using the *lmer* package (Bates et al., 2023), and logistic mixed-effects models were run for accuracy using *glmer* (Bates et al., 2023). *p*-values were approximated for the accuracy data via the Wald chi-square tests, and for RT data via the Satterthwaite degrees of freedom method using the *lmerTest* (Kuznetsova et al., 2020) package. The resulting models were then subject to model comparison using R's *Anova* () from the *car* (Fox et al., 2023) package for the accuracy model and R's *anova* () from *base stats* for the RT model to evaluate the significance of each factor (simple effects and interactions). The results of this modelling process are reported below first for accuracy and then for RTs.

4. Results

4.1 Accuracy

The ANOVA test results for the final model for accuracy in choosing the target words are shown below in Table 7. As stated earlier, the results include only cases where the targets were actually seen, i.e., 85% of possible responses (1325 of a total of 1554 responses across the 42 participants. See Table 6 for the distribution of responses by response type). A table of estimates for the predictors in the final model is given in Appendix B.

The random effects structure returned by the modelling process for the accuracy data included intercepts for participants and stimuli, and by-stimulus slopes for *Switch* (see (2)). The by-stimulus slopes indicate that the effect of *Switch* on accuracy varied depending on item-specific characteristics. We can only conjecture what these might be, but they could include word frequency, contextual predictability, or ease of integration. The fixed effect structure revealed significant simple effects for *Switch*, *Likelihood* and Afrikaans proficiency (MR2) (see Table 7).

Table 7

ANOVA table of the final model for accuracy of the target words seen

	Chisq	Pr(>Chisq)
Switch	16.25	< 0.001
Likelihood	50.63	< 0.001
MR2	5.65	0.0174
Switch:Likelihood	9.05	0.0026

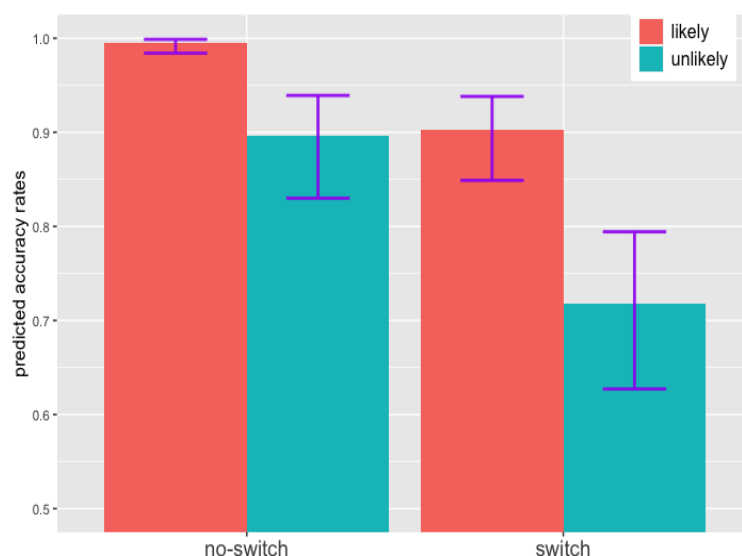
Accuracy was higher in likely conditions than the unlikely, and in the non-switched than the switched, which illustrates the relationship between sentence processing difficulty, Likelihood and Switch. In addition, there was also a significant two-way interaction between these two predictors (see Figure 4). This interaction reflects the finding that the effect of Likelihood on accuracy was stronger in switched conditions than in non-switched conditions. Post-hoc analyses in *emmeans* show a slightly stronger Likelihood effect in the switched condition ($z = 5.7$, $p < 0.05$), than in the non-switched condition ($z = 5.3$, $p < 0.05$), as well as a stronger effect of Switch for likely targets ($z = 4.6$, $p < 0.05$) than unlikely ($z = 3.5$, $p < 0.05$). Overall, then, accuracy was particularly low for unlikely target words in the switched condition. This interaction illustrates how sentence processing difficulty increases when low-predictability (unlikely) words are combined with the additional cognitive cost of encountering a language switch.

$$\text{accuracy} \sim \text{Likelihood} + \text{Switch} + \text{Likelihood:Switch} + \text{MR2} + (1 + \text{Switch} \mid \text{sentnum}) + (1 \mid \text{PROLIFIC_SHORT})$$

(2)

Figure 4

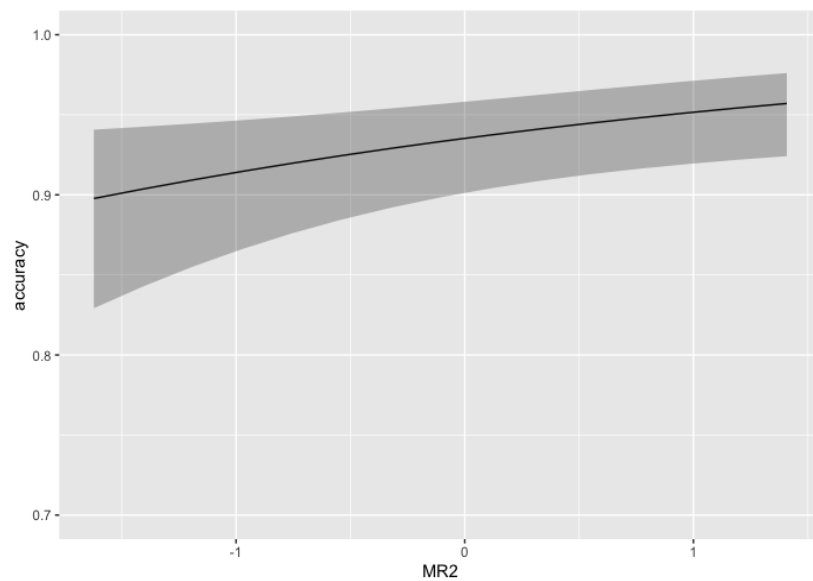
Accuracy rates for the two-way interaction of Likelihood with Switch (based on model predictions)



The significant effect for MR2 reflected the tendency for accuracy to be higher for participants with higher proficiencies in Afrikaans (see Figure 5). However, this effect did not interact with Likelihood, suggesting that proficiency in Afrikaans enhances automatic word recognition and semantic integration, and thereby facilitates comprehension of both likely and unlikely targets. This advantage likely stems from greater exposure to and familiarity with Afrikaans words.

Figure 5

Accuracy rates for the simple effect of MR2 (based on model predictions)



4.2 Reaction times (RTs)

The ANOVA test results for the final model for RTs for correct responses to the target words are shown in Table 8. A table of estimates is given in Appendix B.

Table 8

ANOVA table of the final model for RTs for correct target word responses

	Sum Sq	Mean Sq	DenDF	F value	Pr(>F)
Likelihood	0.00452	0.00452	36	257.48	< 0.001
Switch	0.00268	0.00268	45	152.61	< 0.001
MR1	0.00010	0.00010	39	5.59	0.023
MR2	0.00007	0.00007	39	4.23	0.046
logFreq	0.00018	0.00018	250	10.00	0.002
Likelihood:Switch	0.00130	0.00130	1020	73.94	< 0.001
Likelihood:MR2	0.00027	0.00027	1027	15.15	< 0.001

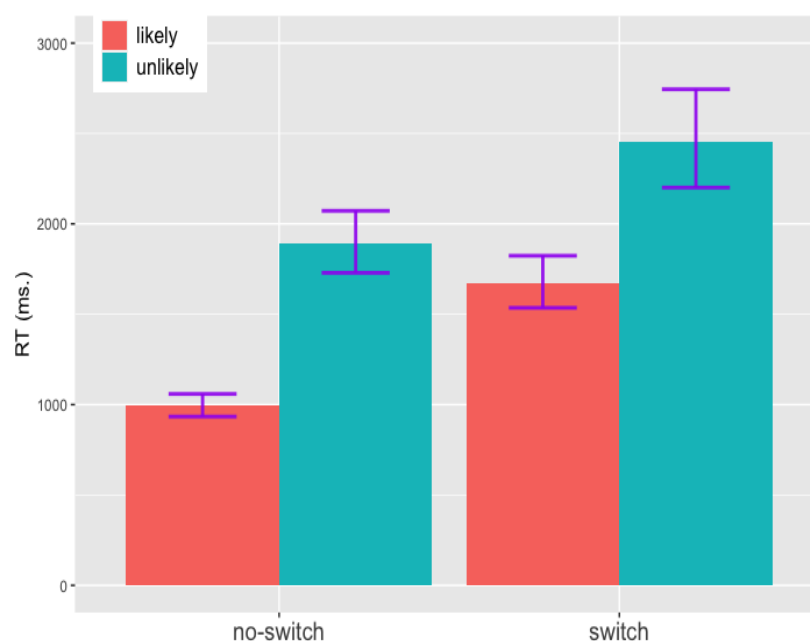
The random effects structure returned by the modelling process included intercepts for participants and stimuli, along with by-participant slopes for Switch and by-stimulus slopes for Likelihood (see (3)). The by-participant slopes for Switch suggest that the effect of encountering a language switch on RTs varied across participants, potentially reflecting individual differences in code-switching familiarity or cognitive flexibility. Similarly, the by-stimulus slopes for Likelihood indicate that the effect of word predictability on RTs differed across items, likely due to variations in lexical properties (e.g., frequency, contextual fit) or the extent to which the surrounding sentence context supported integration.

$$\text{transrt} \sim \text{Likelihood} + \text{Switch} + \text{Likelihood:Switch} + \text{MR1} + \text{MR2} + \text{logFreq} + \text{Likelihood:MR2} + (1 + \text{Switch} \mid \text{PROLIFIC_SHORT}) + (1 + \text{Likelihood} \mid \text{sentnum}) \quad (3)$$

The fixed effects structure revealed two significant interactions. The interaction between Likelihood and Switch showed that the effect of Likelihood on RTs was stronger in the non-switched condition than in the switched condition (see Figure 6). Indeed, post-hoc analyses using *emmeans* (Lenth, 2023) confirmed that the effect of Likelihood was greater in the no-switch condition ($t = 19.1$, $p < 0.05$) than in the switch condition ($t = 8.6$, $p < 0.05$). Furthermore, post-hoc comparisons of responses to switched versus non-switched targets revealed that the effect of switching was stronger for likely targets ($t = 15.6$, $p < 0.05$) than for unlikely targets ($t = 5.6$, $p < 0.05$). These results suggest that switching imposes a greater processing cost when the target word is highly predictable, potentially because deviations from predictable contexts are more salient and disruptive to processing.

Figure 6

Back-transformed RTs for the interaction of Likelihood with Switch



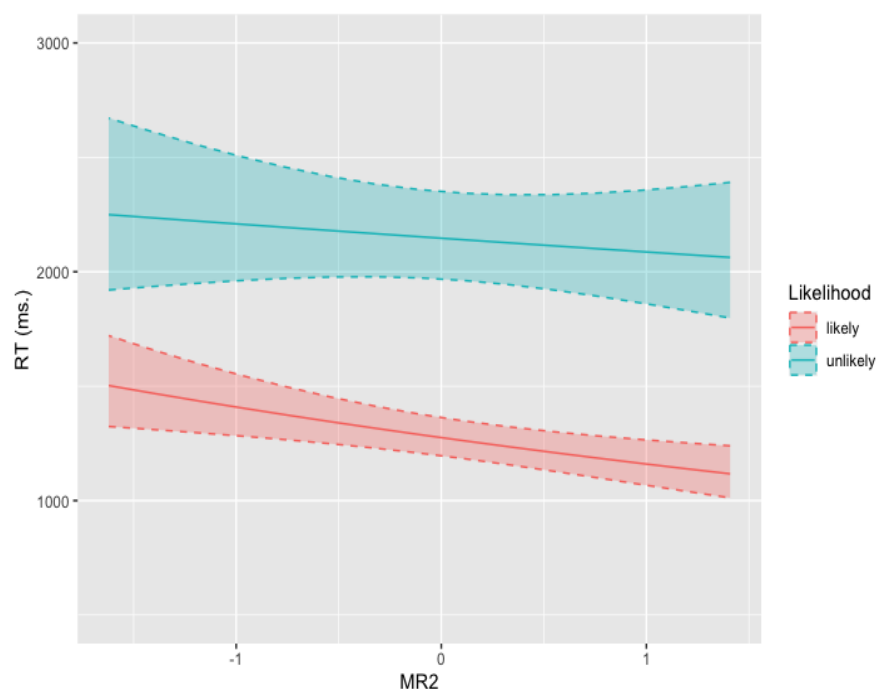
Furthermore, the significant interaction of Likelihood and MR2 (see Figure 7) demonstrated that Afrikaans proficiency moderated the effect of Likelihood, with participants with higher Afrikaans proficiency exhibiting smaller increases in RTs for unlikely words, suggesting that proficiency reduced the processing costs associated with predictability.

The post-hoc analyses of this showed that the effect of MR2 is only significant for the *likely* condition ($t = 3.1$, $p < 0.05$), and not the *unlikely* condition ($t = 0.7$, $p = 0.49$).

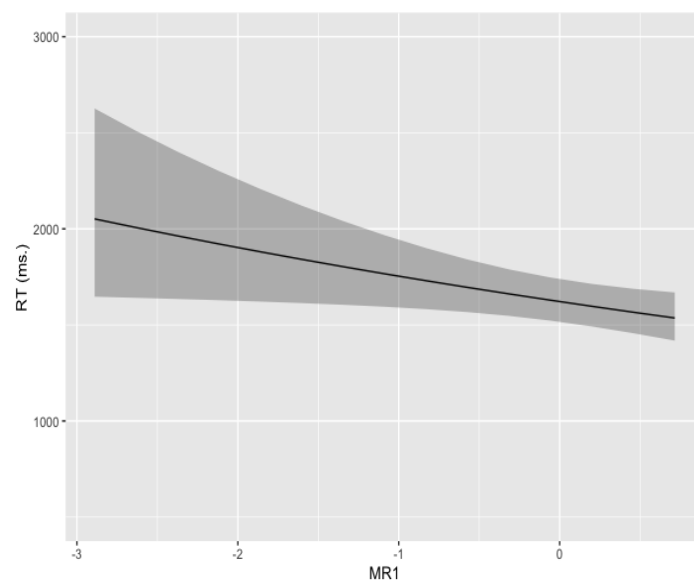
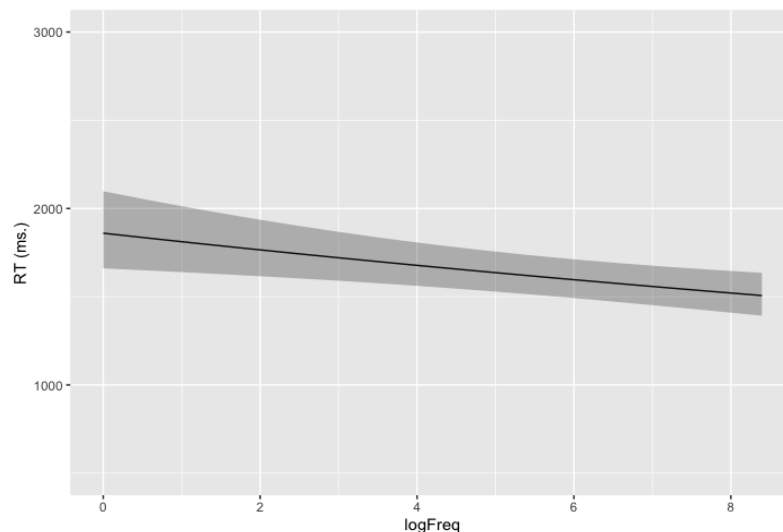
In addition to these interactions, significant simple effects were observed for Likelihood, Switch, word frequency (logFreq), and marginally for English (MR1) and Afrikaans (MR2) proficiencies (see Table 8). RTs were longer in the unlikely than the likely condition, as well as in the switched versus non-switched condition, confirming the expected relationships between processing difficulty, word predictability, and switch costs. Additionally, less frequent words and lower proficiency levels in either language were associated with longer RTs.

Figure 7

Back-transformed RTs for interaction of Likelihood with MR2



The significant simple effect of MR1 is shown in Figure 8, by faster RTs with increasing MR1. However, the effect of MR1 did not interact with Likelihood as with MR2 and is rather an overall effect of MR1 on RTs. Similarly, the significant simple effect of logFreq shown in Figure 9, shows a classic frequency effect, faster RTs with increasing logFreq, which too did not interact with Likelihood (Table 8).

Figure 8*Back-transformed RTs for the simple effect of MR1***Figure 9***Back-transformed RTs for the simple effect of logFreq*

5. Discussion

This study utilised a comprehension task, namely the Maze task, to investigate the impact of word surprisal and code-switched words among Afrikaans-English bilingual speakers.

The ANOVA results for accuracy (see Table 7) reveal significant insights into the factors influencing participants' responses to the target words. A robust relationship is observed between Likelihood and Switch, as well as an impact of Afrikaans proficiency (MR2) in

determining accuracy rates. Higher accuracy in likely conditions compared to unlikely ones signifies the influence of sentence processing difficulty at points of high surprisal. Moreover, lower error rates in non-switched conditions underscore the impact of cognitive load and switching costs on accuracy. Regarding reaction times (RTs), ANOVA results (see Table 8) reveal Likelihood and Switch significantly impacting participants' response times. Longer RTs in unlikely conditions versus likely conditions indicate increased processing difficulty. Additionally, longer RTs in switched conditions compared to non-switched ones highlight the effect of switch-cost, and cognitive load due to task-switching.

The significant interactions of Likelihood and Switch observed in both accuracy and RT data show the significance of their relationship. In the accuracy data there was a slightly stronger Likelihood effect in switched conditions, and a lower accuracy rate in the switched and unlikely condition, which emphasises both the effect of high surprisal in conjunction with seeing a code-switched word in an English sentence (see Figure 4). As both of these factors are known to have an increased effect on cognitive demand, one would expect to see lower accuracy rates due to both unlikely stimuli and language switching. Additionally, the greater difference in error rates between switched and non-switched conditions for likely than for unlikely targets underlines the varying impacts of Switch across different likelihood conditions.

The difference in RTs between switched and non-switched conditions for likely targets highlights the processing costs associated with code-switching. When a word is highly predictable in its context, encountering a translation-equivalent (i.e., switched) word is more disruptive than when the word is less predictable. For example in the sentence *Inside the cave it is really dark ...*, the word 'dark' is contextually highly predictable, and so replacing it with the Afrikaans word 'donker' causes a marked delay in responses. When the target word is less predictable, as in *Inside the cave it is really tidy ...*, the effect of switching languages is smaller, though still significant. Note, though, that the effect of switching (in this example replacing 'dark' with 'donker') is numerically less than the effect of replacing the predictable English word with a contextually less predictable English word (*tidy*), as can be seen from the second and third bars in Figure 6.

The pattern of findings for code-switching involving likely and less likely targets fits well with the language production data reviewed in the Introduction, where it was noted that words with higher surprisal (i.e., which are less likely in their contexts) are more likely to be code-switched. This greater probability of switching in production is matched by a lower disruptive effect of a switch on comprehension.

The interaction of Likelihood with Afrikaans proficiency (MR2) reveals that higher Afrikaans proficiency facilitates faster RTs for likely target words, suggesting that greater familiarity with the switched language enhances processing efficiency at predictable points. This aligns with theories of bilingual cognitive adaptability, where higher proficiency in a secondary language can mitigate processing demands during switches. However, the absence of a similar interaction with English proficiency (MR1) suggests that task-specific demands—primarily in English—may generalise across stimuli, regardless of predictability.

Overall, these accuracy and RT analyses offer valuable insights into cognitive processes involved in identifying, processing, and responding to target words across varying sentence processing difficulties, such as likelihood conditions, switch costs, and language proficiencies. Understanding these effects contributes to comprehending cognitive operations in language processing. Future studies could delve into a detailed corpus-based analysis of an Afrikaans-English code-switching corpus, akin to Calvillo et al. (2020), further exploring the interaction observed in this study.

The statistical findings presented align with the introduction's emphasis on surprisal theory and its relevance in understanding code-switching behaviour. They echo the cognitive effort and processing demands when encountering linguistically unexpected elements, reinforcing the surprisal theory's focus. Furthermore, these findings directly relate to the cognitive effects of surprisal values on code-switching occurrence and comprehension, bridging the gap between surprisal theory and code-switching behaviour within Afrikaans-English bilingual comprehension tasks. The discussions of interaction effects and post-hoc analyses align with the study's focus on unravelling the complexities of CS within a comprehension framework and the influence of surprisal on cognitive processing.

6. Conclusion

This study investigated the intricate relationship between word surprisal, code-switching occurrences, and cognitive processing among Afrikaans-English bilingual speakers using a comprehension task, namely the Maze task. The statistical analyses of accuracy and RTs for target words in the task yielded valuable insights into the interplay between sentence processing difficulty, likelihood conditions, switch costs, and language proficiency. The study revealed a robust relationship between Switch and Likelihood. Higher accuracy in likely conditions pointed to the influence of surprisal on sentence processing difficulty. Moreover, lower error rates in non-switched conditions emphasised the impact of cognitive load and switching costs on accuracy. Likelihood and Switch significantly impacted participants' RTs. Longer RTs in unlikely conditions indicated increased processing difficulty, while longer RTs in switched conditions highlighted switch costs and cognitive load due to switch cost. Notable interactions between Likelihood and Switch observed in both accuracy and RT data underscored their significance. Additionally, the interaction of Likelihood with Afrikaans proficiency (MR2) revealed faster RTs for participants with higher Afrikaans proficiency when encountering predictable stimuli. The significant effect of log frequency on RTs indicated faster responses for higher frequency lexical items, reflecting the influence of sentence processing ease. Future studies could delve into detailed corpus-based analyses, akin to Calvillo et al. (2020), further exploring the observed interaction.

The findings from this study align closely with the theoretical underpinnings established in surprisal theory and its relevance in understanding code-switching behaviour. They reinforce the cognitive effort and processing demands encountered when linguistically unexpected elements arise, thereby bridging the gap between surprisal theory and code-switching behaviour within Afrikaans-English bilingual comprehension tasks.

While this study sheds light on the intricate dynamics of code-switching and word surprisal in a comprehension context, it is not without limitations. Future investigations could aim to

overcome limitations related to sample size and further explore the nuances of processing complexity, especially at points of high surprisal and language switching.

In summary, this study's findings provide valuable contributions to understanding of the cognitive processes underlying code-switching behaviour, highlighting the intricate interplay between word surprisal, sentence processing difficulty, switch costs, and language proficiency in bilingual comprehension.

References

- Balota, D., Pollatsek, A., & Rayner, K. (1985). The interaction of contextual constraints and parafoveal visual information in reading. *Cognitive Psychology*, 17(3), 364–390.
- Bates, D., Mächler, M., Bolker, B., Walker, S., & Christensen, R. H. B. (2023). *lme4: Linear mixed-effects models using 'Eigen' and S4*. <https://CRAN.R-project.org/package=lme4>.
- Boyce, V., Futrell, R., & Levy, R. (2020). Maze made easy: Better and easier measurement of incremental processing difficulty. *Journal of Memory and Language*, 111(104082), 1–13.
- Boyce, V., & Levy, R. (2023). A-Maze of natural stories: Comprehension and surprisal in the Maze task. *Glossa Psycholinguistics*, 2(1), 1–34.
- Blom, J., & Gumperz, J. (1972). Social meaning in linguistic structures: Code switching in Northern Norway. In J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics* (pp. 407–434). Holt, Rinehart and Winston.
- Brothers, T., & Kuperberg, G. (2021). Word predictability effects are linear, not logarithmic: Implications for probabilistic models of sentence comprehension. *Journal of Memory and Language*, 116(104174), 1–14.
- Calvillo, J., Fang, L., Cole, J., & Reitter, D. (2020). Surprisal predicts code-switching in Chinese-English bilingual text. *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing*, 4029–4039.
- Christenfeld, N., Sloan, R., Carroll, D., & Greenland, S. (2004). Risk factors, confounding, and the illusion of statistical control. *Psychosomatic Medicine*, 66, 868–875.
- Chouamo, A., Griego, S., & Lopez, F. M. (2021). Reaction time and hand dominance. *The Journal of Science and Medicine*, 3(Special Issue), 1–7.
- Clyne, M. (1991). *Community languages: The Australian experience*. Cambridge University Press.
- Demberg, V., & Keller, F. (2008). Data from eye-tracking corpora as evidence for the stories of syntactic processing complexity. *Cognition*, 109(2), 193–210.

- Dexheimer, B., Przybyla, A., Murphy, T., Akpinar, S., & Sainburg, R. (2022). Reaction time asymmetries provide insight into mechanisms underlying dominant and non-dominant hand selection. *Experimental Brain Research*, 240(10), 2791–2802.
- Dijkstra, T., Wahl, A., Buytenhuijs, F., an Halem, N., Al-Jibouri, Z., de Korte, M., & Rekké, S. (2019). Multilink: A computational model for bilingual word recognition and word translation. *Bilingualism: Language and Cognition*, 22(4), 657–679.
- Dornic, S. (1978). The bilingual's performance: Language dominance, stress, and individual differences. In D. Gerver & H. Wallace Sinaiko (Eds.), *Language interpretation and communication* (pp. 259–271). Springer.
- Eberhard, K., Spivey-Knowlton, M., Sedivy, J., & Tanenhaus, M. (1995). Eye movements as a window into real-time spoken language comprehension in natural contexts. *Journal of Psycholinguistics Research*, 24(6), 409–436.
- Enochson, K., & Culbertson, J. (2015). Collecting psycholinguistic response time data using Amazon Mechanical Turk. *PLoS ONE*, 10(3), 1–17.
- Eppler, E. D. (2011). The dependency distance hypothesis for bilingual code-switching. *Proceedings of the International Conference on Dependency Linguistics*, Barcelona, 78–87.
- Forster, K., Guerrera, C., & Elliot, L. (2009). The Maze task: Measuring forced incremental sentence processing time. *Behavior Research Methods*, 41(1), 163–171.
- Fox, J., & Weisberg, S. (2022, 2023). *An R companion to applied regression* (3rd ed). Sage Publications. <https://www.john-fox.ca/Companion/index.html>.
- Frazier, L. (1987). Syntactic processing: Evidence from Dutch. *Natural Language & Linguistic Theory*, 5(4), 519–559.
- Freedman, S., & Forster, K. (1985). The psychological status of overgenerated sentences. *Cognition*, 19(2), 101–131.
- Friedman, L., & Wall, M. (2005). Graphical views of suppression and multicollinearity in multiple linear regression. *The American Statistician*, 59(2), 127–136.
- Goldhahn, D., Eckart, T., & Quasthoff, U. (2012). Building large monolingual dictionaries at the Leipzig corpora collection: From 100 to 200 languages. *Proceedings of the 8th International Language Resources and Evaluation*, Istanbul, 759–765.
- Gollan, T., & Ferreira, V. (2009). Should I stay or should I switch? A cost-benefit analysis of voluntary language switching in young and ageing bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35(3), 640–665.
- Goodkind, A., & Bicknell, K. (2018). Predictive power of word surprisal for reading times is a linear function of language model quality. *Proceedings of the 8th Workshop on Cognitive Modeling and Computational Linguistics*, Utah, 10–18.

- Grodner, D., & Gibson, E. (2005). Some consequences of the serial nature of linguistic input. *Cognitive Science*, 29(2), 261–290.
- Grosjean, F. (1982). *Life with two languages: An introduction to bilingualism*. Harvard University Press.
- Hale, J. (2001). A probabilistic earley parser as a psycholinguistic model. *Proceedings of the second meeting of the North American Chapter of the Association for Computational Linguistics on Language technologies*, Baltimore, 1–8.
- Heredia, R., & Altarriba, J. (2001). Bilingual language mixing: Why do bilinguals code-switch? *Current Directions in Psychological Science*, 10(5), 164–168.
- Hofman, M., Remus, S., Biemann, C., Radach, R., & Kuchinke, L. (2022). Language models explain word reading times better than empirical predictability. *Frontiers in Artificial Intelligence*, 4(2021), 1–20.
- Jadoul, Y., Duengen, D., & Ravignan, A. (2023). PyGellermann: A Python tool to generate pseudorandom series for human and non-human animal behavioural experiments. *BMC Research Notes*, 16(1), 135.
- Kennedy, A., & Pynte, J. (2005). Parafoveal-on-foveal effects in normal reading. *Vision Research*, 45(2), 153–168.
- Kuperberg, G., & Jaeger, F. (2016). What do we mean by prediction in language comprehension? *Language, Cognition and Neuroscience*, 31(1), 32–59.
- Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2020). *lmerTest: Tests in linear mixed effects models*. <https://CRAN.R-project.org/package=lmerTest>.
- Lenth, R. V. (2023). *emmeans: Estimated marginal means, aka least-squares means*. <https://CRAN.R-project.org/package=emmeans>.
- Levy, R. (2008). Expectation-based syntactic comprehension. *Cognition*, 106(3), 1126–1177.
- McDonald, S., & Shillcock, R. (2003a). Low-level predictive inference in reading: The influence of transitional probabilities on eye movements. *Vision Research*, 43(16), 1735–1751.
- McDonald, S., & Shillcock, R. (2003b). Eye movements reveal the on-line computation of lexical probabilities during reading. *Psychological Science*, 14(6), 648–652.
- Meister, C., Pimentel, T., Haller, P., Jäger, L., Cotterell, R., & Levy, R. (2021). Revisiting the uniform information density hypothesis. *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*, Punta Cana, 963–980.
- Meuter, R., & Allport, A. (1999). Bilingual language switching in naming: Asymmetrical costs of language selection. *Journal of Memory and Language*, 40(1), 25–40.

- Michaelov, J., & Bergen, B. (2022). Do language models make human-like predictions about the coreferents of Italian anaphoric zero pronouns? *arXiv:2208.14554v2*. <https://doi.org/10.48550/arXiv.2208.14554>.
- Mitchell, D. (1984). An evaluation of subject-paced reading tasks and other methods for investigating immediate processes in reading. In D. Kieras & M. Just (Eds.), *New methods in reading comprehension* (pp. 69–90). Routledge.
- Myslin, M., & Levy, R. (2015). Code-switching and predictability of meaning in discourse. *Language*, 91(4), 871–905.
- Oh, B.-D., & Schuler, W. (2023). Why does surprisal from larger transformer-based language models provide a poorer fit to human reading times? *Transactions of the Association for Computational Linguistics*, 11, 336–350.
- Paige, C., & Saunders, M. (1975). Solution of sparse indefinite systems of linear equations. *SIAM Journal on Numerical Analysis*, 12(4), 617–629.
- Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding mechanical Turk as a participant pool. *Current Directions in Psychological Science*, 23(3), 184–188.
- Peer, E., Brandimarte, L., Samat, S., & Acquisiti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, 70(1), 153–163.
- Poplack, S. (1980). Sometimes I'll start a sentence in Spanish y termino en espanol: Toward a typology of code-switching. *Linguistics*, 18(7–8), 581–618.
- Prolific. (2023). <https://www.prolific.com>.
- R Core Team. (2023). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>
- Radford, A., Wu, J., Child, R., Luan, D., Amodei, D., & Sutskever, I. (2019). Language models are unsupervised multitask learners. *OpenAI blog*, 1(8), 9.
- Ratcliff, R., & McKoon, G. (2008). The diffusion decision model: Theory and data for two-choice decision tasks. *Neural Computation*, 20(4), 873–922.
- Rayner, K., & Well, A. (1996). Effects of contextual constraint on eye movements in reading: A further examination. *Psychonomic Bulletin & Review*, 3(4), 504–509.
- Rayner, K. (1998). Eye movements in reading and information processing: 20 years of research. *Psychological Bulletin*, 124(3), 372–422.
- Rayner, K., Reichle, E., Stroud, M., Williams, C., & Pollatsek, A. (2006). The effect of word frequency, word predictability, and font difficulty on the eye movements of young and older readers. *Psychology and Aging*, 21(3), 448–465.

- Revelle, W. (2023). *psych: Procedures for Psychological, Psychometric, and Personality Research*. <https://CRAN.R-project.org/package=psych>.
- Shain, C., Blank, I., van Schijndel, M., Schuler, W., & Fedorenko, E. (2020). fMRI reveals language-specific predictive coding during naturalistic sentence comprehension. *Neuropsychologia*, 138(107307), 1–19.
- Smith, N., & Levy, R. (2008). Optimal processing times in reading: A formal model and empirical investigation. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 570–576.
- Smith, N., & Levy, R. (2013). The effect of word predictability on reading time is logarithmic. *Cognition*, 128(3), 302–319.
- Staub, A. (2010). Eye movements and processing difficulty in object relative clauses. *Cognition*, 116(1), 71–86.
- Staub, A. (2015). The effect of lexical predictability on eye movements in reading: Critical review and theoretical interpretation. *Language and Linguistics Compass*, 9(8), 311–327.
- Stell, G. (2009). Codeswitching and ethnicity: Grammatical types of codeswitching in the Afrikaans speech community. *International Journal of the Sociology of Language*, 2009(199), 103–128.
- Stoet, G. (2010). PsyToolkit – A software package for programming psychological experiments using Linux. *Behavior Research Methods*, 42(4), 1096–1104.
- Stoet, G. (2017). PsyToolkit: A novel web-based method for running online questionnaires and reaction-time experiments. *Teaching of Psychology*, 44(1), 24–31.
- Tanenhaus, M., Spivey-Knowlton, M., Eberhard, K., & Sedivy, J. (1995). Integration of visual and linguistics information in spoken language comprehension. *Science*, 268(5217), 1632–1634.
- Taylor, W. (1953). “Close procedure”: A new tool for measuring readability. *Journalism Bulletin*, 30(1953), 415–433.
- Traxler, M., Morris, R., & Seely, R. (2002). Processing subject and object relative clauses: Evidence from eye movements. *Journal of Memory and Language*, 47(1), 69–90.
- Voeten, C. (2023). *buildmer: Stepwise Elimination and Term Reordering for Mixed-Effects Regression*. <https://CRAN.R-project.org/package=buildmer>.
- von Meck, A. (1998). *Anderkant die Longdrop*. Tafelberg (NB Uitgewers).
- Wang, X. (2015). Language control in bilingual language comprehension: Evidence from the Maze task. *Frontiers in Psychology*, 6(1179), 1–12.

Westfall, J., & Yarkoni, T. (2016). Statistically controlling for confounding constructs is harder than you think. *PLoS ONE*, 11(3), 1–22.

Wickham, H. (2023). *tidyverse: Easily Install and Load the 'Tidyverse'*. <https://CRAN.R-project.org/package=tidyverse>.

Wilcox, E., Gauthier, J., Hu, J., Qian, P., & Levy, R. (2020). On the predictive power of neural language models for human real-time comprehension behavior. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*, 1707–1713.

Wolf, T., Debut, L., Sanh, V., Chaumond, J., Delangue, C., Moi, A., Cistac, P., Ma, C., Jernite, Y., Plu, J., Xu, C., Le Scao, T., Gugger, S., Drame, M., Lhoest, Q., & Rush, A. (2020). Transformers: State-of-the-art natural language processing. *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing: System Demonstrations*, 38–45.

Zhu, H. (2021). *kableExtra: Construct Complex Table with 'kable' and Pipe Syntax*. <https://CRAN.R-project.org/package=kableExtra>.

Appendix A

Table 1.1

Table of practice sentences used in the Maze task

Practice Sentences	
Practice 1	
Yesterday
I	coming
fed	wobbly
the	plead
dog	strap
Practice 2	
Plants
need	knitting
to	in
be	plug
natgemaak	tel
to	us
survive	material

Practice 3	
Every
morning	drawed
before	dried
school	scarf
Jenny	pouch
brushed	paste
her	cap
hair	hammer

Table 1.2

Table of 4 of the Group A sentence stimuli used in the Maze task

Group A			
Group A - Sentence 1		Group A - Sentence 3	
After	Remember
cooking	said	to	tap
dinner	playing	press	saw
the	couch	the	street
pots	and	button	great
and	mat	on	rainbow
pans	yesterday	the	in
were	spicy	car	rug
really	water	keys	hat
dirty	the	to	mug
		slam	you
		the	no
		car	dish
		doors	rubbish
Group A - Sentence 2		Group A - Sentence 4	
Inside	Only
the	wondering	the	agreed
cave	tile	students	who
it	Saturn	taught	carpenter

is	the	by	hungry
really	table	the	lid
donker	skryf	best	when
because	light	teachers	windows
there	remote	draai	kruik
is	steam	in	pen
no	after	the	oven
sun	and	exams	sleep
		was	mist
		swaar	spiev'l

Appendix B

Table 2.1

Model estimates for Accuracy model

Predictor ²	Estimate	95% CI ³	p-value
(Intercept)	5.4	4.1, 6.7	<0.001
Switch			
no-switch	—	—	
switch	-3.2	-4.5, -1.8	<0.001
Likelihood			
likely	—	—	
unlikely	-3.3	-4.5, -2.0	<0.001
MR2	0.31	0.05, 0.56	0.017
Switch * Likelihood			
switch * unlikely	2.0	0.68, 3.2	0.003

² For categorical predictors the intercept values are shown in the first line below the predictor name

³ CI = Confidence Interval

Table 2.2*Model estimates for RT model⁴*

Predictor ⁵	Estimate	95% CI ⁶	p-value
<i>(Intercept)</i>	0.0300	0.0285, 0.0314	<0.001
<i>Likelihood</i>			
likely	—	—	
unlikely	-0.0086	-0.0096, -0.0077	<0.001
<i>Switch</i>			
no-switch	—	—	
switch	-0.0073	-0.0082, -0.0063	<0.001
<i>MR1</i>	0.0010	0.0001, 0.0018	0.023
<i>MR2</i>	0.0014	0.0005, 0.0022	0.002
<i>logFreq</i>	0.0003	0.0034, 0.0055	0.002
<i>Likelihood * Switch</i>			
unlikely * switch	0.0045	0.0034, 0.0055	<0.001
<i>Likelihood * MR2</i>			
unlikely * MR2	0.0011	0.0016, 0.0005	<0.001

⁴ The RTs values used in this table have been transformed, and are not the raw RT values

⁵ Intercept values are 0 for MR1, MR2, & logFreq. For categorical predictors the intercept values are shown in the first line below the predictor name

⁶ CI = Confidence Interval

Using Social Markers to Aid Perceptual Learning for Understanding Dysarthric Speech

Sara Gilbert

The purpose of this study was to investigate whether social markers, such as discourse markers and slang, can aid perceptual learning of dysarthric speech. When we hear speech, we receive not only language-specific information but also information about a person's identity. Numerous studies have shown that these information streams are integrated in our perceptual systems and that social and linguistic information index each other and can be primed by sociolinguistic variables we encounter. Forty-nine speakers of New Zealand English participated in an online perceptual learning study involving a speaker with moderate–severe spastic–hyperkinetic dysarthria. Participants were randomly allocated to one of three training groups: one focusing on social markers; one focusing on words phoneme-matched to those social markers; and a control group. All groups completed the same transcription tasks (20 baseline and 20 test sentences), with familiarization and training tasks depending on the group. The speech stimuli were all from naturally occurring speech between the speaker and a peer. Differences between the groups did not reach statistical significance, but the data showed trends suggesting that, while both training groups improved more than the control group, the group focusing on phoneme-matched words, and not social markers, had the largest perceptual gains. An exploratory analysis of lexical boundary errors in a small set of sentences also suggested that the phoneme group tuned into stress cues more than the other groups. However, this group also effectively received two streams of perceptual information, as they were passively exposed to the social information in the recorded speech. The results indicate that familiarization with social-indexical information *alongside* other information streams may lead to the most perceptual gain. The study also broadly shows that perceptual learning studies of this type can use naturally occurring speech and that there is some benefit to this. Listener-based interventions for people with dysarthria would benefit from centering the social life of the speaker, so listeners' perceptual systems are oriented toward the particular social speech that individual tends to use.

1. Literature Review

Historically, the 'medical model' of disability (see Haegele & Hodge, 2016; Shakespeare, 2013) regards disability as a function of the individual's impairment—a deficit or something to be fixed. In recent decades, through disability activism, the 'social model' of disability has emerged (Haegele & Hodge, 2016; Shakespeare, 2013). In this, disability is regarded as a function of a lack of accommodation of an individual's needs in society (see Grue, 2015; Marks, 1999; Mitra, 2006, for other approaches).

For people with communication disorders such as dysarthria, interventions often focus solely on the affected individual. Dysarthric speech is speech that is neurologically degraded (differing in prosody and articulation; Patel & Campellone, 2009; Paul et al., 2021) as a result of things such as traumatic brain injury, stroke, Parkinson's disease, motor neuron diseases, or congenital disorders such as cerebral palsy. Speech interventions that only target the speech of the disabled person aim to 'fix' their speech and do not utilize all the tools available

for improving communication. Such interventions aim to improve only speech production, while ignoring the great potential the human perceptual system has for learning. Harnessing the perceptual system for listener-targeted communication interventions (see Borrie & Lansford, 2021) would utilize more of the available learning tools. This approach is also better aligned with the social model of disability, which I follow in this study.

Here, I set out what perceptual learning is and how it applies to speech perception. I also explain the importance of social-indexical information in the speech signal—that the social information we receive about a speaker can help our perception of what they are saying, as explained by models such as exemplar theory. I look at research that has been done into how perceptual learning aids the understanding of degraded or disordered speech, in particular for speakers with dysarthria, and what might enhance this learning. I explore what researchers have found about: how the type and severity of dysarthria affect learning; what the conditions are for familiarizing listeners with dysarthric speech that best aid perceptual learning; whether particular listeners are better than others at understanding dysarthric speech; and how social-indexical information helps listeners decipher degraded speech. Here, I also introduce the current study, which aims to extend understanding of what types of social information might aid perceptual learning. I will be reporting the results of an experiment that tests whether attention to social markers, such as discourse markers and slang, in stimuli taken from a dysarthric speaker’s naturally occurring speech improves listeners’ speech perception of that speaker.

1.1 Perceptual learning

Perceptual learning for speech is the rapid adaptation that occurs in an individual’s perceptual system when they learn to decode another individual’s speech (Borrie & Lansford, 2021; Borrie et al., 2021; Samuel & Kraljic, 2009). To decode a speech signal, listeners must overcome the variability in the signal to map sounds to discrete mental categories. For an individual speaker, our perceptual system learns how acoustic cues and their associated categories are distributed (Kleinschmidt & Jaeger, 2015). Statistically predictable regularities in the acoustic signal (at the segmental and suprasegmental level) allow a listener to categorize speech cues, carry out lexical segmentation, map words to their meanings and quickly overcome the variation (Borrie et al., 2021).

For example, listeners’ processing speeds and accuracy improve very quickly when listening to accented speech (Clarke & Garrett, 2004; Xie et al., 2018), and perceptual learning is evident when people with cochlear implants habituate to the noise-vocoded speech produced by this device (Davis et al., 2005; Loebach et al., 2010). In addition, Nygaard et al. (1994) found that speech intelligibility in noise was improved when listeners heard novel words spoken by familiar speakers (compared with the control group who heard the same words spoken by unfamiliar speakers). Their study suggests that speaker information is stored with phonetic information and that knowledge of the acoustics of an individual’s voice and the identity of that speaker aid perception. Perceptual learning also occurs in the context of neurologically degraded speech (Borrie & Lansford, 2021; Mattys & Liss, 2008; both discussed further below).

Samuel and Kraljic (2009) give an overview of research on perceptual learning of speech. They looked at the literature on non-native phonetic contrasts, such as the many studies on how native Japanese speakers discriminate and can learn to better discriminate between English /r/ and /l/, which are not contrasting sounds in Japanese. They also explored how perceptual learning is involved in decoding accented speech, speech that has been degraded through compression, and speech in noise.

Kraljic et al. (2008) explored the idea of a ‘first impressions bias’ in our perceptual system. They posit that perception of the speech signal cannot be separated from the speaker, but that the perceptual system distinguishes between variation that has come about because of idiosyncrasies of the speaker themselves and variation that is the result of an extraneous cause (for example, if the speaker has a pen in their mouth, p. 332). The perceptual system will learn the first but not the second of these. Further, they state that the system is biased towards the earliest episodes of an individual’s speech, treating these as characteristic of this particular speaker (in the absence of other causes for the idiosyncrasies).

In models of perceptual learning such as Kleinschmidt and Jaeger’s (2015) ‘ideal adapter’ model, the social and phonological are intertwined. Loebach et al. (2008) found evidence of perceptual learning of noise-vocoded speech in listeners carrying out either a transcription task or one of two indexical tasks (either speaker identification or gender identification). They found that just as much perceptual gain was possible from an indexical source as from a lexical source, but that it depended on what the indexical task was (gains were greater for the speaker identification task than for the gender identification task). However, perceptual learning studies on dysarthria have not fully exploited indexicality as a source of learning. Studies on dysarthric speech and indexicality thus far have included only speaker identity as the social variable (Borrie et al., 2013; Mattys & Liss, 2008).

1.2 Indexicality and perception

Perceptual learning findings are consistent with exemplar models—work in this area shows pervasive effects of social information on speech perception. In models based on exemplar theory (Goldinger, 1996, 1998; Johnson, 1997, 2006; Pierrehumbert, 2001; Todd et al., 2019), indexical information about a speaker is integrated with the speech signal and stored as episodic memory. Each time a listener hears a spoken word, this leaves a “unique memory trace” (Goldinger, 1998, p. 251). In this trace “socially meaningful information is indexed to linguistic exemplars” (Drager & Kirtley, 2016, p. 5). Exemplars are tagged to contextual and social information such as gender and ethnicity. The exemplars are stored based on their similarity to each other, creating dense and sparse regions or ‘clouds’. Talker characteristics are an integral part of the signal—they are not removed or normalized (Johnson, 2006), as would be the case with older, abstractionist models, in which linguistic information is stored as abstract units in a person’s memory (for a brief overview see Smith, 2015). Exemplars are activated, along with attached social information, when there is a similar input stimulus. Hybrid models, such as those proposed by Cutler et al. (2010), Luce et al. (2002) and Pierrehumbert (2016) have come to the fore as they are better able to explain phenomena such as generalizability (our perceptual system can generalize knowledge of how a particular speaker produces a sound and apply it to words not heard before, which requires some level of abstraction) as well as word frequency effects (which cannot be explained by a purely

abstract model). Cutler et al. (2010) argue that both the ‘extreme abstractionist’ and the ‘extreme episodic’ models are untenable and that perceptual learning involves the adjustment, based on speaker variation, of pre-lexical phonemic representations.

Social information that is activated in perception is highly detailed and, rather than being just at the level of demographic information (gender etc.), it likely includes personal styles and stances—ways of speaking and being that signal group belonging (Drager & Kirtley, 2016). Stylistic information includes slang and discourse markers—filler words such as *y’know*, *um*, *like* (Schiffrin, 1987). Hearing a speaker use a particular slang word used by a particular group activates other indexical features (including linguistic content) common to the group. How we decode the speech signal in order to understand another person’s speech depends not only on acoustic input from the speaker’s voice but also on the indexical information we perceive about them (Creel & Bregman, 2011; Drager, 2010; Eckert, 2008). This indexical information can have many sources—aspects of the acoustic signal such as accent and prosody, as well as external inputs such as a person’s style of dress, their ethnicity and perceived abilities (Bucholtz & Hall, 2005a, 2005b; Coupland, 2007; Eckert, 2000, 2008; Ochs, 1992). For example, Eckert’s (2000) study of adolescents at a Detroit high school details the stylistic differences between two groups—the ‘jocks’ and ‘burnouts’. The groups are divided by social class (middle class and working class, respectively), and Eckert details how the groups index their respective identities through the way they dress as well as through their use of different sociophonetic variants and vocabulary (e.g., *dude*, *cool*, *right*; Eckert, 2000, p. 218).

Drager (2010) outlines the importance of studying sociophonetic variation in speech perception. We not only produce phonetic variables in socially meaningful ways, but we also perceive them in socially meaningful ways based on our experience with similar speakers and on social characteristics we assume about the speaker. As listeners, we bring to any interaction our own biases and stereotypes about speakers that can aid or inhibit our ability to understand them. We bring this sociolinguistic knowledge to the interaction even if we are unaware of it (Drager & Kirtley, 2016). Rather than being filtered out to reveal a canonical version of a phonetic variable, social and linguistic information are integrated in our perceptual system (Borrie et al., 2013; Johnson & Sjerps, 2021; Nygaard & Tzeng, 2021).

Perceptions of ambiguous variables can be primed by other linguistic information. For example, in a study by Warren (2017), listeners were played a series of sentences with high-rising terminal intonation and asked after each to choose whether they thought it was a question or a statement. In New Zealand English, high-rising terminal intonation can be used for question intonation or for a statement with ‘uptalk’ (see Warren, 2016). New Zealanders who use uptalk tend to be younger, and they distinguish question and statement intonation by the start point of the rise (it is earlier for questions spoken by younger speakers). Listeners were primed earlier in the sentence by another sociophonetic variable known to vary by age in New Zealand English, the realization of the SQUARE vowel as more innovative (closer to NEAR) or more conservative (closer to SQUARE). Warren found that, when primed with the conservative variant, listeners were slower to categorize the statement responses (i.e., when listeners perceived that the uptalk came from a speaker not from the social group that normally uses this intonation).

Priming can also happen with aspects of the environment itself. Hay and Drager (2010) used physical props (stuffed toys) in the room where a linguistic experiment took place to manipulate listeners' perceptions of speaker accent. Participants (speakers of New Zealand English) were exposed to either kiwi toys (representing New Zealand) or kangaroo and koala toys (representing Australia). They carried out an identical speech perception task, matching a target vowel in a spoken sentence with a continuum of synthesized realizations of that vowel. The realizations ranged from more Australian-like tokens to more New Zealand-like tokens. The authors found that listeners' perceptions of the vowels shifted depending on which soft toy they had been exposed to.

Drager (2010) points out that listeners attribute social meaning rather than this being only a speaker-induced phenomenon. Individual speakers can create a persona by recruiting certain variables known to be socially relevant, including linguistic ones. But for those variables to be meaningful, they must also be perceived as socially relevant. For example, in Campbell-Kibler's (2007) study on the variable *-ing*, participants from North Carolina and California were played recordings containing the variable produced as either ending in [ŋ] or [n] (as in *fishin*/*fishin'*) and were asked to comment on the speaker. The study revealed common social understandings of the production of this variable. The [n] ending was associated with Southern accents and judgements about a lack of education or being a 'redneck', while the [ŋ] ending was associated with a gay accent and judgements about lowered masculinity and being a 'metrosexual'.

Studies such as those outlined above not only show evidence that social and linguistic information are intertwined in the speech stream, but they also show that manipulating the social information a listener receives can alter how linguistic information is perceived. This sort of experimental manipulation can be applied to deciphering speech that is hard to understand, such as neurologically degraded speech. There is scope to use this knowledge of the importance of social-indexical information with what we know about perceptual learning (how our perceptual system rapidly adapts to another person's speech). Below I set out how this study aims to do this, but first I introduce research to date on perceptual learning of dysarthric speech.

1.3 Perceptual learning of dysarthric speech

Borrie and Lansford's (2021) review (updated from an earlier review; Borrie et al., 2012a) summarizes the research to date on perceptual learning of dysarthric speech. The aim for Borrie and her colleagues is to shift the burden of improving intelligibility from the speaker to the listener, as it takes both to have meaningful communication.

Research has looked at several specific areas to optimize perceptual learning, with a view to creating a flexible, evidence-based clinical tool for improving intelligibility for dysarthric speakers and their communication partners (Borrie & Lansford, 2021). These areas include the type of speech disorder (whether all types and severities of dysarthric speech are learnable); the familiarization conditions required for successful perceptual learning (what tasks and information help listeners learn); and the listener profile required (such as age and previous experience). Researchers have also looked at generalization (whether perceptual learning achieved with one dysarthric speaker can be applied to other dysarthric speakers;

Borrie et al., 2017a); however, generalization is not a focus of the present study. Few studies have specifically looked at the role of indexical information in perceptual learning of dysarthric speech—that is speaker-specific properties of the speech signal, such as pitch, rate and voice quality, that index aspects of a speaker’s identity (Borrie et al., 2013; Mattys & Liss, 2008).

1.3.1 Type of speech disorder

Dysarthria can have many clinical manifestations—differences in rate, pitch, intensity, rhythm, voice quality, consonant articulation, and vowel quality (Paul et al., 2021)—depending on the underlying cause of neurological degradation. Intelligibility can be affected by the type and severity of the speech disorder (Kim et al., 2011). What is key for inducing perceptual learning is that there is some acoustic regularity in the speech signal (Borrie & Lansford, 2021; Lansford et al., 2019, 2020). Listeners can quickly adapt to the speech signal if it has enough distributional regularities to allow mapping of the acoustic cues to stored linguistic categories, overcoming what Kleinschmidt and Jaeger (2015, p. 149) call the “lack of invariance” of the speech signal.

Lansford et al. (2019) summarize studies measuring intelligibility improvement in perceptual learning experiments for speakers with four different types of dysarthria: hypokinetic, ataxic, spastic, and hyperkinetic. Although the first three of these types of dysarthria all have abnormal rhythmic and segmental cues, the cues are nonetheless consistent for an individual speaker. They are, therefore, predictable and learnable by our perceptual system (Borrie et al., 2018; Lansford et al., 2019, 2020). However, hyperkinetic dysarthria, which is characterized by “variable speaking rate, excess loudness variations, pitch breaks, inappropriate silences, prolonged intervals and phonemes, and irregular articulatory breakdowns” (Lansford et al., 2019, p. 4284), has reduced signal predictability. Therefore, listener-targeted interventions for speakers with this type of dysarthria do not tend to show intelligibility gains (Lansford et al., 2019, 2020).

Hustad and Cahill (2003) found that when listening to speakers with severe dysarthria, intelligibility gains from familiarization that included audiovisual input were inconsistent and depended on how each individual’s face, tongue and mouth movements were affected by the motor disorder. They also found that, for speakers with severe dysarthria, more trials were needed for any significant intelligibility gains, but those gains were greater than for the more mildly affected speakers. For milder dysarthria, the gains were immediate.

1.3.2 Familiarization conditions

Research has established that there is a measurable benefit to having an orthographic transcript provided with the audio signal (explicit familiarization) for dysarthric speech (Borrie et al., 2012b, 2012c; D’Innocenzo et al., 2006). D’Innocenzo et al. (2006) looked at both the familiarization condition (word list, paragraph, or no familiarization) and the speaking condition (habitual, slow, fast, or loud). They found that participants familiarized with either type of written text subsequently had improved intelligibility scores compared with the control group, and that the loud condition also led to greater accuracy than the other speaking conditions when transcribing dysarthric speech. They concluded that intelligibility

gains because of familiarization were due to enhanced perception at the segmental level. Borrie et al. (2012b, 2012c) found that using orthographic as well as acoustic information (that is, explicit familiarization) leads to greater and longer-lasting intelligibility gains. In that study, a control group was not familiarized with dysarthric speech prior to testing; a passive familiarization group heard the dysarthric speech but was not given a transcript; and an explicit familiarization group heard the dysarthric speech and had a transcript. The authors used two measures of segmental processing to measure intelligibility gains compared with the control group: percent words correct (PWC) and percent syllable resemblance (PSR). They also looked at patterns of lexical boundary errors (LBEs) to measure suprasegmental processing. According to the Metrical Segmentation Strategy (Cutler & Butterfield, 1992), in English the first syllable of a word tends to be stressed, and unstressed syllables tend not to be word-initial, or they are function words/grammatical words. If listeners are relying on stress cues to decode connected speech, they will make more predictable errors at word boundaries: incorrectly inserting a boundary before a stressed syllable or incorrectly deleting a boundary before an unstressed syllable. They found that PWC for both familiarization groups was significantly greater than for the control group, and that PWC was also significantly greater for the explicit familiarization group than for the passive familiarization group. They concluded that, rather than gains in the explicit familiarization simply being an enhancement of the intelligibility gains from passive familiarization, the differences actually came from different perceptual sources. Both groups had gains at the segmental level (as evidenced by similar PSR scores). Familiarization with dysarthric speech meant listeners could map the disordered speech sounds onto their own mental representations of the sounds, and these gains remained at 7 days after familiarization. However, patterns of LBEs showed that the explicit familiarization group were paying more attention to stress cues (suprasegmental information) which led to even greater intelligibility gains, which remained *after 7 days*. So, with written information, listeners pay more attention to prosodic cues, which leads to greater and longer-lasting intelligibility gains.

Borrie and Schäfer (2015) then investigated whether imitation of disordered speech might help improve speech recognition. Just as an external, orthographic source helps listeners map what they hear to what they know (Borrie et al., 2012b, 2012c), an internally generated source might do the same. They compared a control group (given no training with dysarthric speech); an auditory group (asked to “listen closely” to the dysarthric speech); an auditory–written group (given subtitles to the dysarthric speech); an auditory–imitation group (asked to repeat each phrase back in the same manner as the dysarthric speaker); and an auditory–written–imitation group (who received all three inputs). This time looking at just PWC, the authors found that somatosensory information (the auditory–imitation group) did in fact have perceptual benefits compared with the control and auditory-only group, but that the gains were no better than for the auditory–written group. The greatest perceptual benefit came from having all three inputs. Borrie and Schäfer (2015) conclude that not only does perception influence production, but production also informs perception, and that multiple perceptual learning sources help disambiguate a degraded speech signal.

Another familiarization condition investigated is the use of video. For typical speech (non-degraded speech in clear conditions), visual information can benefit perception (Davis & Kim, 2004). This “audiovisual advantage” because of the multisensory nature of perception might be even more important when the speech signal is degraded (Borrie, 2015, p. 1473). The

visual cues do more to disambiguate the speech signal. Borrie (2015) looked at whether including audiovisual input in the familiarization task aided perceptual learning when deciphering dysarthric speech. She found that listeners given audiovisual input were better able to exploit suprasegmental cues than listeners given only audio input (evidenced by LBEs). However, intelligibility gains were not as great as they were for non-degraded speech. Importantly though, this study revealed that in adverse listening conditions, listeners varied a great deal in their ability to decode the speech signal (some seemed naturally better at it). This led to further study on what listener attributes contribute to this ability.

1.3.3 Listener profile

Borrie et al. (2021) tested whether experience as a speech language pathologist¹ gave listeners an advantage when it came to decoding dysarthric speech. They found that although the speech language pathologists as a group achieved intelligibility gains from pre-test to post-test, those who had specific experience with dysarthric clients had the biggest pre-test scores. Their conclusions were that familiarization is important for therapists as well as naïve listeners (that is, it is important to explicitly learn the speech of an individual dysarthric client), and that experience with dysarthria may be generalizable (there are parts of the speech signal that may be common to dysarthric speakers as a group).

It has also been suggested that listeners who have better rhythm perception (usually because of musical training) are better at understanding dysarthric speech, but only once they have undergone some familiarization training (Borrie et al., 2017b). And the same study showed that, although they did have higher pre-test intelligibility scores, there was no perceptual learning advantage for listeners with superior vocabulary knowledge.

Luhrsen (2017) found that older listeners were less accurate than younger listeners in transcribing dysarthric speech (pre- and post-familiarization), but the magnitude of intelligibility gains was similar for both age groups. A study by Lansford et al. (2018) showed the same result; however, they found that the older listeners with low accuracy were also those with hearing loss. This indicates that hearing status should be considered in perceptual learning studies, but that even people with hearing loss get perceptual benefit from a familiarization regime. This is important because many communication partners of dysarthric speakers are older caregivers, and hearing loss tends to increase with age (Schneider et al., 2005).

1.4 Indexicality

Borrie et al. (2013) also studied the role of indexical information in decoding a neurologically degraded speech signal. The three speakers in this study had hypokinetic dysarthria as a result of Parkinson's disease. Listeners were divided into three groups: one completed a word-identification task during training (targeting linguistic properties); one completed a speaker-identification task during training (targeting indexical properties); and the control group was passively exposed to the training stimuli. They found that both training groups showed similar

¹ In New Zealand, speech language pathologists are usually called speech language therapists, or speech therapists.

intelligibility gains compared with the control. Their PWC and PSR scores were comparable (see Figures 1 & 2). Importantly though, listeners trained on indexical properties paid more attention to syllabic stress cues (suprasegmental information) than the linguistic group did (as shown by LBEs; see Figure 3; further details on the measures used are given in the Results section of the present study). This indicates that speaker-specific information may be tied to suprasegmental information in the speech signal.

Figure 1

Mean percent words correct (PWC) for listeners by training group; bars are +1 SD. Figure from Borrie et al. (2013, p. 479).

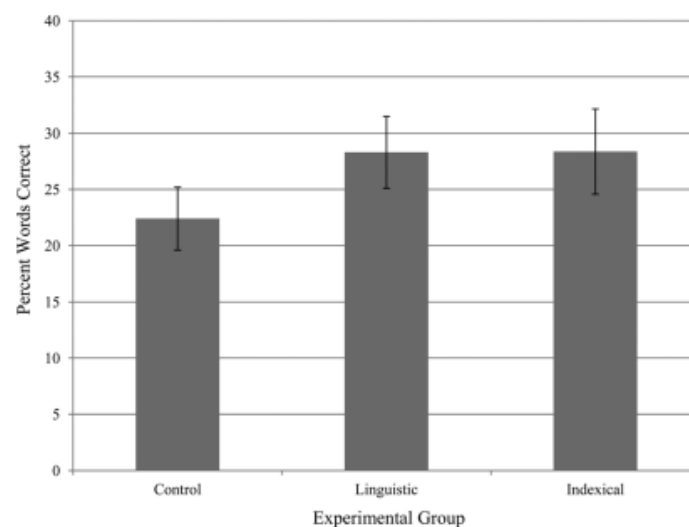


Figure 2

Mean percent syllable correct (PSC) and mean percent syllable resemblance (PSR) for listeners by training group; bars are +1 SD for PSR. Figure from Borrie et al. (2013, p. 479).

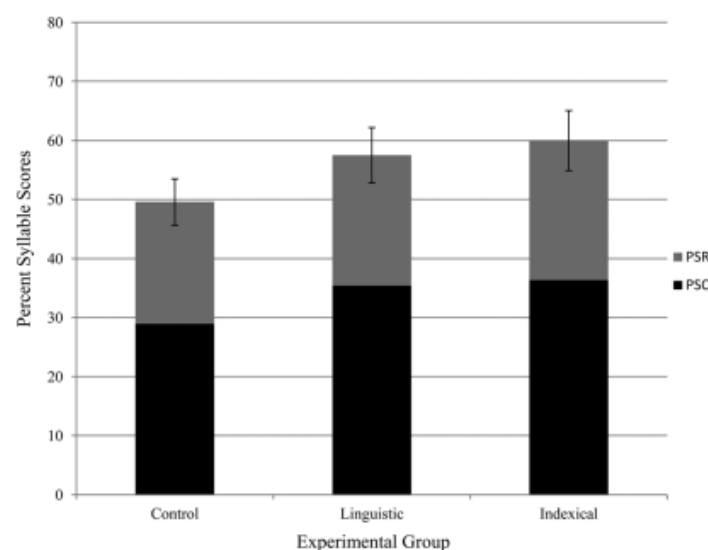


Figure 3

Table II from Borrie et al. (2013, p. 477) showing results of lexical boundary error analysis

TABLE II. Category proportions of lexical boundary errors expressed in percentages and sum error ratio values for listeners by experimental group.^a

Group ^b	%IS	%IW	%DS	%DW	IS/IW ratio	DW/DS ratio
Control	37.92	14.68	24.77	22.63	2.6	0.9
Linguistic	51.72	19.27	11.56	17.44	2.7	1.5
Indexical	54.53	16.21	10.53	18.74	3.4	1.8

^aIS, IW, DS, and DW refer to lexical boundary errors defined as insert boundary before strong syllable, insert boundary before weak syllable, delete boundary before strong syllable, and delete boundary before weak syllable, respectively. Error ratio scores reflect strength of adherence to predicted error patterns, with the greater the positive distance from “1” indicative of increased adherence.

^bN = 20.

Looking at indexicality as a source of perceptual learning may be especially important for decoding dysarthric speech. For example, Mattys and Liss (2008) found that words were recalled faster when played back in the same voice, and that this effect was greater for dysarthric speakers than for speakers with non-degraded speech. Participants were allocated to one of three groups, each with speech stimuli from different speakers: (1) a male and a female speaker with non-degraded speech (control); (2) a male and a female speaker with mild dysarthria; and (3) a male and a female speaker with severe dysarthria. Participants listened to two blocks of 60 monosyllabic words. In the second block, 40 of the words were repeated from the first block. Participants had to indicate whether they thought they had heard each word in the first block, regardless of speaker. These authors conclude that the listeners in their study relied more on indexical cues (that is, aspects of the speech signal specific to that speaker’s identity) for dysarthric speakers than for speakers with standard speech because the slower response times allowed listeners to retrieve episodic traces.

Indexicality is much more than just knowing a speaker’s name, and these studies on indexicality invite the questions: What other indexical features, beyond just speaker identity, might serve as sources of learning in perceptual learning of dysarthric speech? How might indexical cues be included in a training exercise alongside other evidence-based information streams? These questions help motivate the present study.

1.5 Social markers in speech

One important cue speakers use to index their identity is word choice—in particular, social markers, often with low semantic content, such as slang and discourse markers. Using particular social markers can signal to a listener aspects of the speaker’s identity, whether this is broad demographic information (gender, age, ethnicity) or narrower social-group affiliation.

Group membership is particularly important for youth. Youth slang and pragmatic markers are devices adolescent speakers use to “signal ingroupness” (Andersen, 2001, p. 8). For example, Andersen (2001) outlines the use of *like* and *BE like* in the speech of British teenagers in its many forms (as a quotative, an exemplifier, or a discourse link, for example), noting that its use likely spread from American English. Its use also seems widespread among young people in New Zealand (King, 2010). Moore and Podesva (2009) look in depth at the use of tag questions in a group of high school girls in Northwest England, emphasising that their function goes far beyond simply pragmatics. The different ways the tags are used by different social groups imbues them with social meaning. For example, a group the authors call “the Populars” use tag questions more often than other groups (p. 468), and they tend to use them in the context of evaluative talk mostly about other groups (i.e., gossip); whereas another group called “the Townies” tend to use tag questions mostly when talking about or to members of their own group (p. 471). Drager (2015) looked at the use of tag questions in the speech of different groups of teens at a New Zealand high school. Aijmer (2018) studied how London adolescents use ‘attention-getters’ (*look, listen, c’mon, excuse me*) to construct teenager identity. And Bucholtz and Hall (2005a) show how teenagers at the same Californian high school who ostensibly have the same demographic make-up (same gender, class, ethnicity, race, age) both use forms of *go*, *BE like*, and *BE all* to index their youth, but they use them in different ways to position themselves as “different kinds of teenagers” (p. 592).

In New Zealand English, as well as the use of *like* and *BE like* already mentioned (King, 2010), other ubiquitous discourse markers are *eh*, *sorry*, *bro*, *yeah-nah*, *cool*, *um*, *really*, *you know*, *kinda*, and *literally*. Giles-Mitson (2016) investigated the social-indexical meanings of the address forms *mate*, *bro*, *man*, and *guys*. Similar terms were studied by Wilson (2010) in the context of a New Zealand rugby team. Vine and Marsden (2016) studied the use of the pragmatic marker *eh* among male managers in formal workplaces. They concluded that as well as indexing Māori ethnicity, it indexes informality, rapport and solidarity, regardless of ethnicity. Although *eh* is not strictly a marker of youth, Stubbe and Holmes (1995) did find that it was used more (but not exclusively) by younger, working-class speakers. For female speakers, the word *sorry* appears often in informal speech, as women are more likely to both give and receive apologies as acts of negative politeness (Holmes, 1995).

1.6 The current study

In this study, I look at how social markers might be used as what I call ‘indexical primes’ to aid perceptual learning of dysarthric speech. By ‘indexical prime’ I mean a socially relevant linguistic or non-linguistic cue that indexes the speaker’s identity or membership of a particular group. These cues can prime the listener to position the speaker as part of that group, and because social information and lexical information in the speech stream are integrated, other information in the speech stream may be activated. Using social cues in this way may help the listener more easily decipher an individual’s speech (that is, attention to social markers may aid perceptual learning).

Teens and younger adults, for example, may orient themselves toward a particular social group and away from the (undesirable) adults’ and children’s worlds, using combinations of linguistic and non-linguistic variables (including particular slang and discourse features). Young dysarthric speakers will use the same linguistic features in natural speech with their

peers. This may be overlooked in interventions that focus on the speaker's abnormal speech or in listener-targeted interventions that do not include peer interactions. Tuning into this social speech in the real world may be important both in achieving successful listener-based interventions and in championing a social model of disability.

It seems likely that explicitly shifting a listener's social perceptions of a speaker (in effect, priming their perceptual system to view the speaker as part of a particular group through attention to social markers) might improve their perception of that individual's speech generally. My prediction is that this will provide greater activation of sociolinguistic cues than speaker identity alone did (cf. Borrie et al., 2013).

Showing that indexical features support perceptual learning has implications for the broader aims of improving communication for dysarthric speakers. It implies that focusing on indexical features at the outset will help peers, educators and clinicians to centre the dysarthric speaker as an individual who is part of a wider social network or peer group and thus promote and enhance inclusion and move away from a deficit model of disability.

1.7 Research questions

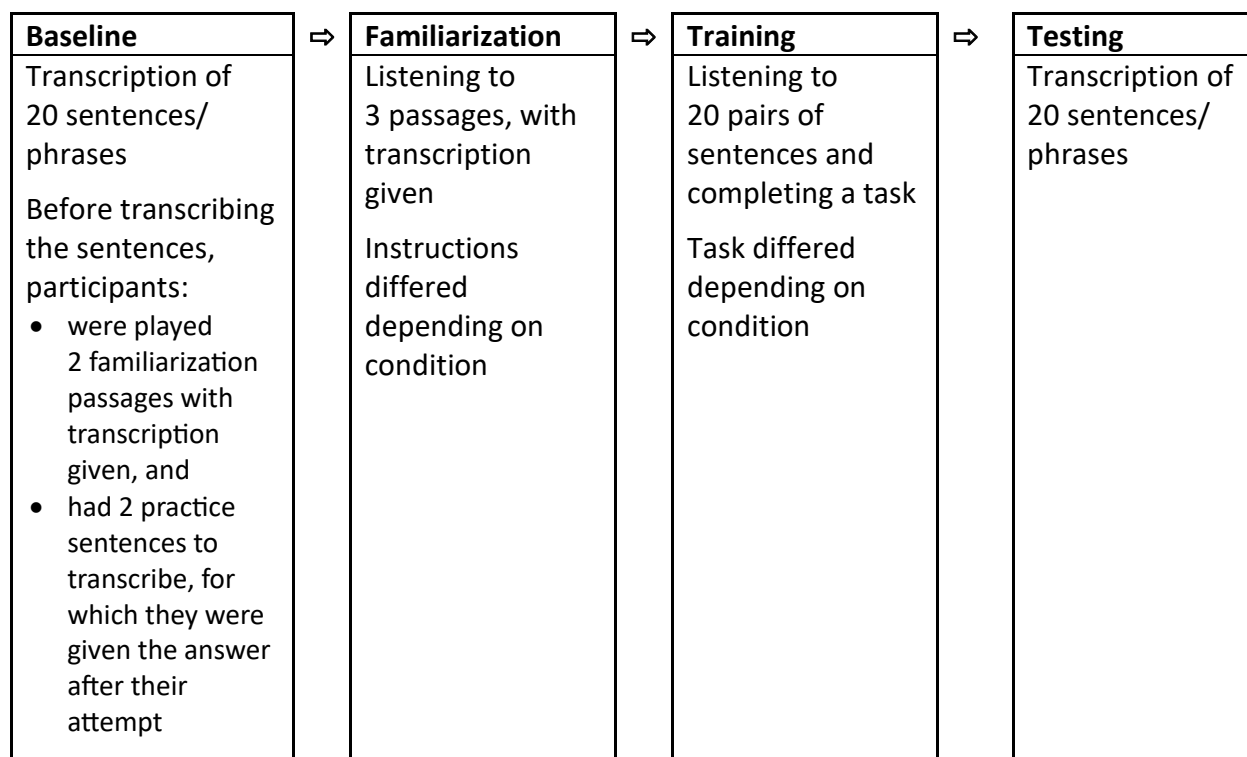
1) Does attention to social markers in dysarthric speech have intelligibility gains for listeners undergoing a perceptual learning training exercise for which the speech stimuli are from natural, conversational speech? That is, does centering the speaker as an individual within a rich and complex social network have measurable gains compared with listeners given no explicit training to identify social markers?

2) Are there gains beyond those afforded by simply becoming familiar with particular phonemes or lexical items? That is, does shifting a listener's expectations about a speaker by drawing their attention to the speaker's social identity improve intelligibility?

Note that specific predictions for the current study are listed after the Method (Section 2.3), following the description of the experimental conditions to which they relate.

2. Method

A speech perception experiment was carried out to investigate whether perceptual learning of dysarthric speech is improved by directing listeners' attention to social markers. The study was in two parts: (1) recording of naturally occurring speech to obtain stimuli for the subsequent experiment; and (2) the speech perception experiment itself, which had four phases: Baseline, Familiarization, Training, and Testing (see Figure 4). The procedures for both parts of the study are outlined below.

Figure 4*Phases of the speech perception experiment***2.1 PART 1: Recording**

The aim of the recording sessions was to obtain stimuli from naturally occurring speech to be used in the subsequent speech perception experiment. I used naturally occurring speech (Holmes & Hazen, 2013) rather than the semantically anomalous phrases Borrie et al. (2013) used in their study on indexicality and perceptual learning. Semantically anomalous phrases make it difficult for listeners to predict words based on other words in the sentence, and they allow researchers to control stresses within the words and sentence, making it easier to measure lexical boundary effects (see further discussion of LBEs in Part 2 below). However, social markers such as slang and discourse markers only really make sense in context, so they need to be examined in context. Naturally occurring speech also has the advantage of having more “ecological validity” (Holmes & Hazen, 2013, p. 295), both reflecting real-life usage and potentially producing results with better real-life applications. The method here is bottom-up—the stimuli come from the speaker rather than being given to the speaker to say, thus fitting better with the principles of co-design (see further below).

It was envisaged that during the experiment, participants would complete a Baseline phase (transcribing 20 sentences); a Familiarization phase (listening to longer passages of speech); a Training phase (listening to sentences containing social markers and sentences containing words phoneme-matched to those social markers); and a Testing phase (transcribing another 20 sentences) (see Figure 4). Therefore, I needed to obtain as much speech as possible containing social markers, such as slang and discourse markers, as well as sentences with none of these markers, and longer passages of speech.

2.1.1 Speaker and co-design

I recruited a 28-year-old male speaker of New Zealand English, Jack², who has mixed spastic/athetoid cerebral palsy. Jack's speech was assessed by two qualified speech language therapists, experts in the perceptual analysis of dysarthric speech, who came to a consensus agreement that he has moderate–severe spastic–hyperkinetic dysarthria.

Following the *National Ethical Standards for Health and Disability Research and Quality Improvement* (National Ethics Advisory Committee, 2019), I partially co-designed the first part of the experiment with the speaker. We corresponded by email ahead of time to come up with ideas for games and activities that he wanted to engage in for the experiment. Jack's suggestion that we record during his gym session with his friend/trainer was taken up. Once Jack and his friend knew what the recording sessions were like, they also agreed to do a further, more artificial, activity—a Diapix task (Baker & Hazan, 2011; Van Engen et al., 2010), described further below.

Co-design is important in disability research as it goes some way to addressing the power imbalance between the researcher and the disabled person. Historically, disabled people have often either been excluded from research or included as subjects rather than collaborators (National Ethics Advisory Committee, 2019). Furthermore, for the present study, including a relevant activity chosen by the participants themselves may be more likely to elicit natural speech containing social markers, as the participants may feel more comfortable.

There are differing views within the disability community on whether to use person-first language ('a person with a disability') or identity-first language ('a disabled person') (see Morgan (2023) and Office for Disability Issues (2022) for further discussion). In co-designing the experiment, I checked with Jack about this, and he had no preference. I, therefore, use the term 'disabled person/people' here (identity-first), following the generally accepted terminology in New Zealand at present according to the *New Zealand Disability Strategy 2016–2026* (Office for Disability Issues, 2016).

Jack and his friend gave informed consent to be recorded for the study, which had ethics approval from the Te Herenga Waka—Victoria University of Wellington Human Ethics Committee (#30951). Both Jack and his friend were given GiftPay vouchers at the conclusion of the recording sessions as an acknowledgement of their time.

2.1.2 Recording sessions

I recorded Jack on three occasions during exercise training sessions he did with his friend/trainer. Jack and his friend knew each other well and, between exercises, they had a lot of what Jack called “banter”—that is, naturally occurring speech between peers. During the exercise sessions I sat to the side of the room, moving the microphone when necessary. From time to time, I also engaged in the conversation when appropriate, but the vast majority of the conversation was between Jack and his friend.

² Jack is a pseudonym.

Before one of these sessions, I also had Jack and his friend engage in a Diapix task (Baker & Hazan, 2011; Van Engen et al., 2010). The Diapix task is designed to elicit spontaneous speech between a pair of people. They each had a copy of a visual scene containing slight differences (see Appendix A). They were asked to describe the pictures in as much detail as possible to each other, starting wherever they liked, in order to find 12 differences. During the Diapix task, I again sat to the side and only engaged in the conversation to instruct how the task should work and give some clues about what the pair might have missed in the pictures.

The Diapix task (Baker & Hazan, 2011; Van Engen et al., 2010) was preferred to another commonly used task for eliciting spontaneous speech, the Map Task (Brown et al., 1983). The Map Task involves two speakers (an instruction giver and an instruction follower) trying to navigate a map route, using separate maps that are out of sight of the other interlocutor. In the Map Task, conversational turns tend not to be even—the instruction giver typically talks more than the instruction follower—and there is not much opportunity for giving detailed descriptions of the pictures, since they are already labelled (Baker & Hazan, 2011). The Diapix task, in contrast, does not have defined roles for the participants, meaning there is typically a more balanced contribution, and the (unlabelled) pictures provide more scope for natural speech (Baker & Hazan, 2011).

Recording was done on a Rode NT-USB+ microphone, directly to the hard drive on a laptop, using Audacity® (Audacity Team, 2023). The microphone was placed facing the main speaker, Jack, approximately 1.0–1.5 meters away and was moved as he moved around the room for the exercise sessions, and on a desk for the Diapix task.

2.1.3 Obtaining potential stimuli and re-recording

Full transcripts of the recordings were made, and a selection of sentences and passages to be used as potential stimuli for the experiment were chosen from these. See Materials below for further explanation of how these were selected. All potential stimuli were then re-recorded in order to obtain high-quality recordings, with the microphone on a table in front of Jack (approximately 40 cm away). The re-recorded sentences were split into separate .wav files and scaled for a uniform intensity of 75dB.

2.1.4 Norming study

The potential stimuli were included in a norming study to rate their intelligibility so this could be controlled for in the experiment.

2.1.4.1 Norming study—Materials/Stimuli

From transcripts of the recordings, 50 sentences not containing any social markers were selected for possible inclusion in the Baseline and Testing phases of the experiment. These sentences also did not contain any of the phoneme-matched words used in the Training part of the experiment (explained below). Care was taken not to use sentences that repeated content words (nouns, verbs) within the Baseline and Testing sentences, so some words had to be altered from the originals where necessary to avoid repetition. As well as this, sentences that might be too predictable were also avoided (e.g., *Is that not good enough for you?*).

Twenty sentences or phrases that did contain social markers were selected from the transcripts to be used in the Training phase of the experiment. A further 20 sentences were created to loosely match these training sentences—the overall sentence length and prosody were matched as closely as possible, and the target word had a word in the same place in the sentence with at least one phoneme matched (e.g., *I'll work it out, no stress / I can't work in this mess*).

As there were a large number of sentences, 90 in total (50 Baseline and Testing sentences, plus 40 Training sentences), the task was split in half and two sub-studies were done (Norming Study A and Norming Study B), with 45 sentences in each. The two sub-studies had a balanced number of Baseline/Testing sentences and Training sentences containing either social markers or their phoneme matches.

2.1.4.2 Norming study—Participants

For the norming study, I recruited 16 speakers of New Zealand English (4 men and 12 women) who met the inclusion criteria for the main speech perception experiment (outlined in Part 2 of this section). Participants in the norming study were aged between 24 and 51 years ($M = 43.75$ years; $SD = 8.90$).

2.1.4.3 Norming study—Design and procedure

Using the speech stimuli, a survey was created in Qualtrics (<https://www.qualtrics.com/au/>). Participants completed the survey online in their own homes, in a single sitting in a quiet room, using their own headphones on a laptop or desktop.

After giving their informed consent, participants were played two short blocks of speech alongside transcripts of what was being said (Recordings 4 and 2 in Appendix B). They were then played three blocks of 15 sentences each, with a break between each block. Each sentence played automatically when a new page loaded (after the participant clicked the forward arrow on the previous page) and there was no option to replay it. Participants were asked to transcribe into written English what they heard, and (following Borrie et al., 2013) to put an X if they were unsure of a word or part word. No feedback was given.

2.1.4.4 Norming study—Results

Responses were scored manually to get the PWC for each response. The PWC was the number of correct words as a percentage of the maximum possible for each sentence. See the “Scoring” section in Part 2 for further information on rules that were applied when scoring (e.g., if *The* appeared instead of *A*, or vice versa, it was still marked correct).

For all sentences, participants' average PWC in Norming Study A ($M = 52.5$, $SD = 7.9$) was higher than in Norming Study B ($M = 43.18$, $SD = 6.2$).

For the Baseline/Testing sentences, the average accuracy for each sentence ranged from 4.5–100.0 PWC ($M = 48.7$, $SD = 24.0$), across both norming studies. These sentences were ranked, to choose two lists of 20 sentences (one for Baseline and one for Testing) that were evenly

distributed in terms of difficulty. See Appendix B for the final list of sentences. From the Baseline and Testing sentences, two of the easiest (with 91% and 93% accuracy) were included in the subsequent experiment as practice questions.

For the Training sentences, the average accuracy for each sentence ranged from 0.0–100.0 PWC ($M = 46.6$ PWC, $SD = 30.0$) across both norming studies. For the sentences containing social markers, the average accuracy by sentence was 41.0 PWC ($SD = 32.2$). And for the sentences containing phoneme matches, the average accuracy by sentence was 37.0 PWC ($SD = 31.3$). The Training sentences were analyzed to see if participants were able to identify the target words, even for those sentences with very low scores (with a view to omitting any sentences where no participants were able to identify the targets). However, due to an oversight in planning the study, there were not enough Training sentences recorded to be able to leave any out, so it was decided to include all sentences.

2.2 PART 2: Speech perception experiment

2.2.1 Materials

The 20 Baseline, 40 Training, and 20 Testing sentences described above became the stimuli for Part 2, the speech perception experiment. Another five longer passages from the recordings, containing some social markers, were selected for Familiarization in the experiment (two ahead of the Baseline and three in the Familiarization block). Two sentences that had very high accuracy rates in the norming study were used as practice sentences before Baseline.

Appendix B gives the full set of final stimuli.

2.2.2 Participants

For the speech perception experiment, I recruited 52 participants (39 women, 12 men, and one non-binary person) via my own networks and from students and staff at Te Herenga Waka–Victoria University of Wellington. The participants were aged between 18 and 59 years inclusive ($M = 40.33$ years; $SD = 10.30$). People older than this were not included because of the possibility of undiagnosed hearing loss and potential age-related cognitive effects (see Lansford et al., 2018; Luhrsen, 2017; Wingfield et al., 2005). Only speakers of New Zealand English were included in the study (defined as anyone who had lived in New Zealand between the ages of 3 and 16 years with no breaks longer than 1 year during this time). Excluded from the study were anyone with significant hearing loss (see Lansford et al., 2018); anyone with a very close friend or relative with dysarthria; and anyone trained as a speech therapist (see Borrie et al., 2021). Participants were advised of the criteria before starting, and two participants were excluded for one of these reasons, as well as three others who had equipment failure at the outset. The study also asked participants if they had a high level of training either in music (see Borrie et al., 2017b) or in prosodic analysis. In analysis, these results were examined more closely (see Results section below).

In the Training phase, there was one participant who scored 30.0% accuracy; other participants scored between 60.0 and 95.0% (see details in Results section below).

This participant reported that “the recordings were low quality so I feel like they weren’t synonymous with a real conversation”. As their low score in Training indicates there may have been some problem with their audio, their results were excluded from the analysis. Another participant reported the sound cutting out in several of the Baseline and Testing sentences, and they were also excluded. And one participant who reported having had training in prosody had the largest improvement in their score from Baseline to Testing ($PWC_{diff} = 0.206$; this measure, which is the difference between a participant’s Baseline and Training score, is described further in the Results section). They were also excluded. This left a final count of 49 participants.

2.2.3 Design and procedure

Using the final speech stimuli decided on after the norming studies, a survey for the speech perception experiment was created in Qualtrics (<https://www.qualtrics.com/au/>). As in the norming studies, participants completed the survey online in their own homes, in a single sitting in a quiet room, using their own headphones on a laptop or desktop.

The 49 participants were randomly allocated to one of three groups (Discourse Markers, DM³, $n = 16$; Phoneme Matches, Phon, $n = 17$; and Control, $n = 16$), each receiving different task instructions in the Training phase of the experiment. These instructions are detailed further below. Participants also filled out a basic demographic questionnaire. As an acknowledgement of their time, all participants, including those in the norming studies, went in a draw to win one of four GiftPay vouchers.

There were four phases in the experiment: Baseline, Familiarization, Training, and Testing (see Figure 4, above).

2.2.3.1 Baseline

All participants completed the same activities in the Baseline phase of the experiment. Because the norming study showed that people found it very hard to transcribe dysarthric speech with absolutely no exposure to it, I opted to include two short Familiarization blocks ahead of the Baseline sentences (see Appendix B). It was hoped this would ensure people did not drop out of the survey early as they found it too difficult. Participants listened to two short extracts from the recordings alongside transcripts. They then listened to and transcribed two practice sentences (see Appendix B), with the correct transcription shown on the screen as feedback after each one. Then they were asked to transcribe the 20 Baseline sentences, with a break halfway through. No feedback was given. Each Baseline sentence played automatically when the new page loaded (after the participant clicked the forward arrow on the previous page) and there was no option to replay it. This was to avoid discrepancies between participants (some might have played it multiple times to arrive at the best transcription, whereas some might have opted for fewer or no repetitions). Following Borrie et al. (2012b, 2013), participants were told to put an X for any word or part of word

³ Note that this group was originally called “Discourse Markers/DM” rather than using the broader term “social markers” used elsewhere in this paper. “Discourse Markers/DM” has been retained as the label for the group in the Method and Results sections here, although the stimuli do include social markers other than just DMs. The term “social markers” was used in instructions to participants.

they were unsure of. All target sentences were randomly cycled so participants heard the same sentences/phrases but in different orders.

2.2.3.2 Familiarization

All participants heard the same Familiarization extracts, accompanied by transcripts. They were all told they would hear three recordings, followed by a short task to do, but the three groups were given different instructions.

The DM group was told:

- 1 **For the recordings:** Follow along with the transcripts and pay particular attention to **social markers** that the speaker uses. Social markers are words and phrases that make someone's speech distinctively theirs. They can be filler words such as *y'know*, *um*, *like* or slang such as *yeah right*, *all good*.

For the task: You'll be played a series of new sentences and asked whether you heard certain social markers.

The Phon group was told:

- 2 **For the recordings:** Follow along with the transcripts and pay particular attention to anything that might help you understand **the words** the speaker says.

For the task: You'll be played a series of new sentences and asked whether you heard certain words.

The Control group was told:

- 3 **For the recordings:** Follow along with the transcripts.

For the task: You'll be played a series of sentences, but you won't be given a transcript. Your task is simply to listen carefully to each sentence.

2.2.3.3 Training

The three groups also had different tasks in the Training phase, although they all heard the same pairs of sentences. Table 1 outlines the Training tasks for each condition, with examples. Note that in conditions 1 and 2, the other options in the multichoice questions were not words that participants had heard elsewhere in the experiment. Again, all pairs of Training sentences were randomly cycled so participants heard the same sentences/phrases but in different orders. There was a break halfway through the Training phase.

Table 1

Instruction and task for Training phase of the experiment, depending on condition

Condition 1: Discourse Markers group	
Instruction:	“Listen carefully for any social markers”
Task:	Participants were played pairs of sentences and asked if they heard a particular social marker after each pair.
Sample question:	Which of these did you hear? <input type="radio"/> okay <input type="radio"/> yeah <input type="radio"/> really
Sample feedback:	Answer: <input type="radio"/> okay <input checked="" type="radio"/> yeah <input type="radio"/> really
Condition 2: Phonemes Matches group	
Instruction:	“Listen carefully to the words”
Task:	Participants were played pairs of sentences and asked if they heard a particular word or phrase after each pair.
Sample question:	Which of these did you hear? <input type="radio"/> next <input type="radio"/> new <input type="radio"/> must
Sample feedback:	Answer: <input type="radio"/> next <input type="radio"/> new <input checked="" type="radio"/> must
Condition 3: Control group	
Instruction:	“Listen carefully”
Task:	There was no explicit task for this group. They listened passively to the pairs of sentences.

2.2.3.4 Testing

All participants completed the same activities in the Testing phase of the experiment. They were asked to transcribe 20 Testing sentences, with a break halfway through. No feedback was given. Again, each Testing sentence played automatically and there was no option to replay it, and all target sentences were randomly cycled so participants heard the same sentences/phrases but in different orders.

At the conclusion of the experiment, participants had the option to report any feedback or to state whether they had any technical difficulties.

2.2.4 Scoring

2.2.4.1 Percent words correct

Initially, scoring was carried out using Autoscore. This is an open-source tool for automatically scoring listener transcripts against target words/sentences (Borrie et al., 2019; <http://autoscore.usu.edu/>). Autoscore was run using the following rules: *A/The* rule (*a* and *the* can be substituted for each other); tense rule (response correct if differs by *-d* or *-ed*); plural rule (response correct if differs by *-s* or *-es*); number-text rule (numbers are correct whether written with digits or spelt out as words); contractions rule (response correct whether written as a contraction or spelt out in full). The acceptable spellings list provided in Autoscore was used (it has common homophones and misspellings), and other likely misspellings/alternatives taken from the actual target sentences were added (such as *favourites/favorites*, *t-shirt/tee-shirt/tshirt*, etc.). Scoring for this dataset also allowed substitution of *it* and *that*.

Unfortunately, the final scores showed some discrepancies. For example, several scores were over 100%, indicating that there was an error in how the correct words were being counted. Therefore, I opted to score the responses manually and compared them with the autoscore results. The same rules were applied. Sentences where the scores did not match were re-checked, and the file was amended.

2.2.4.2 Lexical boundary errors

Using naturally occurring speech to obtain the stimuli for the experiment poses methodological problems for examining lexical boundary effects (and therefore suprasegmental information in the speech signal) as it is not possible to control the stress patterns of the speech as Borrie et al. (2013) did. In order to more easily analyze LBEs as well as eliminate contextual effects, they used grammatically plausible but semantically anomalous phrases in which the prosody was highly controlled (with either an iambic or trochaic stress pattern).

In Borrie et al.'s (2013) study, they found differences by group for the types of LBEs present (see Figure 3 above). The indexical group made proportionately more predicted LBEs than the other groups. In the present study, initially all Testing phase sentences were analyzed for the presence of LBEs. Because the recordings were taken from natural speech, however, they were not able to be controlled for syllable structure, so not all sentences lent themselves to further LBE analysis. The eight sentences with the most boundary errors (indicated in Appendix B) were selected and coded for the type and position of the errors (as per Borrie et al., 2013): IS, boundary incorrectly inserted before strong syllable; IW, boundary incorrectly inserted before weak syllable; DS, boundary incorrectly deleted before strong syllable; DW, boundary incorrectly inserted before weak syllable.

2.3 Predictions

- 1 For PWC, the Phon group and the DM group will have greater intelligibility gains than the Control group.
- 2 For PWC, the DM group will have greater intelligibility gains than the Phon group.
- 3 For LBEs, the DM group will have more predicted errors compared with the other two groups.

3. Results

3.1 Training phase

The average percent accuracy (mean \pm SD) in the Training phase, after exclusions (which are detailed earlier in the Methods section), was $80.9 \pm 9.4\%$ for the DM group and $70.0 \pm 6.9\%$ for the Phon group.

In Borrie et al.'s (2013) study, they used an accuracy rate of 70.0% in the Training phase as a cut-off for inclusion in the analysis. Here, a cut-off of 60.0% was used, as all participants scored between 60.0 and 95.0% and the distribution of accuracy scores by participant was normal, with no outliers aside from the participant already excluded for a very low Training score (see Methods). The Training task here is different from that undertaken by Borrie et al. (2013). In that study, groups were played 36 phrases and after each, they were either asked a speaker's identity or asked to choose between phonetically similar words. In the present study, groups were played 20 pairs of sentences and were asked either to identify social markers in them or to identify particular words which had some phoneme matches with the target social markers. Although the tasks were different, Training results were similar (all participants in Borrie et al.'s training groups, $n = 40$, achieving $> 70\%$, and all participants in the training groups in the present study, $n = 33$, achieving $> 60\%$). This indicates a similar level of difficulty for the tasks.

3.2 Baseline and Testing phases

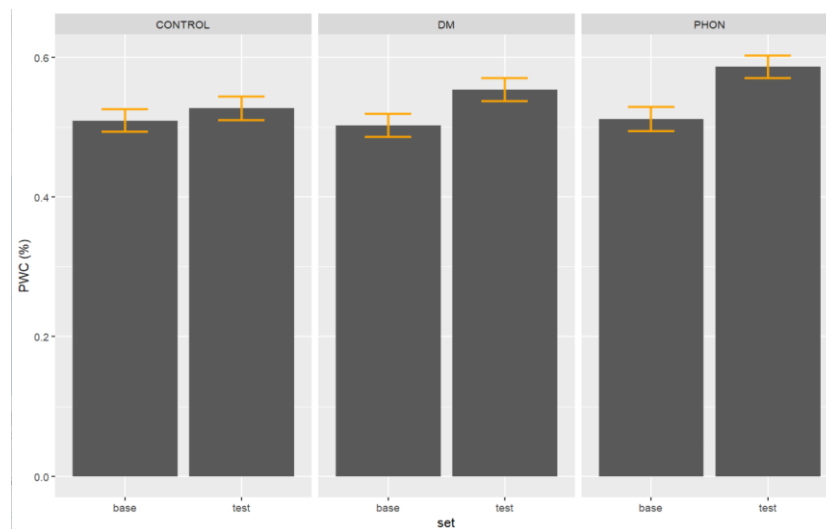
3.2.1 Percent words correct by condition

All participants (total $n = 49$) allocated to the three conditions (DM: $n = 16$; Phon: $n = 17$; Control: $n = 16$) were played the same sentences in the Baseline and Testing phases (Baseline: 20 sentences, word count 141; Testing: 20 sentences, word count 121).

The PWC score was calculated from the maximum score possible for each sentence, and the mean PWC for each participant for the Baseline and Testing sentences were compared across the three conditions (raw data are presented in Figure 5). The Baseline mean scores were very similar across conditions (PWC \pm SE: Control 50.9 ± 1.6 ; DM 50.2 ± 1.7 ; Phon 51.2 ± 1.8). But in the Testing phase, the Control group scored lower than the other two groups (52.7 ± 1.7), and the DM group (55.4 ± 1.7) scored lower than the Phon group (58.6 ± 1.6).

Figure 5

Mean percent words correct from raw data (as a proportion, PWC %) in Baseline to Testing phases for each of the conditions: Control, Discourse Markers (DM), and Phoneme Matches (Phon). Bars show standard error.



Generalized linear mixed effects (*glmer*) modelling was used to analyze the proportion correct per sentence. A binomial model with a weighting for the number of words in each sentence was built using the *lme4* package in the R statistics package (Bates et al., 2015; R Core Team, 2023). The model included an effect on PWC of the interaction of set*condition, and random slopes for condition|target and set|participant, where set is the set of sentences heard (Baseline or Testing), condition is the group each participant was allocated to in the Training block (DM, Phon, or Control), and target is the target sentence. Analysis of variance (ANOVA) was performed (see Table 2). This showed a marginally significant effect ($p < 0.1$) of set*condition for PWC scores.

Table 2

ANOVA of the final model for percent words correct (PWC)

	χ^2	d.f.	($> \chi^2$)
Set	0.50	1	0.48
condition	0.32	2	0.85
set*condition	4.81	2	0.09*

* $p < 0.1$

Figure 6 shows the predicted effect on PWC from Baseline to Testing for each group; estimates were generated using the *ggeffects* package (Lüdtke, 2018) and the graph using *ggplot2* (Wickham, 2016). This shows that all groups performed similarly in the Baseline phase, and it shows the trend that both groups that received training (DM and Phon) improved from Baseline to Testing, but the Control group did not. It also suggests that the Phon group tended to outperform the DM group. However, neither of these comparisons was

significant in post-hoc testing using emmeans (Lenth, 2023; $p > 0.1$). The only significant result was that the Phon group's estimated performance in Testing was significantly greater than the Control group's estimated Baseline performance (see Table 3).

Figure 6

Predicted mean percent words correct (as a proportion) in Baseline to Testing phases for each of the conditions: Control, Discourse Markers (DM), and Phoneme Matches (Phon), from the glmer model. Bars show standard error.

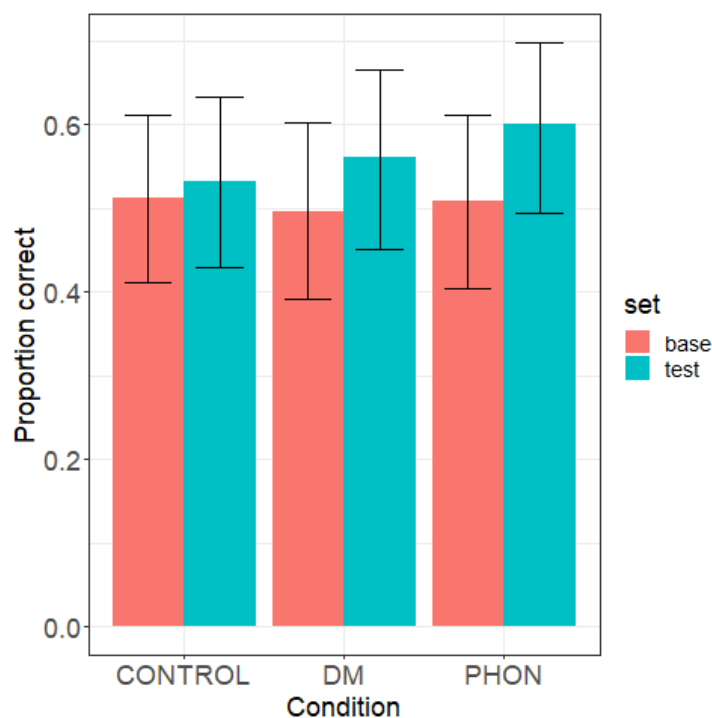


Table 3

Predicted fixed effects results for percent words correct (PWC) from Baseline to Testing depending on condition, from the glmer model

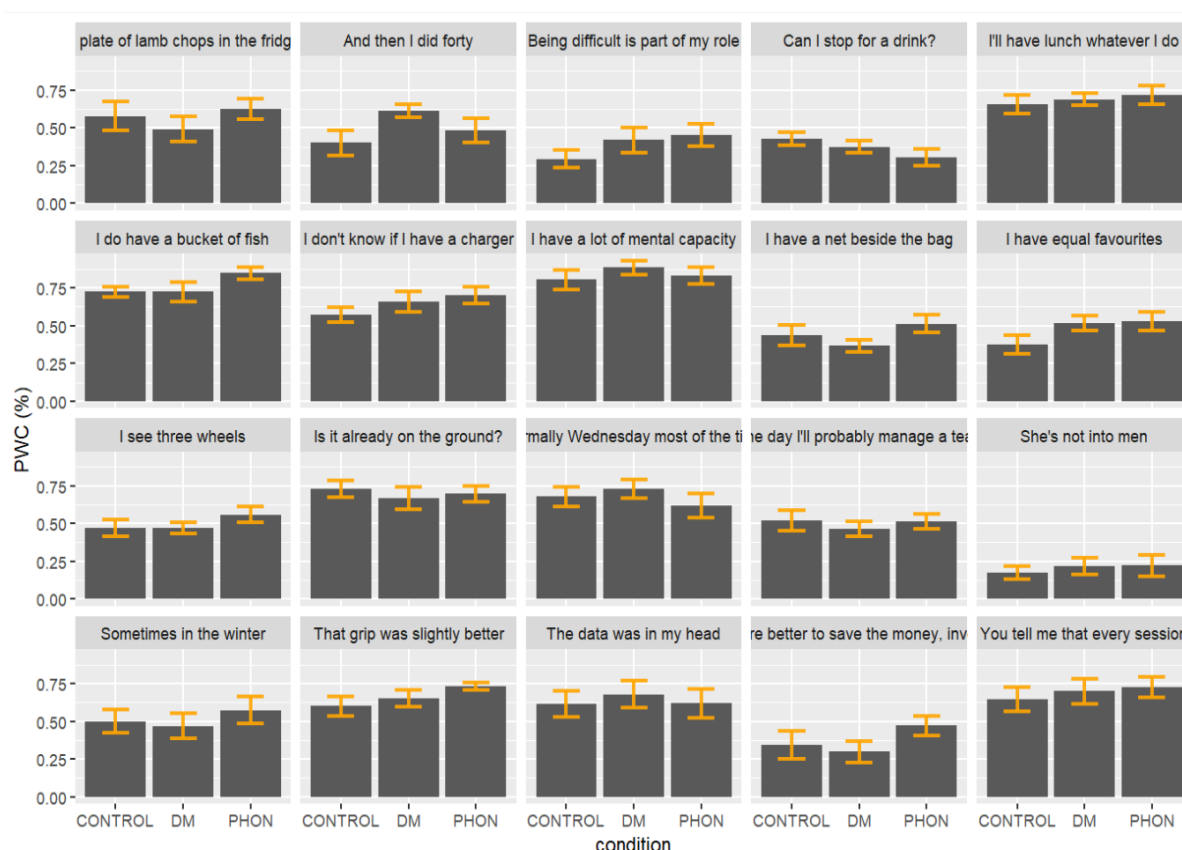
	Estimate	s.e.	z value	Pr(> z)
Intercept	0.0463	0.2060	0.22	0.822
Settest	0.0802	0.2398	0.33	0.738
conditionDM	−0.0598	0.1988	−0.30	0.764
conditionPHON	−0.0155	0.1886	−0.08	0.934
settest:conditionDM	0.1791	0.1559	1.15	0.251
settest:conditionPHON	0.2931	0.1345	2.18	0.029*

* $p < 0.05$

Looking at the data by sentence showed a lot of variation in the mean PWC (range: 11.8–88.4%). For example, Figure 7 shows great variability in the performance in each condition depending on the sentence for the Testing sentences.

Figure 7

Mean percent words correct (PWC) for each Testing sentence by condition: Control, Discourse Markers (DM), and Phoneme Matches (Phon). Bars show standard error.

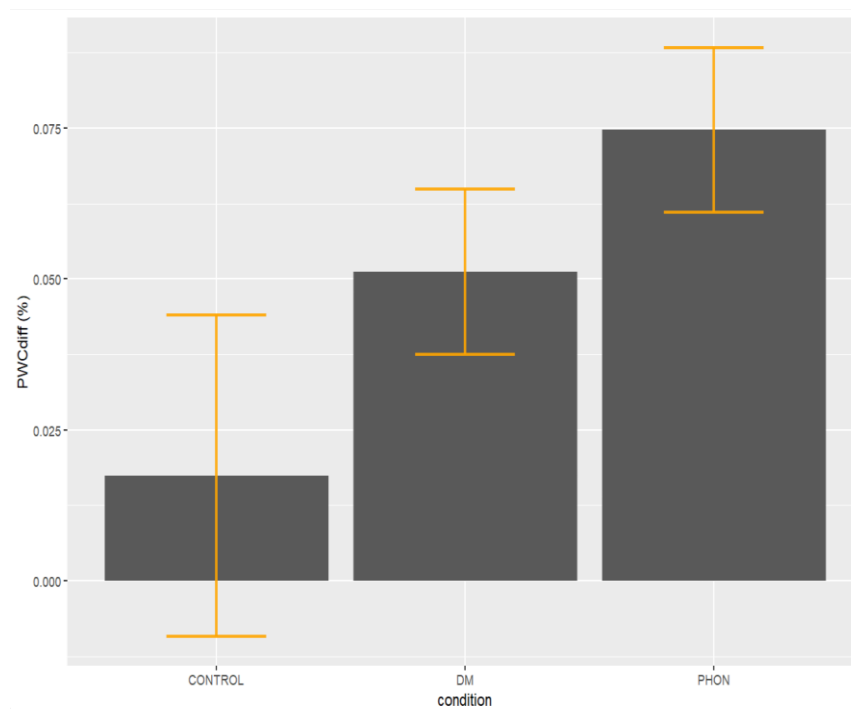


3.2.2 Percent words correct—Difference

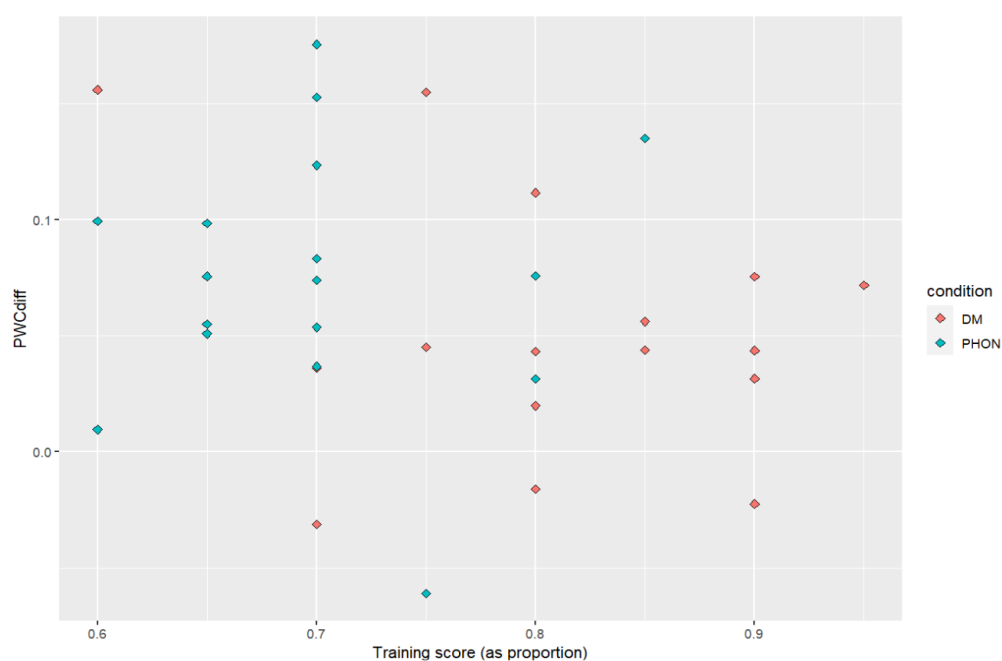
The difference in mean scores from Baseline to Testing was calculated (test – base) for each participant, giving the measure PWCdiff. Figure 8 shows the mean values of these differences according to condition. These values for the Control condition ($\text{PWCdiff} \pm \text{SE}: 1.74 \pm 2.66$) were the lowest, with the error bars crossing zero, but showed the most variation. And, again, the DM condition (5.12 ± 1.37) scored lower than the Phon condition (7.47 ± 1.37). Modelling was not used to analyze PWCdiff as it may have been inconsistent due to a possible “ceiling effect”—those scoring highly in the Baseline would have had less room for improvement and may have shown little improvement, regardless of condition. However, the descriptive results are still useful to confirm the PWC results discussed above.

Figure 8

Mean difference in percent words correct (PWCdiff) between Baseline and Testing phases for each of the conditions: Control, Discourse Markers (DM), and Phoneme Matches (Phon). Bars show standard error.

**Figure 9**

Effect of Training score (shown as proportion) on the difference from Baseline to Testing in percent words correct (PWCdiff) for Discourse Markers (DM) and Phoneme Matches (Phon) conditions.



As reported above, the Phon group had a lower average Training accuracy ($70.0 \pm 6.9\%$) than the DM group ($80.9 \pm 9.4\%$), possibly indicating a harder Training task. However, this group showed the greatest improvement from Baseline to Testing (PWCdiff: 7.47 ± 1.37 , compared with 5.12 ± 1.37 for the DM group). Therefore, the effect of Training accuracy on Testing results was investigated, but no correlation was found between participants' scores in the Training block and their improvement from Baseline to Testing, as measured by PWCdiff (see Figure 9).

3.2.3 Lexical boundary errors

An exploratory analysis of the LBEs in the Testing phase sentences was undertaken in order to see if the three groups attended differently to stress cues in the sentences (see section 2.2.4.2). As explained above, if listeners are relying on stress cues to decode connected speech, they are more likely to incorrectly insert a boundary before a strong (stressed) syllable (IS) or incorrectly delete a boundary before a weak (unstressed) syllable (DW). Because of the low counts for this data, it was not appropriate to run statistical models.

As explained above (see section 2.2.4.2), eight sentences were selected for analysis of LBEs. Following Borrie et al.'s (2013) study, errors are expressed as a proportion of the total errors for each group; these are given in Table 4. Also shown are the ratios of the predicted (IS or DW) to non-predicted (IW or DS) errors for each error type (insertions or deletions). This shows similar proportions for the three groups for DW and IW errors. The Phon group had slightly fewer DS errors, and the Control group had slightly more IS errors. All groups had many more IW errors than any other type/position. The main difference in ratios is that the Phon group had more predicted errors of the DW/DS type, which would be consistent with them using stress cues more. Again though, the small dataset means that this data is unable to be statistically analysed, and firm conclusions are impossible.

Table 4

Lexical boundary errors (LBEs) for selected sentences from Testing block, as proportion (%) of errors in each condition: Discourse Markers (DM), Phoneme Matches (Phon), and Control. Also shows ratios of predicted to non-predicted error types (IS/IW and DW/DS)

	Error type and position:				Ratios*:	
<i>Condition:</i>	IS	IW	DS	DW	IS/IW	DW/DS
<i>DM</i>	8.33	62.50	10.42	18.75	0.13	1.80
<i>Phon</i>	7.87	67.42	6.74	17.98	0.12	2.67
<i>Control</i>	14.89	54.26	12.77	18.09	0.27	1.42

DS: delete boundary before strong syllable; IS: insert boundary before strong syllable;

DW: delete boundary before weak syllable; IW: insert boundary before weak syllable.

*A greater positive distance from 1 indicates increased adherence to predicted error patterns.

Figure 7 (above) shows that two of the selected sentences (*I have a net beside the bag* and *Normally Wednesday most of the time*) had different accuracy between the DM and Phon groups in the Testing phase. The LBEs of these particular sentences were checked to see if the difference in Testing results might be reflected in different types of errors in the LBE data.

However, the error counts were very similar (see Table 5), meaning the difference in performance for the two Training groups for these two sentences was (based on this very small dataset) likely not a result of the difference in attention to stress cues.

Table 5

Counts of lexical boundary errors (LBEs) for two selected sentences from Testing block, by condition: Discourse Markers (DM), Phoneme Matches (Phon), and Control

	Error type and position:			
Condition:	DS	IS	DW	IW
<i>"I have a net beside the bag"</i>				
DM	1	3	1	0
Phon	1	1	3	0
Control	1	3	1	0
<i>"Normally Wednesday most of the time"</i>				
DM	0	0	0	13
Phon	0	0	1	12
Control	0	0	0	13

DS: delete boundary before strong syllable; IS: insert boundary before strong syllable;
DW: delete boundary before weak syllable; IW: insert boundary before weak syllable.

4. Discussion

This study explored how listeners' perceptions of dysarthric speech can be improved by directing their attention to sociolinguistic aspects of the speech signal. It aimed to investigate whether an indexical cue not yet explored in this context—the use of socially relevant language in the form of social markers such as discourse markers and slang—might aid perceptual learning of dysarthric speech. The speech perception experiment undertaken did not, however, show any clear evidence that attention to social markers in dysarthric speech had intelligibility gains. The descriptive data do suggest some interesting trends though (discussed below), even if these did not reach statistical significance. The discussion that follows looks at these trends—with the important caveat that these were *trends* only, not statistically significant results.

Prediction 1 is supported: "For PWC, the Phon group and the DM group will have greater intelligibility gains than the Control group". The two groups of listeners who received more explicit familiarization and training improved more from Baseline to Testing than the Control group did (in the descriptive data).

Prediction 2 is not supported: "For PWC, the DM group will have greater intelligibility gains than the Phon group". The Phon group outperformed the DM group from Baseline to Testing, although this result was not statistically significant.

Prediction 3 is not supported: "For LBEs, the DM group will have more predicted errors compared with the other two groups". In this (albeit very limited) sample, the Phon group made the most predicted LBEs.

The study's broader research questions (reiterated below) are less straightforward to answer.

- 1) Does attention to social markers in dysarthric speech have intelligibility gains for listeners undergoing a perceptual learning training exercise for which the speech stimuli are from natural, conversational speech? That is, does centering the speaker as an individual within a rich and complex social network have measurable gains compared with listeners given no explicit training to identify social markers?
- 2) Are there gains beyond those afforded by simply becoming familiar with particular phonemes or lexical items? That is, does shifting a listener's expectations about a speaker by drawing their attention to the speaker's social identity improve intelligibility?

The first of these questions can be answered in the affirmative—the trend suggested in the descriptive data was that the DM group had greater intelligibility gains than the Control group. And, had the DM group also scored higher in the Testing phase than the Phon group, the second question would also be affirmative. However, the trend was in fact that the Phon group outperformed the DM group, both in improvement in PWC and in attention to LBEs. Possible reasons for these trends are discussed in the following sections.

4.1 Comparison with previous studies

Previous studies on perceptual learning of speech have provided evidence that both lexical and indexical information are sources of learning when attempting to understand degraded speech (Borrie et al., 2013; Borrie & Lansford, 2021; Mattys & Liss, 2008; Nygaard et al., 1994; Samuel & Kraljic, 2009), and that these information sources are not processed separately from each other but are linked. Drawing a listener's attention to information that indexes a speaker's identity helps them understand what is being said. When a listener hears speech, the words or phonemes are mapped to their mental representations of those sounds alongside the social information they are receiving. This can be explained by exemplar models of speech processing (e.g., Goldinger, 1996, 1998; Johnson, 1997, 2006; Todd et al., 2019), which posit that listeners store episodic memories of the speech they hear, and that speaker-specific information is retained (Smith, 2015).

Borrie et al. (2013) studied one such indexical cue, speaker identity, to help understand the contribution of indexical information to perceptual learning of dysarthric speech. They found that familiarizing listeners with dysarthric speech while drawing attention to the identity of the speaker afforded gains in understanding that were significantly higher than those of listeners passively exposed to the speech (measured by PWC). The gains were also comparable to those of listeners who had their attention drawn to lexical information instead. They also found that although all listeners attended to suprasegmental information in the speech signal (i.e., stress cues for the placement of word boundaries, as measured by LBEs), listeners whose focus was on speaker identity relied on this suprasegmental information more.

The current study did not find the same statistically significant result as Borrie et al. for PWC between the DM group (the equivalent of Borrie et al.'s indexical group) and the Control group (although the raw data did suggest the same result) or between the DM group and the

Phon group (the equivalent of Borrie et al.'s lexical group). However, the trends in the raw data suggest there were perceptual gains within and between groups. And it is possible that a larger sample size and/or a greater number of sentences may have led to such a significant result. The perceptual experiment in the present study had only 49 participants compared with Borrie et al.'s 60. And listeners in the Testing phase in the present study transcribed only 20 sentences compared with Borrie et al.'s 36.

In the current study, it was also the Phon group that made more predictable LBEs and not the DM group as in Borrie et al.'s study. However, the current analysis was carried out on a very small set of sentences, so no firm conclusions can be drawn. Because the stimuli were from natural speech, it is likely they also included more function/grammatical words than the sentences in Borrie et al.'s study. This may have led to distortions in the counts (i.e., more deletions, and possibly insertions, before weak syllables), making a comparison between studies even less meaningful.

The two studies differed a great deal in their methodology, which may go some way to explaining the difference in results. Because of the nature of social markers such as discourse markers and slang, it was not possible to carry out the experiment using semantically anomalous phrases, as the aforementioned study had done. Social markers only make sense in context. An alternative method of constructing the speech stimuli was necessary. Therefore, stimulus sentences were taken from recordings of natural speech between a dysarthric speaker and a peer. This part of the experiment was co-designed with the speaker, Jack—a young man with mixed spastic–hyperkinetic dysarthria. This move toward natural speech may have improved the “ecological validity” of the study (Holmes & Hazen, 2013, p. 295); however, it may also have contributed to the null findings in the present study.

4.2 Phon versus DM group effects

The (tentative) finding that the Phon group outperformed both the other groups (in both PWC and reliance on stress cues) suggests that this group may have been gaining some advantage from the exercise that the other groups were not. Two possible reasons for this advantage are: (i) the Phon group effectively received two streams of training; and (ii) the more difficult training task for the Phon group may have improved speech perception.

4.2.1 Two streams of training

Because the stimuli and familiarization materials were taken from natural language and were rich with sociolinguistic input, all groups were exposed to social markers and other sociolinguistic cues (such as the acoustics of the speaker's voice, which give cues to the speaker's age and gender) for the duration of the experiment. So, the Phon group received training on the phoneme-matched words as well as incidental sociolinguistic training. Having two sources of perceptual learning (effectively three because the orthographic transcript was also included) may be what has led to the gains. In Borrie and Schäffer's (2015) study on how somatosensory feedback can aid perceptual learning, they found that having multiple sources of learning (auditory–written–imitation) led to the greatest gains in perceptual learning. Perhaps it is also the case for the present study that having multiple sources has boosted learning for the Phon group.

4.2.2 A more difficult training task

Training accuracy data show that the Phon group tended to have lower accuracy than the DM group in the Training phase, suggesting that the Phon group had a harder task. The greater cognitive effort involved in this Training phase may have increased perceptual learning. In the experiment, place in sentences was controlled, but word/phrase frequency was not. Therefore, the task may have been more difficult because of word-frequency effects. It is possible that the discourse markers are naturally easier to pick out in a sentence because of their greater frequency relative to the phoneme-matched words and phrases. The suggestion is that not only are explicit familiarization and training needed to induce perceptual learning, but a *sufficiently difficult* training task may also be needed. However, this is mainly speculative as no overall trend was evident when the measure of improvement (PWCdiff) was plotted against participants' training accuracy scores.

Taking these (tentative) points together, it seems the Phon group did a sufficiently difficult lexical training task in the context of rich sociolinguistic input, and the trend in the descriptive data suggests they gained the greatest perceptual benefit. If these are the reasons for the possible advantage, this has positive implications for any real-world intervention targeting listeners. It is possible that a focussed task involving one or more of the evidence-based streams of learning (e.g., imitation, audiovisual, lexical; see Borrie & Lansford, 2021) *in the context of* the speaker's natural social environment might have the greatest effect. It also means the second research question above can be answered in the affirmative after all: there were gains beyond those afforded by simply becoming familiar with particular phonemes or lexical items. However, these applied to the Phon group, as they benefited from having multiple learning streams, one of which was indexical. And, arguably, shifting a listener's expectations about a speaker by drawing their attention to the speaker's social identity does improve intelligibility.

4.3 Effect of training and familiarization

The Familiarization and Training tasks undertaken likely also contributed to the perceptual learning that seems evident for both training groups compared to the Control group. The relatively better performance of the two training groups indicates that the more focused instructions they received for Familiarization, alongside the subsequent Training task, may have helped their learning. This backs up findings from numerous studies about the importance of targeted familiarization with the speech of dysarthric speakers (Borrie et al., 2012b, 2012c; D'Innocenzo et al., 2006; Hustad & Cahill, 2003). It is not enough to simply be exposed to the speech. There must be some focus to the exposure.

It is also worth noting that the Control group showed great variability in their PWCdiff—the measure of improvement from Baseline to Testing—compared with the other two groups. This group included the participants whose performance declined most and the participants whose performance improved most. This result could indicate that the Training task given to this group was not sufficient to hold all participants' attention. They were passively exposed to the same stimuli as the other groups but were simply told to “listen carefully” to the fairly long series of recordings, with no active task to complete. This may have meant some listeners increased their concentration (this perhaps depended on their own personal tendencies when

it comes to listening tasks) and, for others, boredom and distractibility may have set in. If repeated in the future, this type of experiment may need a better control condition.

4.4 A different methodology

The methodology in the present study was a significant departure from other studies on perceptual learning of dysarthric speech (for a comprehensive review, see Borrie & Lansford, 2021). In order to build a strong research base on what sources of learning might support a listener-based intervention, researchers have used various combinations of words, word lists, passages, and phrases for familiarization and testing in their speech perception experiments. The more recent studies (listed in Borrie & Lansford, 2021) have favored the use of semantically anomalous phrases in their testing phases. Such phrases make it easier to form robust conclusions about the source of any learning that occurs, as contextual effects are eliminated (i.e., listeners must be relying on acoustic cues from the words themselves and cannot have guessed them from the context). They also allow researchers to constrain the prosody so suprasegmental information can be more easily investigated. In particular, the use of fixed stress patterns (a mix of iambic and trochaic across the stimuli) makes it possible to analyze LBEs. When listeners make more predictable LBEs (insertion of a boundary before a strong syllable or deletion of a boundary before a weak syllable), it generally means they are relying more on stress cues in the speech signal for decoding.

Here, the stimuli are taken from naturally occurring speech. It is important that the listeners hear Jack's voice as it is. Using indexical content to prime listeners' perceptual systems means semantically anomalous, or even semantically predictable but pre-prepared, material would not have been appropriate. This arguably comes at the expense of some analytical rigor. Although care was taken not to include sentences that seemed too predictable, it is impossible to remove possible contextual effects. Using natural speech also means the stress patterns are not able to be constrained for easier analysis of LBEs.

4.5 Effect of dysarthria type

Another major difference is that previous studies on perceptual learning of dysarthric speech have been undertaken mainly with speakers with other dysarthria types, as hyperkinetic dysarthria has been shown not to be amenable to perceptual learning (Lansford et al., 2019, 2020). This is because there is not enough regularity in the speech signal for mapping of the individual's speech cues to occur successfully. Descriptively at least, the results in the present study suggest that learning is happening for the groups that undertook training. They improved from baseline, so there must be enough regularity in Jack's acoustic cues for this to happen. Perhaps this is because of the mixed nature of his speech disorder. Note that his level of speech disorder is also more severe than that of people who have lent their voices to other studies (Jack's dysarthria was judged moderate–severe, whereas most others have been at a moderate level). It seems that where there are any regularities in the signal, our perceptual systems will learn them.

4.6 Implications for listener-based interventions

A focus of work in this field, much of it by Borrie and her colleagues, has been on shifting the locus of improvement and training from the speaker to the listener. They have focussed on speech perception rather than production to tap into what we know about how our brains process speech and how our perceptual systems can rapidly adapt to variations in the way people speak. The present study has examined how social-indexical information in the speech stream might help this adaptation to impaired speech. This has implications for the context of listener-based interventions. The next step is to see how any perceptual advantage afforded by indexical information might be maximized for the listener.

For example, an intervention could take the form of video recordings of a young dysarthric speaker in a classroom environment engaging in a social activity with peers. The video, plus a transcription and appropriate training task, could be used as part of the transition to a new classroom/school, so teachers could become familiarized with the young person's speech early on in the school year. This approach would have minimum impact on the speaker. The teacher, alongside a speech language therapist, would be undertaking the intervention, thus shifting the burden of communication from speaker to listener. The speaker would simply be engaging in banter with friends.

Group recording, including as many information streams as possible (audio, visual, orthographic, social) could confer the greatest benefit for learning an individual's speech. Using such recordings of natural peer interactions in a deliberate, suitably difficult training task for a teacher or clinician may give them a head start in beginning to understand the individual's speech. It is important that these training tasks are not abstracted away from the speaker, focussing only on phonetic/lexical material.

Many people with dysarthria are also otherwise disabled (e.g., post-stroke) and have physical therapies alongside their speech interventions. For clinicians working with people with dysarthria (e.g., physiotherapists, occupational therapists), there is a great advantage in them being able to better understand their clients' speech so they can better meet their needs. However, the clinician is usually not privy to the speaker's social environment. Having an intervention that involves the listener watching a video or listening to an audio-recording and undertaking a targeted training task would again shift the communication burden.

The shift in the present study towards less constrainable variables and methodology is important as it is in real life that speech interventions will take place. In real life, the social cannot be divorced from the linguistic. Listener-based speech interventions focussed on social contexts are likely to have the most benefit. Any intervention must center the speaker and include the richness of their sociolinguistic repertoire—how they speak, how they dress, how they are around their peers and families.

5. Conclusion

The present study was on the use of social markers as indexical primes for aiding perceptual learning of dysarthric speech. A speech perception experiment was carried out using stimuli taken from recordings of everyday speech between a young man with dysarthria and a peer

engaged in a social activity. Results from the experiment suggest that familiarization with this speaker's speech alongside explicit training exercises led to some improvement in speech perception. The evidence for this was not statistically significant, but trends in the data allow the following tentative conclusions to be drawn. A sufficiently difficult training task is needed to aid perceptual learning. Exposure to naturally occurring speech, coupled with a sufficiently difficult task, leads to the greatest perceptual gains. Having multiple learning sources, which include social information about the speaker, may lead to the best outcomes in listener-based speech interventions.

Providing rich sociolinguistic information could help bias perception towards relevant social-indexical information in the speech stream, overriding other judgements about the speaker that may arise because they hear their dysarthric speech. It is possible that the inclusion of socially relevant speech cues, such as discourse markers, even without drawing attention to them, is enough to enhance listeners' perception of other words and may partly account for the relative success of the Phon group in the present study. The benefit of including social language may even afford some learning benefits when listening to speakers with more severe dysarthria and those with limited regularities in the speech signal.

The perceptual benefit provided by attention to indexical information may be invaluable in helping listeners unfamiliar with a particular dysarthric speaker (such as new teachers or clinicians) to learn their speech quickly. Including more indexical information when familiarizing listeners with dysarthric speech also helps in moving away from a deficit model of disability towards a social one.

References

- Aijmer, K. (2018). Positioning of self in interaction: Adolescents' use of attention-getters. In K. Beeching, C. Ghezzi & P. Molinelli (Eds.), *Positioning the self and others: Linguistic perspectives* (pp. 177–195). John Benjamins.
- Andersen, G. (2001). *Pragmatic markers and sociolinguistic variation: A relevance-theoretic approach to the language of adolescents*. John Benjamins.
- Audacity Team (2023). *Audacity* (Version 3.3.3) [Computer software].
<https://www.audacityteam.org>
- Baker, R., & Hazan, V. (2011). DiapixUK: Task materials for the elicitation of multiple spontaneous speech dialogs. *Behavior Research Methods*, 43, 761–770.
<https://doi.org/10.3758/s13428-011-0075-y>
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67(1), 1–48.
<https://doi.org/10.18637/jss.v067.i01>
- Borrie, S. A. (2015). Visual speech information: A help or hindrance in perceptual processing of dysarthric speech. *The Journal of the Acoustical Society of America*, 137(3), 1473–1480. <https://doi.org/10.1121/1.4913770>

- Borrie, S. A., Barrett, T. S., & Yoho, S. E. (2019). Autoscore: An open-source automated tool for scoring listener perception of speech. *The Journal of the Acoustical Society of America*, 145(1), 392–399. <https://doi.org/10.1121/1.5087276>
- Borrie, S. A., & Lansford, K. L. (2021). A perceptual learning approach for dysarthria remediation: An updated review. *Journal of Speech, Language, and Hearing Research*, 64(8), 3060–3073. https://doi.org/10.1044/2021_JSLHR-21-00012
- Borrie, S. A., Lansford, K. L., & Barrett, T. S. (2017a). Generalized adaptation to dysarthric speech. *Journal of Speech, Language, and Hearing Research*, 60(11), 3110–3117. https://doi.org/10.1044/2017_JSLHR-S-17-0127
- Borrie, S. A., Lansford, K. L., & Barrett, T. S. (2017b). Rhythm perception and its role in perception and learning of dysrhythmic speech. *Journal of Speech, Language, and Hearing Research*, 60(3), 561–570. https://doi.org/10.1044/2016_JSLHR-S-16-0094
- Borrie, S. A., Lansford, K. L., & Barrett, T. S. (2018). Understanding dysrhythmic speech: When rhythm does not matter and learning does not happen. *The Journal of the Acoustical Society of America*, 143(5), EL379–EL385. <https://doi.org/10.1121/1.5037620>
- Borrie, S. A., Lansford, K. L., & Barrett, T. S. (2021). A clinical advantage: Experience informs recognition and adaptation to a novel talker with dysarthria. *Journal of Speech, Language, and Hearing Research*, 64(5), 1503–1514. https://doi.org/10.1044/2021_JSLHR-20-00663
- Borrie, S. A., McAuliffe, M. J., & Liss, J. M. (2012a). Perceptual learning of dysarthric speech: A review of experimental studies. *Journal of Speech, Language, and Hearing Research*, 55(1), 290–305. [https://doi.org/10.1044/1092-4388\(2011/10-0349\)](https://doi.org/10.1044/1092-4388(2011/10-0349))
- Borrie, S. A., McAuliffe, M. J., Liss, J. M., Kirk, C., O’Beirne, G. A., & Anderson, T. J. (2012b). Familiarisation conditions and the mechanisms that underlie improved recognition of dysarthric speech. *Language and Cognitive Processes*, 27(7–8), 1039–1055. <https://doi.org/10.1080/01690965.2011.610596>
- Borrie, S. A., McAuliffe, M. J., Liss, J. M., O’Beirne, G. A., & Anderson, T. J. (2012c). A follow-up investigation into the mechanisms that underlie improved recognition of dysarthric speech. *The Journal of the Acoustical Society of America*, 132(2), EL102–EL108. <https://doi.org/10.1121/1.4736952>
- Borrie, S. A., McAuliffe, M. J., Liss, J. M., O’Beirne, G. A., & Anderson, T. J. (2013). The role of linguistic and indexical information in improved recognition of dysarthric speech. *The Journal of the Acoustical Society of America*, 133(1), 474–482. <https://doi.org/10.1121/1.4770239>
- Borrie, S. A., & Schäfer, M. C. M. (2015). The role of somatosensory information in speech perception: Imitation improves recognition of disordered speech. *Journal of Speech, Language, and Hearing Research*, 58(6), 1708–1716. https://doi.org/10.1044/2015_JSLHR-S-15-0163

- Brown, G., Anderson, A., Yule, G., & Shillcock, R. (1983). *Teaching talk*. Cambridge University Press.
- Bucholtz, M., & Hall, K. (2005a). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4–5), 585–614. <https://doi.org/10.1177/1461445605054407>
- Bucholtz, M., & Hall, K. (2005b). Language and identity. In A. Duranti (Ed.), *A companion to linguistic anthropology* (pp. 369–394). Blackwell.
- Campbell-Kibler, K. (2007). Accent, (ING), and the social logic of listener perceptions. *American Speech*, 82(1), 32–64. <https://doi.org/10.1215/00031283-2007-002>
- Clarke, C. M., & Garrett, M. F. (2004). Rapid adaptation to foreign-accented English. *The Journal of the Acoustical Society of America*, 116(6), 3647–3658. <https://doi.org/10.1121/1.1815131>
- Coupland, N. (2007). *Style: Language variation and identity*. Cambridge University Press.
- Creel, S. C., & Bregman, M. R. (2011). How talker identity relates to language processing. *Language and Linguistics Compass*, 5(5), 190–204. <https://doi.org/10.1111/j.1749-818X.2011.00276.x>
- Cutler, A., & Butterfield, S. (1992). Rhythmic cues to speech segmentation: Evidence from juncture misperception. *Journal of Memory and Language*, 31(2), 218–236.
- Cutler, A., Eisner, F., McQueen, J. M., & Norris, D. (2010). How abstract phonemic categories are necessary for coping with speaker-related variation. In C. Fougerson, B. Kuehnert, M. Imperio & N. Vallee (Eds.), *Laboratory phonology 10: Variability, phonetic detail and phonological representation* (pp. 91–111). De Gruyter.
- Davis, C., & Kim, J. (2004). Audio-visual interactions with intact clearly audible speech. *The Quarterly Journal of Experimental Psychology Section A*, 57(6), 1103–1121. <https://doi.org/10.1080/02724980343000701>
- Davis, M. H., Johnsrude, I. S., Hervais-Adelman, A., Taylor, K., & McGettigan, C. (2005). Lexical information drives perceptual learning of distorted speech: Evidence from the comprehension of noise-vocoded sentences. *Journal of Experimental Psychology*, 134(2), 222–241. <https://doi.org/10.1037/0096-3445.134.2.222>
- D’Innocenzo, J., Tjaden, K., & Greenman, G. (2006). Intelligibility in dysarthria: Effects of listener familiarity and speaking condition. *Clinical Linguistics & Phonetics*, 20(9), 659–675. <https://doi.org/10.1080/02699200500224272>
- Drager, K. (2010). Sociophonetic variation in speech perception. *Language and Linguistics Compass*, 4(7), 473–480. <https://doi.org/10.1111/j.1749-818X.2010.00210.x>
- Drager, K. K. (2015). *Linguistic variation, identity construction and cognition*. Language Science Press. <https://doi.org/10.17169/refubium-22510>
- Drager, K., & Kirtley, M. J. (2016). Awareness, salience, and stereotypes in exemplar-based models of speech production and perception. In A. Babel (Ed.), *Awareness and control in sociolinguistic research* (pp. 1–24). Cambridge University Press.

- Eckert, P. (2000). *Linguistic variation as social practice: The linguistic construction of identity in Belten High*. Blackwell.
- Eckert, P. (2008). Variation and the indexical field. *Journal of Sociolinguistics*, 12(4), 453–476. <https://doi.org/10.1111/j.1467-9841.2008.00374.x>
- Giles-Mitson, A. (2016). *Address terms in New Zealand English: Tracking changes to the social indexicality of gendered terms of address*. [Master's thesis, Victoria University of Wellington]. Open Access Te Herenga Waka–Victoria University of Wellington. <http://researcharchive.vuw.ac.nz/handle/10063/5406>
- Goldinger, S. D. (1996). Words and voices: Episodic traces in spoken word identification and recognition memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 22(5), 1166–1183. <https://doi.org/10.1037/0278-7393.22.5.1166>
- Goldinger, S. D. (1998). Echoes of echoes? An episodic theory of lexical access. *Psychological Review*, 105(2), 251–279. <https://doi.org/10.1037/0033-295X.105.2.251>
- Grue, J. (2015). *Disability and discourse analysis*. Ashgate.
- Haegele, J. A., & Hodge, S. (2016). Disability discourse: Overview and critiques of the medical and social models. *Quest*, 68(2), 193–206. <https://doi.org/10.1080/00336297.2016.1143849>
- Hay, J., & Drager, K. (2010). Stuffed toys and speech perception. *Linguistics*, 48(4), 865–892. <https://doi.org/10.1515/ling.2010.027>
- Holmes, J. (1995). *Women, men and politeness*. Routledge.
- Holmes, J., & Hazen, K. (2013). *Research methods in sociolinguistics: A practical guide*. John Wiley & Sons.
- Hustad, K. C., & Cahill, M. A. (2003). Effects of presentation mode and repeated familiarization on intelligibility of dysarthric speech. *American Journal of Speech-Language Pathology*, 12(2), 198–208. [https://doi.org/10.1044/1058-0360\(2003/066\)](https://doi.org/10.1044/1058-0360(2003/066))
- Johnson, K. (1997). Speech perception without speaker normalization: An exemplar model. In K. Johnson & J. W. Mullennix (Eds.), *Talker variability in speech processing* (pp. 145–166). Academic Press.
- Johnson, K. (2006). Resonance in an exemplar-based lexicon: The emergence of social identity and phonology. *Journal of Phonetics*, 34(4), 485–499.
- Johnson, K., & Sjerps, M. J. (2021). Speaker normalization in speech perception. In J. S. Pardo, L. C. Nygaard, R. E. Remez & D. B. Pisoni (Eds.), *The handbook of speech perception* (2nd ed., pp. 145–176). Wiley.
- Kim, Y., Kent, R. D., & Weismer, G. (2011). An acoustic study of the relationships among neurologic disease, dysarthria type, and severity of dysarthria. *Journal of Speech, Language, and Hearing Research*, 54(2), 417–429.

- King, B. (2010). "All us girls were like euuh!": Conversational work of "be like" in New Zealand adolescent talk. *New Zealand English Journal*, 24, 15–33.
- Kleinschmidt, D. F., & Jaeger, T. F. (2015). Robust speech perception: Recognize the familiar, generalize to the similar, and adapt to the novel. *Psychological Review*, 122(2), 148–203. <https://doi.org/10.1037/a0038695>
- Kraljic, T., Samuel, A. G., & Brennan, S. E. (2008). First impressions and last resorts: How listeners adjust to speaker variability. *Psychological Science*, 19(4), 332–338. <https://doi.org/10.1111/j.1467-9280.2008.02090.x>
- Lansford, K. L., Borrie, S. A., & Barrett, T. S. (2019). Regularity matters: Unpredictable speech degradation inhibits adaptation to dysarthric speech. *Journal of Speech, Language, and Hearing Research*, 62(12), 4282–4290. https://doi.org/10.1044/2019_JSLHR-19-00055
- Lansford, K. L., Borrie, S. A., Barrett, T. S., & Flechaus, C. (2020). When additional training isn't enough: Further evidence that unpredictable speech inhibits adaptation. *Journal of Speech, Language, and Hearing Research*, 63(6), 1700–1711. https://doi.org/10.1044/2020_JSLHR-19-00380
- Lansford, K. L., Luhrsens, S., Ingvalson, E. M., & Borrie, S. A. (2018). Effects of familiarization on intelligibility of dysarthric speech in older adults with and without hearing loss. *American Journal of Speech-Language Pathology*, 27(1), 91–98. https://doi.org/10.1044/2017_AJSLP-17-0090
- Lenth, R. V. (2023). emmeans: Estimated marginal means, aka least-squares means (R package version 1.8.9). <https://CRAN.R-project.org/package=emmeans>
- Loebach, J. L., Bent, T., & Pisoni, D. B. (2008). Multiple routes to the perceptual learning of speech. *The Journal of the Acoustical Society of America*, 124(1), 552–561. <https://doi.org/10.1121/1.2931948>
- Loebach, J. L., Pisoni, D. B., & Svirsky, M. A. (2010). Effects of semantic context and feedback on perceptual learning of speech processed through an acoustic simulation of a cochlear implant. *Journal of Experimental Psychology: Human Perception and Performance*, 36(1), 224–234. <https://doi.org/10.1037/a0017609>
- Luce, P. A., Mclennan, C., & Charles-Luce, J. (2002). Abstractness and specificity in spoken word recognition: Indexical and allophonic variability in long-term repetition priming. In J. S. Bowers & C. J. Marsolek (Eds.), *Rethinking implicit memory* (pp. 197–214). Oxford.
- Lüdecke, D. (2018). ggeffects: Tidy data frames of marginal effects from regression models. *Journal of Open Source Software*, 3(26), 772. <https://doi.org/10.21105/joss.00772>
- Luhrsens, S. (2017). *Perceptual learning of dysarthric speech: Age-related consequences* (Publication No. 10267863). [Master's thesis, Florida State University]. FSU Digital Repository. http://purl.flvc.org/fsu/fd/FSU_SUMMER2017_Luhrsens_fsu_0071N_13924

- Marks, D. (1999). Dimensions of oppression: Theorising the embodied subject. *Disability & Society*, 14(5), 611–626.
- Mattys, S. L., & Liss, J. M. (2008). On building models of spoken-word recognition: When there is as much to learn from natural “oddities” as artificial normality. *Perception & Psychophysics*, 70(7), 1235–1242. <https://doi.org/10.3758/PP.70.7.1235>
- Mitra, S. (2006). The capability approach and disability. *Journal of Disability Policy Studies*, 16(4), 236–247. <https://doi.org/10.1177/10442073060160040501>
- Moore, E., & Podesva, R. (2009). Style, indexicality, and the social meaning of tag questions. *Language in Society*, 38(4), 447–485. <https://doi.org/10.1017/S0047404509990224>
- Morgan, H. (2023). *The importance of language in the disabled community*. New Zealand Disability Employers’ Network. <https://nzden.org.nz/importance-of-language>
- National Ethics Advisory Committee (2019). *National ethical standards for health and disability research and quality improvement*. Ministry of Health, Wellington. <https://neac.health.govt.nz/national-ethical-standards/>
- Nygaard, L. C., Sommers, M. S., & Pisoni, D. B. (1994). Speech perception as a talker-contingent process. *Psychological Science*, 5(1), 42–46.
- Nygaard, L. C., & Tzeng, C. Y. (2021). Perceptual integration of linguistic and non-linguistic properties of speech. In J. S. Pardo, L. C. Nygaard, R. E. Remez & D. B. Pisoni (Eds.), *The handbook of speech perception* (2nd ed., pp. 398–427). Wiley.
- Ochs, E. (1992). Indexing gender. In A. Duranti & C. Goodwin (Eds.), *Rethinking context: Language as an interactive phenomenon* (pp. 335–358). Cambridge University Press.
- Office for Disability Issues (2016). *New Zealand disability strategy 2016–2026*. Ministry of Social Development, Wellington. <https://www.odi.govt.nz/assets/New-Zealand-Disability-Strategy-files/pdf-nz-disability-strategy-2016.pdf>
- Office for Disability Issues (2022, March 28). *Things you should know: Definitions, concepts and approaches*. Ministry of Social Development, Wellington. <https://www.odi.govt.nz/disability-toolkit/things-you-should-know-definitions-concepts-and-approaches>
- Patel, R., & Campellone, P. (2009). Acoustic and perceptual cues to contrastive stress in dysarthria. *Journal of Speech, Language, and Hearing Research*, 52(1), 206–222. [https://doi.org/10.1044/1092-4388\(2008/07-0078\)](https://doi.org/10.1044/1092-4388(2008/07-0078))
- Paul, R., Simmons, E. S., & Mahshie, J. (2021). Prosody in children with atypical development. In C. Gussenhoven & A. Chen (Eds.), *The Oxford handbook of language prosody* (pp. 582–593). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198832232.013.49>
- Pierrehumbert, J. B. (2001). Exemplar dynamics: Word frequency, lenition and contrast. In J. Bybee & P. J. Hopper (Eds.), *Frequency and the emergence of linguistic structure* (pp. 137–157). John Benjamins.

- Pierrehumbert, J. B. (2016). Phonological representation: Beyond abstract versus episodic. *Annual Review of Linguistics*, 2, 33–52. <https://doi.org/10.1146/annurev-linguistics-030514-125050>
- R Core Team (2023). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>
- Samuel, A. G., & Kraljic, T. (2009). Perceptual learning for speech. *Attention, Perception & Psychophysics*, 71(6), 1207–1218. <https://doi.org/10.3758/APP.71.6.1207>
- Schiffrin, D. (1987). *Discourse markers*. Cambridge University Press.
- Schneider, B. A., Daneman, M., & Murphy, D. R. (2005). Speech comprehension difficulties in older adults: Cognitive slowing or age-related changes in hearing? *Psychology and Aging*, 20(2), 261–271. <https://doi.org/10.1037/0882-7974.20.2.261>
- Shakespeare, T. (2013). The social model of disability. In L. J. Davis (Ed.), *The disability studies reader* (4th ed., pp. 214–221). Taylor & Francis.
- Smith, R. (2015). Perception of speaker-specific phonetic detail. In S. Fuchs, D. Pape, C. Petrone & P. Perrier (Eds.), *Speech production and perception, volume 3: Individual differences in speech production and perception* (pp. 11–38). Peter Lang.
- Stubbe, M., & Holmes, J. (1995). *You know, eh* and other “exasperating expressions”: An analysis of social and stylistic variation in the use of pragmatic devices in a sample of New Zealand English. *Language & Communication*, 15(1), 63–88. [https://doi.org/10.1016/0271-5309\(94\)00016-6](https://doi.org/10.1016/0271-5309(94)00016-6)
- Todd, S., Pierrehumbert, J. B., & Hay, J. (2019). Word frequency effects in sound change as a consequence of perceptual asymmetries: An exemplar-based model. *Cognition*, 185, 1–20. <https://doi.org/10.1016/j.cognition.2019.01.004>
- Van Engen, K. J., Baese-Berk, M., Baker, R. E., Choi, A., Kim, M., & Bradlow, A. R. (2010). The Wildcat corpus of native-and foreign-accented English: Communicative efficiency across conversational dyads with varying language alignment profiles. *Language and Speech*, 53(4), 510–540. <https://doi.org/10.1177/0023830910372495>
- Vine, B., & Marsden, S. (2016). *Eh* at work: The indexicality of a New Zealand English pragmatic marker. *Intercultural Pragmatics*, 13(3), 383–405. <https://doi.org/10.1515/ip-2016-0016>
- Warren, P. (2016). *Uptalk: The phenomenon of rising intonation*. Cambridge University Press.
- Warren, P. (2017). The interpretation of prosodic variability in the context of accompanying sociophonetic cues. *Laboratory Phonology: Journal of the Association for Laboratory Phonology*, 8(1), 1–21. <https://doi.org/10.5334/labphon.92>
- Wickham, H. (2016). *ggplot2: Elegant graphics for data analysis*. Springer-Verlag.
- Wilson, N. (2010). Bros, boys and guys: Address term function and communities of practice in a New Zealand rugby team. *New Zealand English Journal*, 24, 34–54.

Wingfield, A., Tun, P. A., & McCoy, S. L. (2005). Hearing loss in older adulthood: What it is and how it interacts with cognitive performance. *Current Directions in Psychological Science*, 14, 144–148.

Xie, X., Weatherholtz, K., Bainton, L., Rowe, E., Burchill, Z., Liu, L., & Jaeger, T. F. (2018). Rapid adaptation to foreign-accented speech and its transfer to an unfamiliar talker. *The Journal of the Acoustical Society of America*, 143(4), 2013–2031.
<https://doi.org/10.1121/1.5027410>

Appendix A

DiapixUK (Baker & Hazan, 2011) image pair used for spontaneous speech recording (Beach 4A and Beach 4B)



Appendix B

Stimuli used in speech experiment

Familiarization blocks ahead of Baseline phase

Recording 1

We just have to maintain what we have, working on it.
 You can't do it all the time.
 If I want to stay mobile and independent, I have to work on this, um.
 We all have to do some.

Recording 2

It's a wide spectrum but as you get older you get more experience.
 You know what works, what doesn't work,
 and you can tell people can't understand you.
 I can tell.
 I know when I need to repeat myself to understand,
 or I'll find another way to say what I mean to say.

Practice sentences ahead of Baseline phase

I have nine people
What colour are the shoes?

Baseline phase

Not on the sun shade
You weren't counting properly
It depends what order we do things as well
Is that the holiday program?
Have you got a deck on the front?
Are you putting it down or not?
Have you got yellow seahorses on them?
How often do you speak to her?
It's meant to happen next month
All the peaches are in the basket, none hanging over the edge
Is your golfball on the sand?
I have a person beside the bin in a pink t-shirt, light blue shorts
There's a radio beside him
I need my income to grow more
You have passive stretching as well
Friday morning was cold going into town
I think more black but it's subjective
What was the penalty for?
You have to go home to cook your dinner
Look at me, I'm sweating

Familiarization phase

<p><i>Recording 3</i></p> <p>That was hard.</p> <p>It's different when you do them in different orders, y'know.</p> <p>When you do the exercises in different orders, it changes how it feels.</p>
--

Sometimes I get more tired after one exercise.
But why can't we do all the squats first.
It's probably more tiring.

Recording 4

Because it's a habit,
it's part of my job every day.
I just have to ask questions of people.
Yeah, it's all part of the job, you have to ask questions.

Recording 5

We have to do this stuff at work as well, um, not all the time,
but, just to get to know how our team operates together
and how we can collaborate better. Just team building.
Yeah, there's a lot of smart people.
Yeah, I have ten people in my immediate team. It's quite big,
but, we work on a wide range of policy and research.
I kind of work with ... I work with a graduate and kind of
coach him a bit, but I don't manage people per se.
Yeah, be a mentor, coach him a bit, help him out if I can.

Training phase

Target words/phrases are italicised

Social markers	Phoneme matches
<i>Yeah</i> , you told me that last night	<i>Wear</i> what you had on last night
<i>Yeah</i> , I hope it's not, not too boring for you	<i>There</i> are heaps that are too boring for you
I'm <i>just</i> catching up with a friend	I <i>must</i> catch up with my friends
<i>Just</i> do it when I come back up	<i>Jump</i> over when I come back up
<i>Come on</i> ! You know what I mean	<i>Come over</i> so I can see
<i>Well</i> , it's good he'll be back	<i>Tell</i> me when you get back
<i>Well</i> that's not my fault	<i>Where</i> is the fault?
<i>Take it easy</i> on the way back	<i>Take a cheese</i> cracker, they're, they're good
I'll work it out, <i>no stress</i>	I can't work in <i>that mess</i>
<i>Maybe</i> afternoon and then back again	<i>Make me</i> afternoon tea again
Let's do half-past-three <i>maybe</i>	Let's do this half here <i>mainly</i>
<i>Oh</i> , he does have a hat, but he's looking down	<i>No</i> he doesn't do that, he's looking down
<i>Oh</i> does your work still pay?	<i>So much</i> work on today
It's a skirt, <i>sorry</i>	It's a true <i>story</i>

That's the rules, <i>even better</i>	That's the rule <i>when you're better</i>
<i>I guess so</i> , you can't really tell	<i>It gets so</i> you can't really tell
<i>Nah</i> , why would I cheat?	<i>Now</i> it's my turn to cheat
<i>Nah</i> , she's gone back to study	<i>Nasty</i> weather on Sunday
They're <i>kinda</i> greenish	They're <i>kind</i> to greet us
I'm in <i>no rush</i> to do that	I think <i>none of us</i> should do that

Testing phase

You're better to save the money, invest it
A plate of lamb chops in the fridge
Can I stop for a drink?
I have a net beside the bag*
One day I'll probably manage a team*
I have equal favourites*
I'll have lunch whatever I do
You tell me that every session
Sometimes in the winter
I do have a bucket of fish
She's not into men*
Being difficult is part of my role*
And then I did forty
I see three wheels
I don't know if I have a charger*
That grip was slightly better
The data was in my head
Normally Wednesday most of the time*
I have a lot of mental capacity
Is it already on the ground?*

*These eight sentences were selected for analysis of lexical boundary errors (LBEs).

Acknowledgements

Many thanks to everyone who has helped me complete this dissertation—most especially my supervisor, Dr Sasha Calhoun. Thank you for your expertise and patience (particularly with

the stats). I am very grateful in particular to “Jack” and his friend for letting me sit in on their exercise sessions and record their voices. They were so generous with their time, and it was a pleasure to work with them both. Thanks also to everyone who participated in the online experiment and norming studies, and to Joy and Claire for helping me with the pilot. I also very much appreciated the help from Professor Megan McAuliffe and Doreen Hansmann at the University of Canterbury for helping with the diagnosis of Jack’s dysarthria type. And finally, thanks to my lovely daughter for keeping me happy.

Stress Markers and Stress Position: How do They Influence English-Speaking Listeners' Perception of Speech Rhythm?

Elena Heffernan

Speech rhythm is a long studied linguistic feature, but there is still much debate about what is made up of or even how listeners key into it. This paper investigated speech rhythm perception for 16 English speaking participants. This was measured using the sensorimotor-synchronisation (SMS) task. Participants tapped to sequences of nonsense syllables /na/ or /nu/. These were resynthesised so there were alternating markers of stress on each syllable, i.e. high-low pitch, loud-quiet amplitude or lengthened-shortened vowel. In each stimulus, two of these markers were alternated while the other was held constant, e.g. high-short followed by low-long. The order of each combination was also tested. It was predicted that pitch would be the stress marker that participants oriented to for their perception of the beat of the speech, followed by duration, then amplitude. It was also predicted that participants would prefer to tap to a stress marker that appeared first in a pair and was therefore in the trochaic position. The results showed that trochees were strongly preferred by the participants, and that loudness was the least likely stress marker for participants to tap to. Unexpectedly, stress position also seemed to influence asynchrony more than individual stress markers, further highlighting the preference for trochees. Ultimately it was concluded that both prosodic stress markers and the participants' expectation of trochaic patterns were influential to how they tapped along to the stimuli.

1. Introduction

The ability to clap, sway, or dance along to music is an experience shared by humans all around the world (Kotz et al., 2018). Speech also has rhythm of its own, which can be clearly seen in poetry cross-culturally, although the rhythm of speech continues to be difficult to define (Turk & Shattuck-Hufnagel, 2013) and measure (Arvaniti, 2012) both in production and perception. This paper will report the results of a speech rhythm perception experiment which utilised the sensorimotor-synchronisation (SMS) task. The relationship between various prosodic cues and rhythm perception was investigated. The experiment aimed to ascertain the relevance of stress markers as well as stress position to participants' perception of the rhythm or beat of the speech stimuli.

This section will cover why speech rhythm is both important and interesting, what speech rhythm is as it pertains to production and perception, and the method that has been selected as the most appropriate way to measure it in this study.

1.1 Why speech rhythm?

The experience of clapping in time to a song or dancing is one shared by people of all cultures (Kotz et al., 2018). Humans have been shown to be attentive to auditory rhythmic patterns from early infancy (Bella et al., 2013; Vihtnan et al., 1998).

Rhythm is central to our ability to find structure and meaning in not only music but also speech (Chung & Arvaniti, 2013; Iversen et al., 2008; Kotz et al., 2018). It has been proposed that rhythm perception is a key component of language acquisition (Chung & Arvaniti, 2013; Iversen et al., 2008). Speech rhythm is a fundamental part of performing and understanding both public speaking and poetry (Barry et al., 2009; Novák-Tót et al., 2017). While it has been studied for over a century (Bolton, 1894), the exact nature of speech rhythm is still much debated. Researchers remain unsure precisely what features of speech are involved in both the production and perception of speech rhythm.

1.2 Defining speech rhythm

As there are still many questions about the nature of speech rhythm, this section will outline prominent existing theories and criticisms. Firstly, it will cover how speech rhythm is discussed in the realm of poetry, as it is an art form that has been practiced throughout time and across the world's languages, and prominently features speech rhythm as one of its main components (Attridge, 1995). Then, timing-based classifications will be outlined, which have been used to describe the use of rhythm in poetry and speech more broadly. As prosodic stress-markers and speech rhythm often go hand in hand in speech production and perception, competing speech rhythm classification systems highlight the importance of pitch and amplitude variation along with the temporal aspect of rhythm. Lastly, the effect of stress position on the perception of speech rhythm will be discussed.

Speech rhythm as it pertains to poetry in several languages, including Latin and English, is described in terms of feet. Metrical feet are the most basic rhythmical structure in the poetry of these languages, made up of groups of syllables, usually two to three, which are named according to the position of stress within them (Attridge, 1995). Types of feet include trochees (stressed-unstressed), iambs (unstressed-stressed), anapests (unstressed-unstressed-stressed), and dactyls (stressed-unstressed-unstressed). A widely known example of metre is the use of iambic pentameter (five feet per line) in Shakespeare's plays. The two types of feet which have been most significant in speech rhythm research are iambs and trochees. The English language naturally lends itself to trochaic rhythmic patterns (Vihtnan et al., 1998) being a stress-initial language (Cutler, 1990).

It has been shown that humans have a tendency to group auditory stimuli into either iambs or trochees (Arvaniti, 2009; Wagner et al., 2021; Wagner, 2022). In fact, this tendency is so strong that iambs or trochees are perceived even in sequences of physically identical sounds (Bolton, 1894; Iversen et al., 2008). This phenomenon is referred to as the Iambic-Trochaic Law (or the ITL) (Wagner et al., 2021; Wagner, 2022).

In their 1995 paper, Grabe and Warren discussed 'stress shift', an English language phenomenon in which words that typically carry iambic stress, such as *thirteen* and *ideal*, become more trochaic when the following lexical item is stressed, such as in the phrases 'thirteen men' and *ideal* 'partners'. This paper found that this 'stress shift' phenomenon is more perceptual than acoustic, as in many cases of their production study the second syllable maintained prominence markers such as vowel lengthening and increased pitch.

1.2.1 Timing based classifications

Rhythm, as it pertains to music, is characterised by equal intervals between beats. For several decades, speech rhythm research fixated itself on finding evidence for timing-based production and perception. However, speech rhythm is likely more complex than this theory accounted for. A primary question that speech rhythm literature aimed to answer for many years was whether or not the production of rhythm in speech was based on isochrony (the equal division of time). This led to the classification of languages into the categories known as ‘stress-timed’ and ‘syllable-timed’. These terms were coined by Pike (1945). Under this theory, stress-timed languages such as German and Thai are said to produce stressed syllables at equally timed intervals, while syllable-timed languages such as French, Italian, and Spanish are said to have syllables of roughly equal duration (Arvaniti, 2009).

It has been shown there is very little evidence that supports the theory that speech production is isochronous (Arvaniti, 2012; Lehiste, 1977; Turk & Shattuck-Hufnagel, 2013). The focus of isochrony research then pivoted to the idea that it existed in perception rather than production. Lehiste (1977) found that ‘just-noticeable-differences’ in duration are larger for speech stimuli than non-speech stimuli. This means that people may be less sensitive to disruptions to rhythm patterns in speech than they would be to music and other non-speech rhythms; therefore, even if speech isn’t produced as isochronous, it might still be perceived as such.

However, a later study asked French and English phoneticians and non-phoneticians to categorise several languages, including Arabic, Yoruba, Polish, and Spanish, into the two timing classifications (Miller, 1984). There was rarely a consensus reached by the four groups, and it is likely that the phoneticians were influenced by received ideas. Therefore, the categorisation of languages into the ‘stress-timed’ and ‘syllable-timed’ brackets proves obsolete in both production and perception.

Another timing-based theory that was proposed was that of rhythm metrics, an idea that languages were not clearly divided into categories like stress- and syllable-timed but rather that languages exist on a continuum. On this continuum, languages’ rhythmicity would be determined by variation in their syllable structures and stress-based lengthening, which leads to differences in the duration of each vowel and consonant interval and the proportion of each utterance made up of vowels or consonants (Ramus et al., 1999). This theory received support but has also been extensively critiqued (Arvaniti, 2012; Barry et al., 2009; Turk & Shattuck-Hufnagel, 2013).

Barry et al. (2009) conducted both a production and a perception study based on rhythm metrics for English, German, and Bulgarian speaking participants. They used natural speech with different focus (broad or early focus) and poetic stimuli with four different metrical patterns. They showed that participants relied on fundamental frequency (F0) or pitch cues and intensity (amplitude) cues for: A. Speech rhythm production (evident as the percent-vowel-index, a purely durational measure, which could not account for the rhythm and prominence which was perceptually evident); and B. Perception of speech rhythm, which was proven in a second experiment which had participants rate perceived rhythmicity of different metric patterns. This experiment showed that rhythm metrics measures were not

enough on their own to describe the rhythmical patterns in both production and perception for each language.

Arvaniti (2012) showed that rhythm metric measures are sensitive to inter-speaker differences within languages and are sensitive to other features, such as rate of speech. This study also showed that languages which should exist at quite a distance from each other on the proposed spectrum, such as English (distinctly stress-timed) and Spanish (distinctly syllable-timed), were not significantly different statistically based on the rhythm metric measure.

1.2.2 Stress markers: Tone, intensity & duration

It is clear that speech rhythm is a complex and multidimensional phenomenon which cannot be analysed based on one aspect of speech alone (Tilsen & Arvaniti, 2013). Prosodic features such as F0 (Barry et al., 2009; Cumming, 2011; Dilley & McAuley, 2008; Jun, 2014), amplitude (Iversen et al., 2008; Jun, 2014; Wagner et al., 2021; Wagner, 2022), and speaking rate (Arvaniti, 2012) have been shown to affect rhythm perception. In the following sections, the interactions between duration and F0, as well as amplitude, will be discussed as the rhythm perception experiment reported here was centred on these three intonational features.

As rhythm research focussing solely on durational cues seems unable to completely explain the phenomenon of speech rhythm production and perception, new theories have emerged as to what other cues contribute to it. Jun (2014) referred to 'tonal rhythm' or 'macro rhythm'. Under this proposal, tonal and amplitudinal patterns across an utterance contribute to the perception of rhythm. This theory could still co-exist with a more 'micro' duration based rhythm at the level of phonemes and/or syllables.

Tone

Several studies have reported a link between F0 movement and speech rhythm perception. Barry et al. (2009) found that changes in F0 contributed strongly to participants' impressions of rhythmicity. They claimed that in English and German participants, F0 movement was a 'strong' secondary predictor of perceived rhythmic strength, while in Bulgarian participants F0 movement was almost equal to durational cues.

Cumming (2011) found that both F0 and durational prominence cues must be 'non-deviant' for a sentence to be perceived as rhythmic. Deviancy was considered any syllable which differed in length or pitch from the original production. It was hypothesised that deviancy would affect rhythm perception, but that tolerance levels for deviancy would vary between the language groups and individuals. It was found that participants from different native languages (German and French) had different tolerance levels for 'deviant' prominence cues. German listeners showed higher tolerance for tonal 'deviance' and almost no tolerance for durational deviance, while French listeners showed some tolerance for deviance in both measures.

There is undoubtedly a link between tonal variation and listeners' perception of speech rhythm for native speakers of a variety of languages. However, it remains unclear whether durational cues or F0 cues are stronger influencers of perceived rhythmicity.

Intensity

Much of the research into the link between amplitude variation and speech rhythm perception comes from the study of the Iambic-Trochaic-Law (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022). These studies aimed to find evidence for a universal law for grouping. Under this law, long syllables would be expected at the end of a foot, resulting in the perception of iambs, while loud syllables would be expected at the beginning of a foot (as intensity decreases across utterances (Gussenhoven, 2016)), resulting in the perception of trochees (Bolton, 1894).

All three of these ITL studies (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022) showed a strong link between amplitudinal variation and grouping, while the link between duration and grouping varied based on native language. For example, English listeners tended to follow the expected trend of alternating duration syllables being perceived as iambs. Listeners whose native language was Japanese did not follow this trend (Iversen et al., 2008). It was proposed that this is due to the differing word orders between the two languages.

Therefore, amplitude influences perceived rhythm, though whether it is a stronger influence than duration is a question yet to be answered. As the ITL predicts, people instinctively group alternating loud-quiet syllables into trochees, which will be relevant to the study reported here.

Tone, intensity, and duration

These three cues are to be the centre of this research, as very little work has been done comparing them in a single experiment. Two of the papers comparing intensity and durational cues acknowledged that tonal cues may be of equal importance to grouping and rhythm perception, but were excluded from the experiments (Wagner et al., 2021; Wagner, 2022).

In their production and perception studies, Barry et al. (2009) found that variation in rhythmic strength was reflected in durational measures, but additionally was often complemented by other properties, especially F0, but also intensity for certain listeners.

In a study investigating the interdependence of F0 and durational cues on perceived rhythmicity, Cumming (2011) found that participants based their rhythmicity judgements on several criteria and could not always put into words which acoustic features they were orienting to. Further research is required in order to ascertain how all three of these cues influence speech rhythm perception specifically.

1.2.3 Stress position & metrical structure

Another theory of speech rhythm that has emerged is that of 'abstract phonological rhythm' (Turk & Shattuck-Hufnagel, 2013). Under this theory, speech is made up of prominence

patterns theorised to be repeating, these prominence patterns can be represented on a metrical grid. Within these metrical structures, phonetic cues such as amplitude and pitch increase mark the highest beats in the structure. The beats, or highest bars of the metrical structure, align with these prominence cues, which do not necessarily need to be isochronous.

Cummins and Port (1998) conducted a speech cycling experiment (which will be discussed further in the following section). This study found that participants matched prominent syllables to metronome beats in predictable patterns which varied between participants. This supports the metrical structure theory, as people seem to subconsciously match prominence with beats in English, and in Korean accentual phrases are matched to beats, i.e. beat perception is influenced by the phonological prominence structures of the language (Chung & Arvaniti, 2013).

There are several studies which include poetic metres, such as Barry et al. (2009), as a way of keying into speech rhythm. Their study utilised poetry with trochaic, iambic, dactylic and anapest metre. Stress position within the proposed metrical structure seems to influence speech rhythm production and perception. Additionally, the Iambic-Trochaic-Law research (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022) focussed on iambic and trochaic grouping for durational and amplitudinal cues. Clearly, stress position and stress markers combine to influence rhythm perception.

An English listener might be biased towards perceiving repeating trochees in a metrical structure, even when there is no phonological cue to suggest a trochee, as English is a stress-initial language (Cutler, 1990). By contrast, Japanese listeners may be biased towards the perception of iambs, as Japanese is a stress-final language.

The experiment reported here took order into account in order to ascertain the importance of repeating metrical feet patterns on speech rhythm perception. As this experiment was limited to English-speaking participants, a bias towards trochees was anticipated.

1.3 Prior methodologies

Several different methodologies have been used to measure phonological rhythm perception including word segmentation tasks (Dilley & McAuley, 2008), grouping tasks (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022), and rhythmicity rating tasks (Barry et al., 2009; Cumming, 2011). All of these methods have their own issues.

Segmentation and grouping tasks are related to rhythm perception but are a more indirect measure than the task that was selected for this study. It has been shown that speech rhythm is a key part of listeners' ability to group and segment parts of speech. However, while the two are related, a grouping or segmentation task as a measure of speech rhythm assumes that this is an appropriate way to tap into linguistic rhythm, when it appears to be but one aspect of it.

The rating task also relies on conscious rather than subconscious perception and therefore is not the purest measure of speech rhythm perception. Asking people to decide which sentences sound more rhythmic is closer to addressing the question of what speech rhythm

is, but it has been shown that people struggle to explain what features they orient to, and at times say that they can't put it into words. Rating tasks presume that speech rhythm production and perception are conscious processes, which it seems that they are not, at least not always.

Other research into speech rhythm has utilised different methodologies, such as speech synchronisation with a metronome (Chung & Arvaniti, 2013; Cummins & Port, 1998). Cummins and Port (1998) showed that participants exhibited various different 'patterns' when asked to repeat a phrase in time with a metronome. There was a high degree of 'inter-subject variability'. These metrical patterns support the metrical structure theory presented in section 1.2.3.

Interestingly, participants' ability to remain in phase with the metronome often did not match their own perception of their performance. Trained musicians rated their performance better than it was, while non-musicians sometimes performed better than they thought. Chung and Arvaniti (2013) utilised the same task with Korean speaking participants. It was shown that despite the Korean language lacking stress, participants had the ability to systematically remain in phase, prioritising initial syllables of accentual phrases (APs) within an utterance to match the metronome.

Another methodology was the distraction task (Bella et al., 2013). This task involved participants synchronising their taps to a metronome, whilst a competing musical or speech rhythm was played. Music was found to be a stronger 'distractor' than speech. This showed that humans entrain to music more readily than they entrain to speech rhythm. However, entrainment to speech rhythm was still an observed phenomenon. This study doesn't reveal much about how humans understand and entrain to speech rhythm. However, it does reinforce that speech rhythm is something we instinctively perceive and respond to, even if this instinct is more prominent for musical rhythm than speech.

1.3.1 What is entrainment?

Entrainment describes our "natural tendency to synchronize movements with the temporal regularities of external stimuli" (Lidji et al., 2011, p. 1035). It is a relatively rare ability within the animal kingdom, although spontaneous entrainment has been observed in dolphins, orcas, songbirds, and certain species of primates (Wilson & Cook, 2016).

Entrainment can be shown in dancing (Lidji et al., 2011) or tapping (Drake et al., 2000). It occurs most commonly with music but happens also with speech (Bella et al., 2013; Kotz et al., 2018). An everyday example of entrainment to speech is gesture (Leonard & Cummins, 2011). A feature of entrainment that should be noted is the impact of individual characteristics on entrainment behaviour. It is known that higher levels of musical training lead to less frequent tapping (or entrainment to a higher 'referent level' (Drake et al., 2000; Lidji et al., 2011)). For example, a non-musician is more likely to tap their foot to every downbeat, while a musician is more likely to tap their foot only twice or even just once per bar (half/quarterly as regularly as the non-musician). This is something to bear in mind for the use of entrainment in speech rhythm research, information about musical training should be collected as it may influence individual behaviours.

Another phenomenon for entrainment that is relevant specifically to tonal rhythm research is that increases in pitch across an utterance have been shown to encourage acceleration in taps. Boasson and Granot (2012) showed in an SMS experiment with isochronous ‘beeps’ with either rising, falling, or steady frequency; the rising pitch stimuli destabilised inter-tap-intervals and produced more anticipation of tones (i.e. negative asynchrony). An experiment involving speech stimuli with pitch rises may be influenced by this.

1.3.2 What is the SMS?

A task which has emerged in speech rhythm literature over recent years utilises participants’ ability to entrain to speech (Lidji et al., 2011; Lin & Rathcke, 2020; Rathcke et al., 2019; Rathcke et al., 2021). This task is called sensorimotor-synchronisation (SMS). It requires participants to listen to a stimulus and simultaneously entrain (usually by tapping) to the beat that they perceive in the stimulus.

The SMS task has been used not just with speech stimuli but also with musical and metronome stimuli. An outline of the emergence of this task can be found in Repp (2005) and Repp and Su (2013). Repp and Su reported that the task is performable for people of a wide range of ages. Elderly participants retain good synchronisation ability, and participants as young as 6–7 years can perform the task at a high level, almost equal to that of adults.

The SMS task was used by Lidji et al. (2011) to compare two languages, English and French. It was found that both English and French participants tapped most regularly to the English stimuli. Native language was also shown to affect the participants’ referent level (see above and in Drake et al., 2000). English speakers were shown to tap at a higher referent level than French speakers. Native language was also shown to affect their regularity, as English speakers were more regular overall.

Rathcke et al. (2019) compared tapping behaviours (both simultaneous and non-simultaneous) of English speaking participants to speech and non-speech stimuli. They showed that participants entrained to speech (specifically vowel onsets) comparably to how they entrained to pure tones (at three different tempi). The stability of intervals between taps was also shown to be higher when the participants were tapping while listening to the stimuli rather than afterwards. Lin and Rathcke (2020) investigated the relationship between English-speaking participants’ taps and different signals in speech in order to ascertain which signals serve as the best ‘anchor’ for taps. Natural sentences of varying length were repeated twenty times each, and participants were asked to tap along. Vowel onsets were compared to amplitude and pitch increases as well as speech rate measures. Taps were shown to synchronise best with vowel onsets and amplitude increases.

Rathcke et al. (2021) again proved that the simultaneous tapping (SMS) task with looped speech (20 repetitions of each utterance) is comparable to SMS task studies with music and metronome stimuli. English-speaking participants were instructed to tap to their perceived beat of the speech. Six sentences were repeated 20 times each and participants were asked to tap along. Metrically strong and phrasally accented vowels were more likely to attract taps than metrically weak vowels. Amplitude increases were shown to have a strong correlation with negative asynchrony.

The measures of the SMS task utilised in the study reported here are asynchrony (i.e. how close to the vowel onset do the taps fall?) and the proportion of tap peaks on a syllable, which was an average of their tapping behaviour across the 20 repetitions of each utterance. If a participant had a tap peak on a certain syllable, that syllable would receive a peak value of 'yes'. This methodology was selected in order to investigate participants' subconscious perception of, and entrainment to, the 'beat' of speech. Asynchronies are a measure of a participant's accuracy, and tap peaks are a measure of whether the participant considered that syllable to be a 'beat'.

1.4 Research questions and hypotheses

This experiment aims to investigate the perception of speech rhythm, as shown by tapping behaviour. Stress position was an important factor, as well as how the stress markers pitch, amplitude, and duration influence participants' tapping behaviour.

The questions that this paper aims to address are:

1. Of the three prominence markers (tone, amplitude, and duration), which is the most likely to attract tap-peaks?
2. How will the stress position affect the participants' tapping behaviours, e.g. will trochees be favoured?
3. How will these three prominence markers affect the accuracy or 'asynchrony' of participants' taps? Will certain stress markers and their position within the utterance encourage decreases in asynchrony more than others?

I hypothesise that I will find a hierarchy of importance for the three factors that I am considering, with the pitch being the most significant (i.e. have the highest number of tap peaks), followed by duration and lastly amplitude. Barry et al. (2009) found that pitch was an important secondary cue for speech rhythm perception after durational cues for English listeners. However, other studies have shown a strong link between pitch cues and durational cues (Cumming, 2011). It remains unclear which of these three cues people orient to when asked to key into speech rhythm.

I also hypothesise that participants will show a preference for trochees, as English is a stress-initial language (Vihtnan et al., 1998).

Finally, I hypothesise that, when the stress markers high pitch and amplitude appear second in their utterance, participants will anticipate the syllable more than when the stress markers happen in the first syllable of the utterance, in line with the findings of Boasson and Granot (2012) and with amplitude increases, in line with Ratchke et al. (2021). This will be evident through a higher degree of negative asynchrony for high pitch and amplitude syllables in the second syllable condition.

2. Method

The sensorimotor-synchronisation (SMS) task was the method selected to measure participants' speech rhythm perception. This method is said to enhance participants' perceptual abilities (Rathcke et al., 2021) and relies on the entrainment phenomenon, rather than on working memory or conscious judgments of rhythmicity.

2.1 Participants

There were 16 participants in this experiment, all of whom were native New Zealand English speakers. Participants were recruited through Facebook and were compensated with online gift vouchers. There were 7 male participants, 7 female participants, and 2 participants who identify with other genders.

The age range of this research was 18–58, and the average age was 24.75 years. They all read an information sheet and signed a consent form prior to participation. The study was approved by the Human Ethics Committee at Victoria University of Wellington (No. 29412).

2.2 Materials

The stimuli for the experiment were recorded by a female native New Zealand English speaker. The stimuli consisted of different iterations of six-syllable 'utterances' (see Article 3 supplementary folder_Example Sound Files). The nonsense syllables /na/ and /nu/ were selected as they are made up of sonorants and vowels. Each utterance was made up of six repetitions of either /na/ or /nu/. After recording, the 6 syllable utterances were pitch, duration (of each syllable) and amplitude normalised in Praat (Boersma & Weenink, 2023).

The syllables in each utterance were then manipulated to have combinations of intonational features typically associated with stress marking. These features were pitch, amplitude, and duration. Each syllable combined one stress marker (high pitch, loud, long) with one unstressed marker (low pitch, quiet, short). This combination would then switch to the opposite marker (e.g. a high and short syllable would be followed by a low and long syllable) so that each utterance would alternate between combinations, as shown in Table 1. The third cue, which was not relevant to any given utterance, was kept constant. When pitch was not being manipulated in an utterance, it was kept at an average f_0 of 185Hz (halfway in between the high and low pitch peaks and troughs when pitch was being manipulated). When duration was excluded from the manipulation of a given utterance, the length of each syllable was 550ms. This was calculated from the speaker's average syllable length across the recordings. When amplitude was not being intentionally manipulated, the average amplitude across the utterance was 76db. Again, this was an average of the speaker's amplitude across the recordings taken.

Table 1

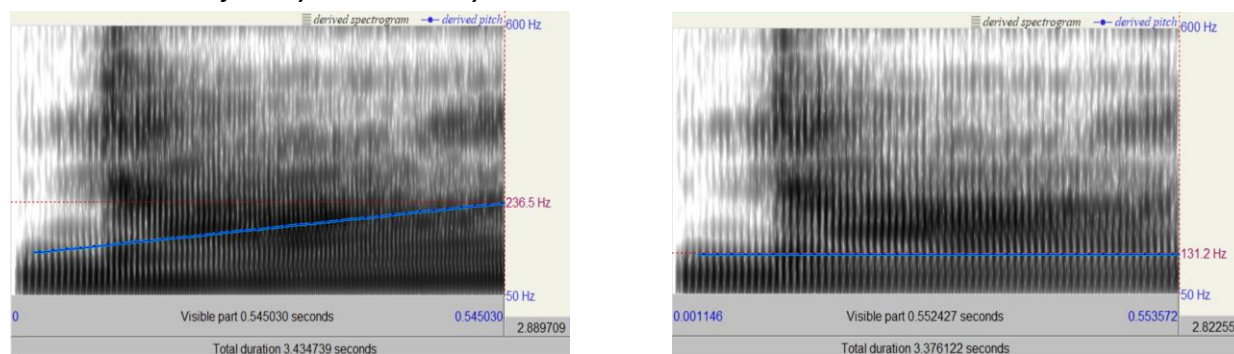
The syllable alternation patterns of the six different orders used in the experiment

	High-quiet first	High-short first	Low-loud first	Low-long first	Quiet-long first	Loud- short first
Syllable 1	High-quiet	High-short	Low-Loud	Low-long	Quiet-long	Loud-short
Syllable 2	Low-loud	Low-long	High-quiet	High-short	Loud-short	Quiet-long
Syllable 3	High-quiet	High-short	Low-Loud	Low-long	Quiet-long	Loud-short
Syllable 4	Low-loud	Low-long	High-quiet	High-short	Loud-short	Quiet-long
Syllable 5	High-quiet	High-short	Low-Loud	Low-long	Quiet-long	Loud-short
Syllable 6	Low-loud	Low-long	High-quiet	High-short	Loud-short	Quiet-long

For the pitch manipulations, peaks were created at the end of the syllable; high pitch peaks were 240Hz, while the low pitch troughs were 130Hz and placed near the vowel onset (see Figures 1 and 2).

Figures 1 & 2

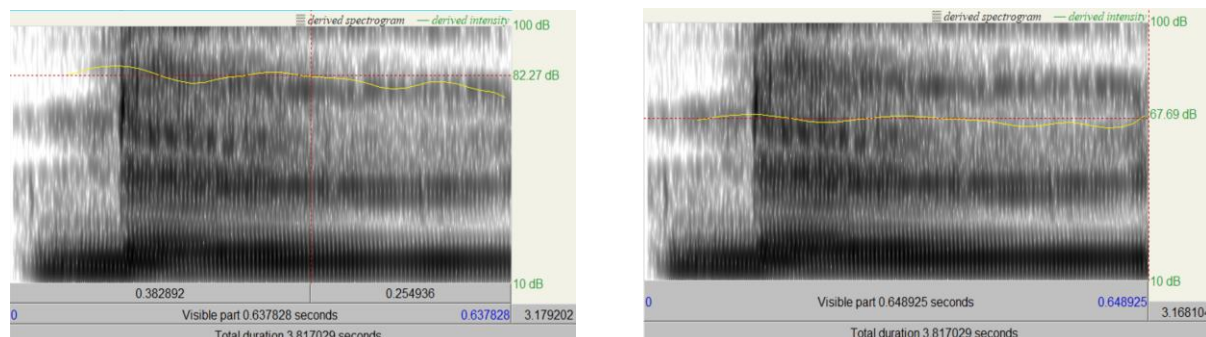
Spectrograms of the /na/ high pitch syllable (left) and low pitch syllable (right). The blue line shows the F0 trajectory across the syllable.



The amplitude manipulations were made across the entire syllable, with loud syllables being roughly 80db on average and the quiet syllables being roughly 65db (see Figures 3 and 4). These values were taken from averages of the speaker's stressed/unstressed syllables across 12 recorded sentences.

Figures 3 & 4

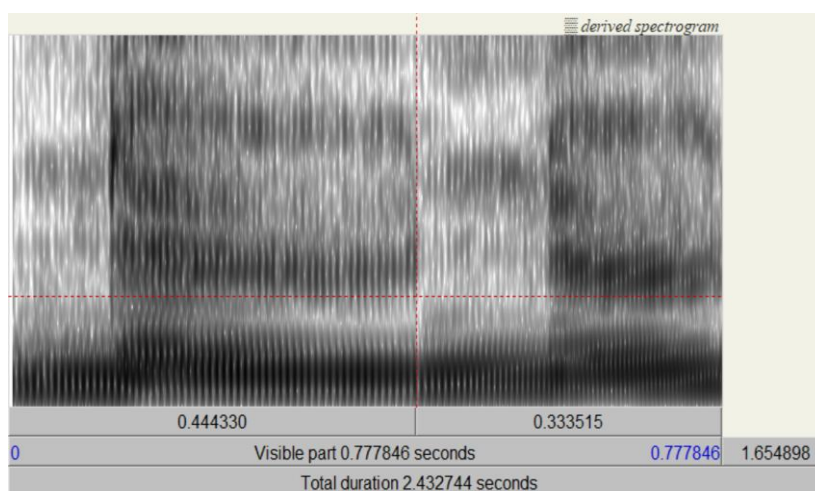
Spectrograms of the /nu/ loud syllable (left) and quiet syllable (right). Yellow line shows the amplitude trajectory across the syllable.



The duration manipulations were done over the vowel, rather than the whole syllable. Long vowels were 310 ms long while short vowels were 170 ms long (see Figure 5). These values are taken from Cruttenden (2014) who reports another study which measured the length of vowels in certain contexts. That study reported long vowels as being 310ms long and short vowels as 130 ms long when preceding voiced consonants.

Figure 5

Spectrogram of the /nu/ long (left) and short (right) syllables

**2.3 Design**

The syllable utterances had a total of 12 versions, i.e. the 6 different orders (see Table 1) for both of the syllables /na/ and /nu/. Each of these 12 versions had 20 repetitions in the experiment for a total of 240 utterances.

The utterances were concatenated so that they were repeated 20 times with 1 second of silence between each repetition. This followed the SMS task described in Rathcke et al. (2021). These utterance chains were then placed into one of four randomly ordered lists with a period of silence double the length of 1 repetition (6 seconds) in between each change in utterance. Each list contained all 12 of the utterances.

2.4 Procedure

Before completing the experiment, all participants answered a questionnaire regarding demographic information as well as relevant experience with dancing, musicianship, and video gaming.

All participants were assigned one of the four lists, with four participants completing each list. All participants used the same headphones (Sennheiser HD450BT, used with a cable and not the Bluetooth function) and laptop, as well as a drum pad (Roland SPD: ONE WAV PAD)).

Participants were given time to familiarise themselves with the drum pad before the experiment began. They were all told to use their dominant hand.

The sound files were presented to participants in Bandlab software (<https://www.bandlab.com>). This program allowed the presentation of the stimuli to the participants, and the recording of their taps into a MIDI file using the drum pad. The participants did not hear any feedback from their taps in Bandlab. The length of the 12 utterance lists exceeded the maximum length of a sound file in Bandlab. Therefore, they were split in half, with six utterances per sound file in Bandcamp.

Participants were instructed to tap to the beat of the utterances they would hear. If they asked for further direction, participants were told that they should tap to the beat of whatever rhythm that they perceived in the stimuli. They were also told that no rhythm would be 'correct' or 'incorrect'. They were told that there would be 20 repetitions of each utterance followed by a change to another utterance. They were asked to start tapping along with each utterance whenever they felt they had a sense of its beat.

Prior to completing the experiment itself, the participants tapped along to a short sound file made up of non-speech tones of varying tempi. This format was modelled on the BAASTA task in Bella et al. (2016). This task allowed participants to get used to the task and tools involved in the experiment before it began.

Following this, the participants heard their assigned list of utterances. As the chains were quite long, participants were granted breaks as needed at the end of any sound file.

After this task, participants completed another tapping task with another set of speech stimuli. This second experiment is not reported here.

2.5 Analysis

The MIDI files containing each participant's taps were converted into CSV files using a Matlab script (The MathWorks Inc., 2022), in order to be analysed in the R program (R Core Team, 2022). These were then collected into dataframes according to the list of utterances that they belonged to. This enabled matching of the tapping dataframes with other CSVs with information regarding the properties of the sound files that were being tapped to.

An R script was developed to assign tap peaks to the utterance that they occurred in, and then which syllable they were synchronised with. The first three repetitions of each utterance for each participant were excluded from the analysis following Ratchke et al. (2019, 2021).

The two dependent variables used in the analysis were tap peak proportions and asynchrony. The proportions of taps were calculated using each participant's tap peaks (an average of their tapping behaviour across the 17 repetitions of each utterance). It should be noted that as participants were given the freedom to begin their tapping when they felt they had a sense of the beat of the utterance, not every participant had 17 repetitions of each utterance.

Once the raw taps were loaded into R, individual participants' taps across their repetitions of each utterance were combined into a gaussian graph (x-axis showing progression of time and the y-axis showing the number of taps). These graphs displayed the points that were tapped to the most overall. These high points in the gaussian graphs were considered the 'tap peaks'. The 'findpeaks' function in the *pracma* package (Borchers, 2022) allowed for the calculation of the exact peak times in each utterance for each participant. The tap peaks were then assigned to syllables. If a participant had a tap peak on a certain syllable, that syllable would receive a peak value of 'yes'.

The asynchronies were calculated with respect to the vowel onset (in line with the findings in Lin & Rathcke, 2020; Rathcke et al., 2019; Rathcke et al., 2021) and also with respect to the syllable onsets. However, it was found that vowel onsets were the most appropriate measure of asynchrony. The final asynchrony measure was the time of a tap in any given syllable minus the vowel onset time for that syllable, so positive asynchronies indicate the tap was after the vowel onset, and negative before.

The independent variables that were investigated were 'stressed value' (whether the syllable was high pitch, loud or long), 'other phonetic property' (whether the syllable was also low pitch, quiet or short), and 'position of stress' in the syllable pair. These were chosen to investigate the first and second research questions regarding the importance of stress cues and stress position.

The effect of the independent variables on each of the dependents (tap peak proportions and asynchrony) was first explored through visualisations from the raw data. Bar charts were created to depict the proportion of syllables that had a 'yes' value out of the total possible number. Boxplots were created (Rudis, 2020; Wickham, 2016) to represent the asynchrony results visually.

Mixed effects modelling was then used to explore the significance of each factor for the two dependents. Elimination of non-significant factors was done using *buildmer* (Robinson et al., 2022; Voeten, 2023; Zhu, 2021), with the ‘bobyqa’ optimiser. For tap peak proportions, a binomial model was run.

3. Results

3.1 Proportion of tap peaks

The first measure of rhythm perception used in this study was the proportion of tap peaks. Figure 6 shows the proportion of tap peaks across the six syllables. It is clear from this graph that the first syllable was unlikely to attract a tap peak. This aligns with the findings in Rathcke et al. (2021; see Figure 8) and Lin & Rathcke (2020; see Figure 2) although it is a more sizeable difference in my data. For the remainder of the descriptive statistics, the first syllable was excluded as it is clearly different from the other syllables.

Figure 6

A barchart showing the proportion of tap peaks across the six syllables

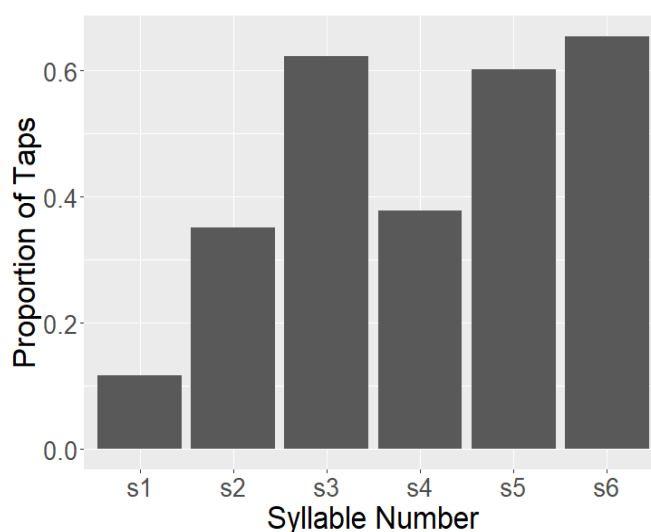


Figure 7 shows a strong tendency towards trochees as the position of stress ‘first’ is more likely to attract taps than when stress position is ‘second’.

Figure 8 shows very little difference between the proportion of taps for the stress markers ‘high’ and ‘long’. The stress marker ‘loud’ seems less likely than the other two to attract tap peaks.

Figures 7 & 8

Figure 7 (left) is a bar chart showing the proportion of taps in the two different stress positions, first and second. Figure 8 (right) is a bar chart depicting the proportion of taps across the three stress markers.

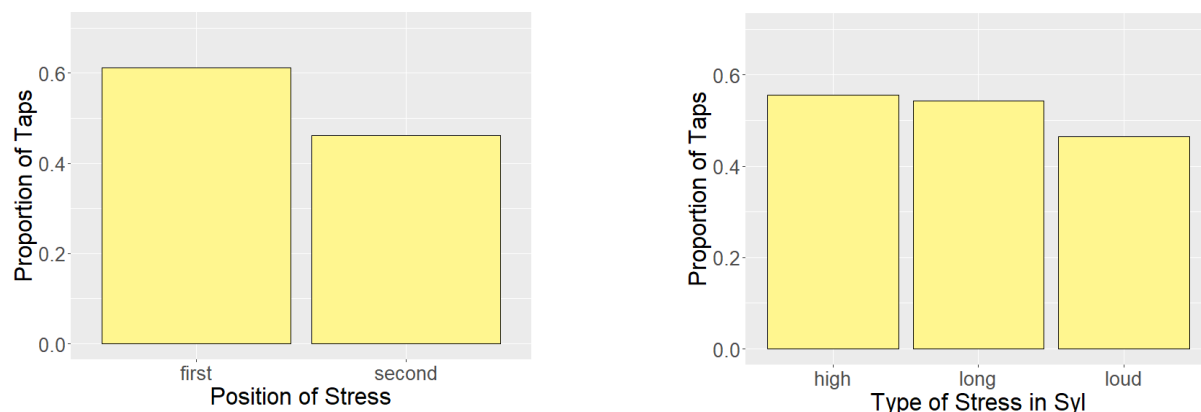


Figure 9 confirms that the high and long syllables were more likely to attract the tap peaks than the loud syllables. The competing prosodic cue does not seem to influence the proportion of peaks for these two syllable types. The loud syllables have a lower proportion of tap peaks overall, especially when combined with short syllable length.

Figure 9

A bar chart showing tap peak proportion for the interaction between the stress markers and each of the three competing prosodic cues: low, quiet, and short

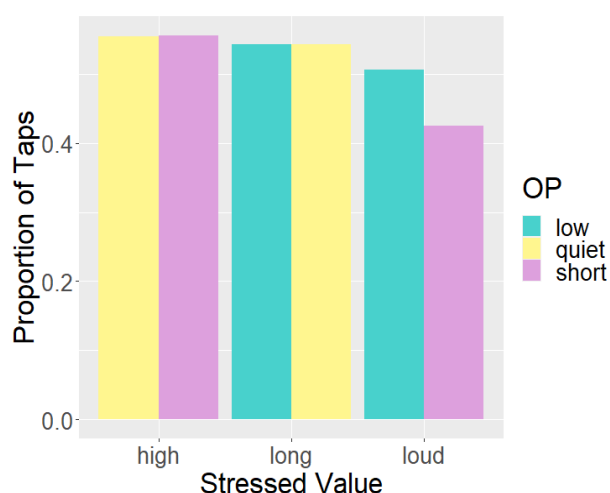
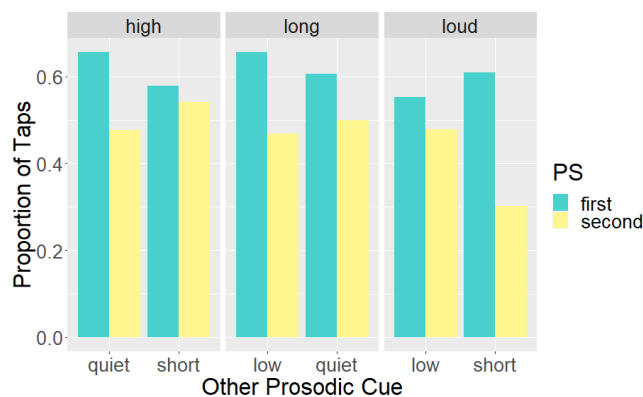


Figure 10 shows a clear preference for trochees across all conditions. This effect is strongest for the loud-short combination, and weakest in the high-short condition.

Figure 10

Bar charts showing the proportion of taps for the stress markers with respect to other prosodic cues and stress position



A binomial model was created using the dependent value 'HasTapPeak'. The fixed effects of the initial model were stress marker, stress position, other prosodic cues, and 'initial syllable'. The variable 'initial syllable' was included as these seemed to behave differently in an important way. The interaction between these fixed effects was also included. The random effects were participant and item (/na/-/nu/). The model returned by *buildmer* included a three-way interaction between the stress marker, stress position and other prosodic cues, as well as the simple effect of an initial syllable ($\beta = -2.48$, $z = -9.9$, $p < 0.0001$). Neither of the random effects were found to be significant.

Figure 11

A bar chart created with estimates from the peak proportions model, with other prosodic cues on the x axis, stress position represented by colour, and faceted by stress marker

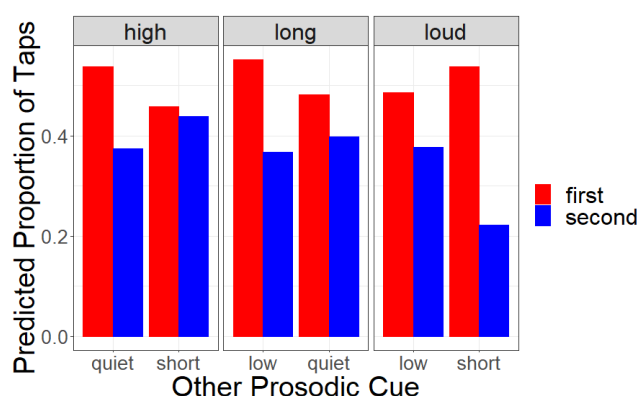


Figure 11 shows the effect of the three-way interaction stress marker, stress position, and other prosodic cues on the predicted proportion of taps, using estimates from the model. A clear preference for trochees (stress position = first) can be seen. This is strongest for the loud-short condition and weakest for the high-short condition. The amplitude cues being the most susceptible to the trochaic ordering preference is interesting, as this matches the findings of the ITL with grouping tasks. Also matching the ITL is the preference for a short

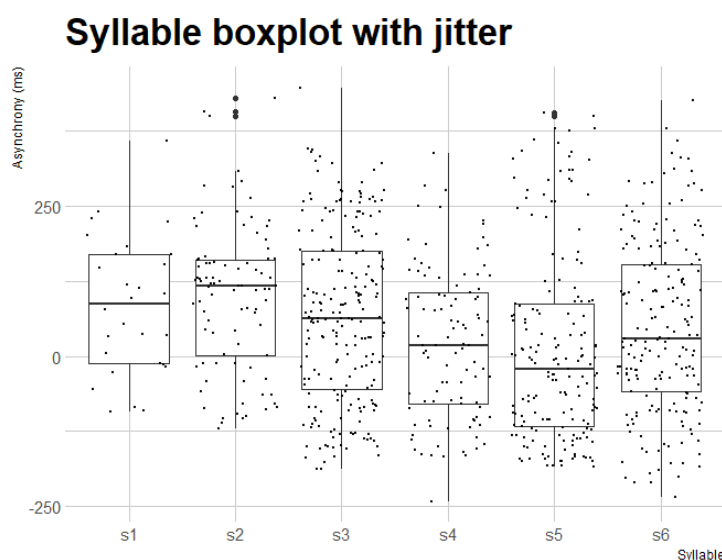
syllable in the first position. This syllable type (loud-short), showing the strongest trochaic effect aligns perfectly with the ITL.

3.2 Asynchrony

The second measure of rhythm perception was asynchrony. Previous research has found that the most appropriate anchor for tapping in the SMS task with speech is vowel onsets (see Section 1.3.2 above). In this analysis, other possibilities were considered, namely syllable onsets; however, the results suggest that in general peaks were aligned with vowel onsets.

Figure 12

Boxplots displaying the distribution of asynchronies for each of the six syllables. Dots represent individual peaks.



From Figure 12, we can see that asynchrony seemed to decrease across the utterances. The average asynchrony of syllables 1, 2, and 3 is higher than the average asynchrony of syllables 4, 5 and 6. This is in line with the findings in Rathcke et al. (2021).

Figure 13 shows that the average asynchronies across all three of the stress markers are comparable to one another. They are all positive (i.e. peaks were usually found just after the vowel onset). Overall, the distribution for all three stressed values looks similar, although there appears to be more variability in the long condition.

Figure 13

Boxplots displaying the distribution of asynchronies for all three of the stressed value conditions. Dots represent individual peaks.

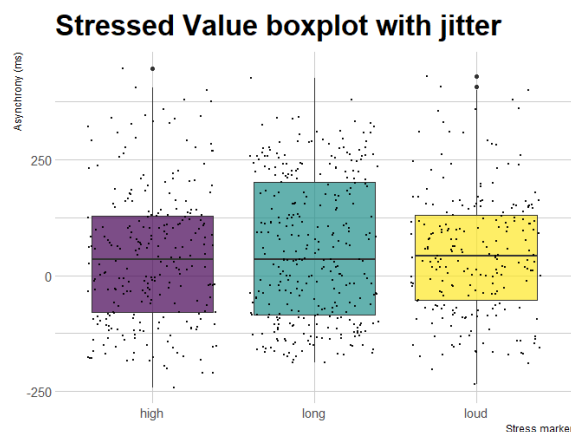


Figure 14 shows the average asynchrony for the two stress positions. The average asynchrony appears slightly higher for the second syllable, though this does not seem to be an important difference.

Figure 14

Boxplots displaying the distribution of asynchronies for each stress position. Dots represent individual peaks.

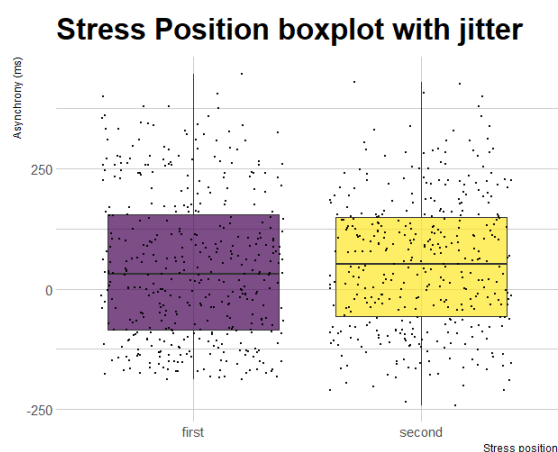
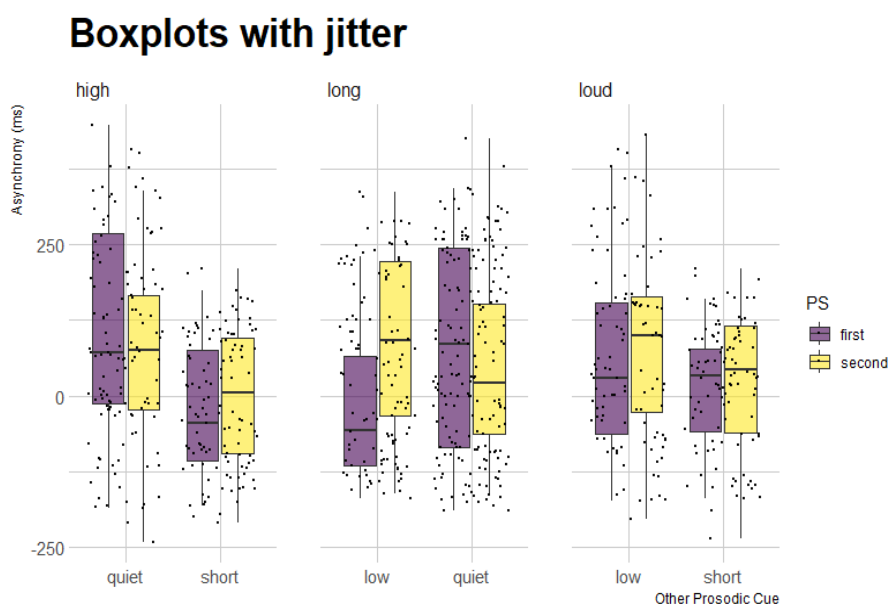


Figure 15 shows the distribution of asynchronies for the three-way interaction between stress marker, other prosodic cues, and stress position. In general, the distribution of asynchronies is comparable between conditions. There are some boxplots which seem different from the norm including the high-short condition (especially when first in a syllable pair) and low-loud syllables when first in a syllable pair. However, this three-way interaction was not found to be a significant predictor of asynchrony variation in the model which is reported below.

Figure 15

Boxplots displaying the distribution of asynchronies for each competing prosodic cue, with respect to stress position. The boxplots are faceted by the stress marker. Dots represent individual peaks.

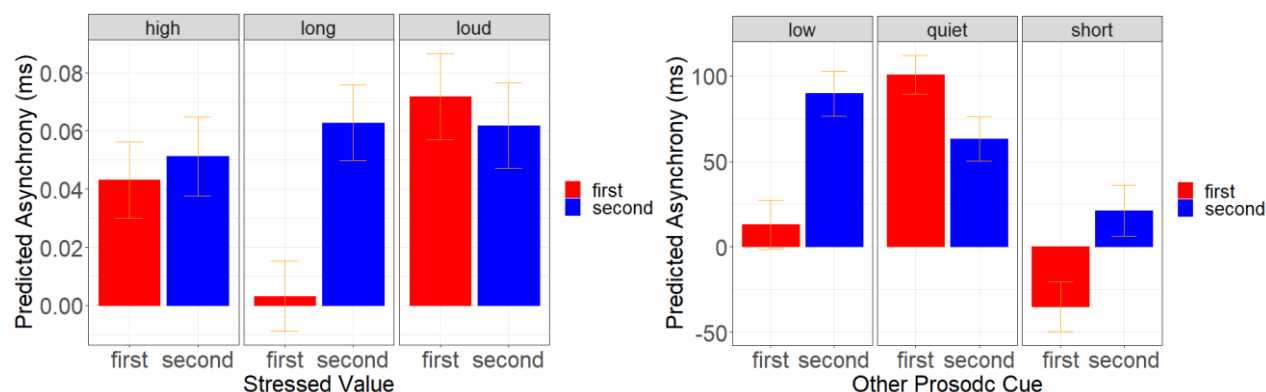


A mixed effects model was created to predict the effects of the independent variables (stress marker, other prosodic cues, and position of stress, and the interaction between these three), as well as 'syllable position', and the random effects participant, and item (/na/-/nu/) on the asynchrony measure. This model used the variable 'syllable position' rather than 'initial syllable' as the average asynchronies stabilised across the six syllable utterances (see Figure 12).

The model returned by *buildmer* included the interaction between the stress marker and stress position, as well as between other prosodic cue and stress position, and a simple effect of syllable number ($\beta = -15.319$, f value = 17.9517867, $p < 0.0001$) showing that asynchronies were smaller later in the utterance. For both high and long syllables, asynchrony was higher when the stress position was second (see Figure 16). However, the effect for the long syllables is clearly more significant, as the error bars do not overlap. Additionally, for both low and short syllables, asynchrony was higher when the stress position was second (see Figure 17). These figures show the effect of stress position on hearers' tapping accuracy for each of the prosodic cues that were investigated. A higher level of tapping accuracy can be seen for trochees than iambs.

Figures 16 & 17

Figure 16 (left) is a bar chart showing the effect of the interaction between stress marker and stress position on predicted asynchrony. Figure 17 (right) is a bar chart showing the effect of the interaction between other prosodic cues and stress position on predicted asynchrony.



4. Discussion

The questions that this paper aimed to address were:

1. Of the three prominence markers (tone, amplitude, and duration), which is the most likely to attract tap-peaks?
2. How will the stress position affect the participants' tapping behaviours, e.g. will trochees be favoured?
3. How will these three prominence markers affect the accuracy or 'asynchrony' of participants' taps? Will certain stress markers and their position within the utterance encourage decreases in asynchrony more than others?

This section will first elaborate on the results found for tap peak proportions and will address research questions one and two. It will then discuss the asynchrony results and address research question three.

4.1 Tap peak proportions

The finding for research question one supports the hypothesis that amplitude would be the least likely stress marker to attract tap peaks, and thus is the least important stress marker for rhythm perception (see Figures 8 and 9). However, the pitch and duration stress markers seem similarly likely to attract tap peaks, so they are perhaps equally important to speech rhythm perception for English-speaking listeners.

The finding for research question two is that the participants were much more likely to tap to any given stress marker if it appeared first in the alternating syllable pairs (see Figures 7, 10, and 11). This confirms that the expectation of trochaic rhythm patterns was strong.

The first conclusion is that amplitude is the least likely stress marker to attract tap peaks. Figure 8 shows that the peak proportion for ‘loud’ is lower than for the other two stress markers. As it pertains to the first research questions and hypothesis, of the three prominence cues, amplitude is the least important to rhythm perception in these data.

However, it is still unclear whether ‘duration’ or ‘pitch’ is more significant to the perception of speech rhythm. As Figure 9 shows that loud syllables were more likely to attract taps when combined with the competing prosodic cue ‘low’ than ‘short’, it is possible that durational cues are more important than pitch cues for perception of rhythm in speech. This evidence is not overwhelmingly convincing, so the dynamic of importance between these two cues for rhythm perception warrants further examination.

The second conclusion from the tap peak proportion results was that the participants were much more likely to tap to any given stress marker if it appeared first in the alternating syllable pairs (see Figures 7, 10, and 11). This confirms that the expectation of trochaic rhythm patterns was strong. This result was found for all stress markers and all stress markers and other prosodic cue combinations. With respect to the hypotheses, it is clear that stress position clearly impacted the participants’ tapping behaviours, even where the iambic-trochaic-law does not necessarily apply, such as for the long-short alternating syllables, which typically lend themselves to iambic grouping (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022).

Notably, the stress position effect seems to be more important than the effect of the stress marker (see for example Figures 7 and 8). This shows that participants had a preference for the perception of trochees, and that this was more important than the influence of stress markers on their rhythm perception. It is apparent from these results that the participants’ preference for trochaic patterns is strong, confirming the second hypothesis that the participants would favour trochaic rhythm patterns.

It is important to point out that the model created for the peak proportion variable found the three-way interaction between the stress marker, stress position, and unstressed cue was significant (see Figure 11). Also significant was the interaction between stress marker and stress position. None of these factors were found to be significant on their own.

Investigation of the three-way interaction between stress marker, stress position, and other prosodic cues (see Figures 10 and 11) showed that the preference for trochees was so strong that it could be seen for all three stress markers, including ‘long’. According to ITL research, alternating long-short syllables are grouped as iambic feet by English listeners (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022). However, in this SMS tapping experiment, trochaic patterns were preferred even for the stress marker long.

Following the iambic-trochaic-law, it is expected that the loud-quiet syllable pairs be perceived as trochees, as this has been shown in several languages (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022). Although high-low syllables don’t seem to have been investigated under the ITL framework, as a stress marker pitch most likely has implications for the ITL, which was acknowledged in Wagner et al. (2021). In stress-initial languages such as English, alternating high-low syllables are likely to lend themselves to trochaic perception.

As discussed in Grabe and Warren (1995), listeners tend towards trochaic perception even when typically iambic words carry prosodic markers on their second syllable.

The biggest conclusion to draw from these graphs is that trochees were preferred so strongly that they overruled some expectations of the ITL grouping law. The finding that the preference for trochees was strong and influenced tapping behaviours even more than any of the prosodic cues alone lends itself to the theory of metrical structure. This suggests that metrical structure and patterns are more important for rhythm perception than macro-rhythm and prominence cues, for English speakers. This warrants further investigation, as the nature and mechanisms of speech rhythm remain difficult to define. It is clear that there is a relationship between durational and prosodic cues for rhythm perception. The results signify that expectations of rhythm are also important to how speakers perceive the rhythm of speech.

While Figure 6 shows that the very first syllable rarely attracted tap peaks, this does not take away from the conclusion that the perception of trochaic patterns had the strongest influence over the participants' tapping behaviours. The first syllable was probably difficult for the participants to tap to as there was a gap between repetitions, so anticipating the start of the next utterance was understandably difficult. This was similar to the finding in Rathcke et al. (2021; see comment in section 3.1); however, the effect in my data was noticeably stronger.

Overall, the conclusion is that while the bias towards trochaic perception was stronger than the effect of the prosodic cues, both of these factors were important for rhythm perception. Amplitude was certainly the least likely stress marker to attract taps, and duration perhaps the most likely; however the pitch and durational cues behaved very similarly, and this might warrant further investigation.

4.2 Asynchronies

The results that were found for the tap asynchronies supported the previous findings for SMS tasks with speech (Lin & Rathcke, 2020; Rathcke et al., 2019; Rathcke et al., 2021) that vowel onsets are the most appropriate anchor for taps. Additionally, the results were in line with the findings of these studies that tap asynchronies tend towards zero as utterances go on (see Figure 12).

The hypothesis regarding asynchronies was that when the stress markers high pitch and amplitude appeared in the second syllable, this would lead to increased negative asynchrony in the participants' taps. There was no significant difference between the three stress markers (see Figure 13). All three stress markers had an average asynchrony that was positive, so there was no evidence for acceleration with any particular prosodic cue in either the first or second syllable condition.

Despite the fact no evidence was found to support the anticipation hypothesis, it still seems that stress position impacted asynchronies (see Figures 16 and 17). The interaction between stress position and stress marker and the interaction between stress position and other prosodic cues were both found to be significant predictors of asynchrony in the model.

For both the durational cues and the pitch cues, asynchronies were lower when the stress position was first. Therefore, participants were less consistent in their tapping when the stress marker was in the second position of the utterance, again showing a strong preference for trochaic rhythm perception in the participants. However, when amplitude cues were involved, there was higher predicted asynchrony when stress position was first.

5. Conclusions

While it seems that stress markers did influence the perception of rhythm, the effect of these prosodic cues was most salient when also combined with stress position. It seems that metrical structure theory is relevant to the findings presented here. While the prosodic cues did contribute to rhythm perception, they varied strongly in the likelihood of attracting taps based on their position within the metrical structure.

Interestingly, the preference for trochees was found even with long-short syllable patterns, which favour iambic perception for English listeners in grouping tasks (Iversen et al., 2008; Wagner et al., 2021; Wagner, 2022).

Ultimately, the results showed that both prosodic cues and stress position impacted rhythm perception. Although this quote from Bolton (1894, 168) was not in reference to the factors this paper examined, it is incredibly apt for one of the first published studies into English speech rhythm: “A rhythm which depends wholly upon either the time element or the accent, is certainly less forcible than one which combines both factors.”. Translated to these findings; a rhythm based solely on either repeating patterns or stress markers is less compelling than a rhythm which combines them.

References

- Arvaniti, A. (2009). Rhythm, timing and the timing of rhythm. *Phonetica*, 66(1–2), 46–63. <https://doi.org/10.1159/000208930>
- Arvaniti, A. (2012). The usefulness of metrics in the quantification of speech rhythm. *Journal of Phonetics*, 40(3), 351–373. <https://doi.org/10.1016/j.wocn.2012.02.003>
- Attridge, D. (1995). *Poetic rhythm: An introduction*. Cambridge University Press.
- Barry, W., Andreeva, B., & Koreman, J. (2009). Do rhythm measures reflect perceived rhythm? *Phonetica*, 66(1–2), 78–94. <https://doi.org/10.1159/000208932>
- Bella, S. D., Białuńska, A., & Sowiński, J. (2013). Why movement is captured by music, but less by speech: Role of temporal regularity. *PLOS ONE*, 8(8), e71945. <https://doi.org/10.1371/journal.pone.0071945>
- Boasson, A. D., & Granot, R. (2012). Melodic direction’s effect on tapping. *12th International Conference on Music Perception and Cognition*, Thessaloniki, Greece.
- Borchers, H. W. (2022). *pracma: Practical Numerical Math Functions*. <https://CRAN.R-project.org/package=pracma>

- Bolton, T. L. (1894). Rhythm. *The American Journal of Psychology*, 6(2), 145–238.
- Chung, Y., & Arvaniti, A. (2013). Speech rhythm in Korean: Experiments in speech cycling [Conference session]. *Meetings on Acoustics*, 19(1), 060216. <https://doi.org/10.1121/1.4801062>
- Cruttenden, A. (2014). *Gimson's pronunciation of English*. Routledge.
- Cumming, R. E. (2011). The language-specific interdependence of tonal and durational cues in perceived rhythmicity. *Phonetica*, 68(1–2), 1–25. <https://doi.org/10.1159/000327223>
- Cummins, F., & Port, R. (1998). Rhythmic constraints on stress timing in English. *Journal of Phonetics*, 26(2), 145–171. <https://doi.org/10.1006/jpho.1998.0070>
- Cutler, A. (1990). Exploiting prosodic probabilities in speech segmentation. In G. T. M. Altmann (Ed.), *Cognitive models of speech processing: Psycholinguistic and computational perspectives* (pp. 105–121). MIT Press.
- Dilley, L. C., & McAuley, J. D. (2008). Distal prosodic context affects word segmentation and lexical processing. *Journal of Memory and Language*, 59(3), 294–311.
- Drake, C., Jones, M. R., & Baruch, C. (2000). The development of rhythmic attending in auditory sequences: Attunement, referent period, focal attending. *Cognition*, 77(3), 251–288.
- Grabe, E., & Warren, P. (1995). Stress shift: Do speakers do it or do listeners hear it? In B. Connell & A. Arvaniti (Eds.), *Phonology and phonetic evidence: Papers in laboratory phonology IV* (pp. 95–110). Cambridge University Press.
- Gussenhoven, C. (2016). Foundations of intonational meaning: Anatomical and physiological factors. *Topics in Cognitive Science*, 8(2), 425–434.
- Iversen, J. R., Patel, A. D., & Ohgushi, K. (2008). Perception of rhythmic grouping depends on auditory experience. *The Journal of the Acoustical Society of America*, 124(4), 2263–2271.
- Jun, S.-A. (2014). Prosodic typology: By prominence type, word prosody, and macro-rhythm. In Sun-Ah Jun (ed.), *Prosodic Typology II: The Phonology of Intonation and Phrasing* (pp. 520–539). Oxford University Press <https://doi.org/10.1093/acprof:oso/9780199567300.003.0017>
- Kotz, S. A., Ravignani, A., & Fitch, W. T. (2018). The evolution of rhythm processing. *Trends in Cognitive Sciences*, 22(10), 896–910. <https://doi.org/10.1016/j.tics.2018.08.002>
- Lehiste, I. (1977). Isochrony reconsidered. *Journal of Phonetics*, 5(3), 253–263.
- Leonard, T., & Cummins, F. (2011). The temporal relation between beat gestures and speech. *Language and Cognitive Processes*, 26(10), 1457–1471.

- Lidji, P., Palmer, C., Peretz, I., & Morningstar, M. (2011). Listeners feel the beat: Entrainment to English and French speech rhythms. *Psychonomic Bulletin & Review*, 18(6), 1035–1041. <https://doi.org/10.3758/s13423-011-0163-0>
- Lin, C.-Y., & Rathcke, T. (2020). How to hit that beat: Testing acoustic anchors of rhythmic movement with speech. *Proceedings of Speech Prosody 2020*, Tokyo, Japan. <https://doi.org/10.21437/SpeechProsody.2020-1>
- Miller, M. (1984). On the perception of rhythm. *Journal of Phonetics*, 12(1), 75–83.
- Novák-Tót, E., Niebuhr, O., & Chen, A. (2017). A gender bias in the acoustic-melodic features of charismatic speech? *Proceedings of Interspeech*, 2017, Stockholm, Sweden, 2248–2252.
- Pike, K. L. (1945). *The intonation of American English*. Michigan University Press.
- Ramus, F., Nespor, M., & Mehler, J. (1999). Correlates of linguistic rhythm in the speech signal. *Cognition*, 73(3), 265–292.
- Rathcke, T., Lin, C.-Y., Falk, S., & Bella, S. D. (2019). When language hits the beat: Synchronising movement to simple tonal and verbal stimuli. In S. Calhoun, P. Escudero, M. Tabain & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences*, Melbourne, Australia (pp. 1505–1509). Australasian Speech Science and Technology Association Inc.
- Rathcke, T., Lin, C.-Y., Falk, S., & Bella, S. D. (2021). Tapping into linguistic rhythm. *Laboratory Phonology*, 12(1), Article 1. <https://doi.org/10.5334/labphon.248>
- R Core Team. (2022). R: A language and environment for statistical computing. *R Foundation for Statistical Computing*. <https://www.R-project.org/>
- Repp, B. H. (2005). Sensorimotor synchronization: A review of the tapping literature. *Psychonomic Bulletin & Review*, 12(6), 969–992. <https://doi.org/10.3758/BF03206433>
- Repp, B. H., & Su, Y.-H. (2013). Sensorimotor synchronization: A review of recent research (2006–2012). *Psychonomic Bulletin & Review*, 20(3), 403–452. <https://doi.org/10.3758/s13423-012-0371-2>
- Robinson, D., Hayes, A., & Couch, S. (2022). *broom: Convert statistical objects into tidy tibbles*. <https://CRAN.R-project.org/package=broom>
- Rudis, B. (2020). *hrbrthemes: Additional themes, theme components and utilities for “ggplot2.”* <https://CRAN.R-project.org/package=hrbrthemes>
- The MathWorks Inc. (2022). Statistics and Machine Learning Toolbox Documentation, Natick, Massachusetts: *The MathWorks Inc.* <https://www.mathworks.com/help/stats/index.html>

- Tilsen, S., & Arvaniti, A. (2013). Speech rhythm analysis with decomposition of the amplitude envelope: Characterizing rhythmic patterns within and across languages. *The Journal of the Acoustical Society of America*, 134(1), 628–639. <https://doi.org/10.1121/1.4807565>
- Turk, A., & Shattuck-Hufnagel, S. (2013). What is speech rhythm? A commentary on Arvaniti and Rodriquez, Krivokapić, and Goswami and Leong. *Laboratory Phonology*, 4(1), 93–118. <https://doi.org/10.1515/lp-2013-0005>
- Vihtnan, M. M., DePaolis, R. A., & Davis, B. L. (1998). Is there a “trochaic bias” in early word learning? Evidence from infant production in English and French. *Child Development*, 69(4), 935–949.
- Voeten, C. C. (2023). *buildmer: Stepwise elimination and term reordering for mixed-effects regression*. <https://CRAN.R-project.org/package=buildmer>
- Wagner, M., Zurita, A. I., & Zhang, S. (2021). Parsing speech for grouping and prominence, and the typology of rhythm. *Interspeech 2021*, 2656–2660.
- Wagner, M. (2022). Two-dimensional parsing of the acoustic stream explains the Iambic–Trochaic Law. *Psychological Review*, 129(2), 268–288.
- Wickham, H. (2016). *ggplot2: Elegant graphics for data analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>
- Wilson, M., & Cook, P. F. (2016). Rhythmic entrainment: Why humans want to, fireflies can’t help it, pet birds try, and sea lions have to be bribed. *Psychonomic Bulletin & Review*, 23(6), 1647–1659.
- Zhu, H. (2021). *kableExtra: Construct complex table with “kable” and pipe syntax*. <https://CRAN.R-project.org/package=kableExtra>

“Why Would I Be Believed?": Il/legitimacy in Experiences of Endometriosis

Alex Margaret Mitchell

In this paper, I critically examine the concept of legitimacy in New Zealanders' experiences of endometriosis, exploring the ways they are constrained by societal (mis)understandings of their pain and how they subvert these to achieve legitimacy on their own terms. Endometriosis (endo) is a gynaecological disease associated with debilitating pelvic pain, a symptom socially constructed as 'illegitimate' and so often dismissed. As such, it takes many years and multiple doctors for those with endo to have their symptoms taken seriously. This delay speaks to the historical and systemic delegitimisation of women's pain and voices, and the consequently limited understanding of their illnesses. By building on previous research across multiple disciplines, including the medical humanities and health discourse, I aim to help build the volume and scope of discourse analytic treatments of this type of 'invisible pain'—pain that cannot be seen and must be mediated almost entirely through language. This reliance on language opens invisible pain (and thus the people who experience it) to harmful, often gendered, sociocultural Discourses arising from historical (mis)interpretations. My research makes use of this linguistic necessity to explore the Discourses underpinning and perpetuating these (mis)interpretations. My data comprises two focus groups of women with endometriosis recounting their experiences, supported by an interview with a GP experienced in women's health. This enables me to consider both the professional and the lay perspectives in my account and to expose the power differentials and discrimination inherent in these experiences. Combining the tools of Interactional Sociolinguistics with a social constructionist lens, I connect micro-linguistic features with the broader societal narratives I have identified around il/legitimacy, especially those of epistemology and gender. My findings expose how people with endo are delegitimised through Discourses of shunning and shaming, and at the same time, show how my participants skilfully navigate and resist these constraints. My research both offers a deeper and more nuanced understanding of New Zealanders' experiences with endo and problematises our current treatment and understanding of pain as something that must be seen to be believed.

1. Cassandra at the Gates of Medicine

In Ancient Greek mythology, Cassandra—a Princess of Troy and a priestess of Apollo—was blessed with powers of prophecy. The tragedy of her story also lies in this power: although she could foretell the future, she was cursed never to be believed. So, when they dragged the Trojan horse through the gates of Troy, there Cassandra was, screaming of the death that was to follow.

It is unsurprising that this archetype of the disbelieved woman has survived and continues to have significance today, especially within the medical system. The history of medicine is typically traced back to the Ancient Greek Hippocrates (of the Hippocratic Oath fame). From this beginning, women have seemed to be an afterthought: Othered at best and ignored at worst. This silencing has continued throughout history, intensified by the institutionalisation

and professionalisation of medicine that was especially evident in the 18th and 19th centuries (Clark, 1995; Waddington, 1990). The resulting masculinisation of the discipline occurred in conjunction with the development of positivism and the prioritisation of ‘rationality’ over emotion (Micale, 2008). Emotion was gendered as feminine and “contaminated the pursuit of real knowledge” (Micale, 2008, p. 102). Being a man-made construct, medicine could hardly escape the widely held beliefs of female inferiority, and has often been used in conjunction with religion to justify and systematise that inferiority (and, therefore, male superiority)¹.

Although feminist movements of earlier decades strove to raise awareness of the continuing impacts of this history (e.g., Boston Women’s Health Collective, 1970), there have been few systematic attempts to reconcile with it. Medicine continues to fail people assigned female at birth (AFAB),² both from within the profession and from the areas of biomedical research surrounding it. Women’s pain is less likely to be treated with pain medication (Chen et al., 2008) and more likely to be ascribed to psychological rather than biological causes (Hamberg et al., 2002). This is problematic due to the stigmatised nature of mental illness, especially in those AFAB (e.g., the construction of women as hysterical, neurotic, and hypochondriacs³ (Caplan, 2005)). Skewed historical understandings of women’s physiology, diseases, and character continue to underlie both lay and professional understandings of women’s pain. Without interrogation, these problematic myths will continue to be propagated and cause harm.

This is where I come into the story. Having studied both biomedicine and linguistics, I have found my niche at the intersection of language and science, particularly health. My interest in critical research has led me to focus on the miscommunications and inequities arising from the power imbalance between doctors and those seeking healthcare. When it comes to disorders primarily affecting women, this imbalance combines with gender ideologies to produce even greater disparities (Bird & Rieker, 2008; Dusenbery, 2018). The diagnosis and treatment of diseases such as endometriosis (or endo), which I introduce further below, provide ample opportunity to expose the manifestation of these inequities.

I am not alone in recognising that people with endo are drastically underserved. There has been a recent groundswell of work on and awareness of this disease. Both internationally and here in Aotearoa New Zealand, researchers are calling attention to these disparities (Agarwal et al., 2019; Ellis et al., 2022a),⁴ with most of this push coming from within the (bio)medical field. Yet to fully begin enacting change, these scientific advancements must be met by

¹ Note that this twisting of ‘science’ to uphold cultural and societal ideologies has also been applied to race, disability, and more (e.g., Baynton, 2001; Saini, 2019).

² Here I take the opportunity to explain my use of language around sex and gender. As a primarily gynaecological disease, endo occurs predominantly in those AFAB (although in rare cases it can occur in people assigned male at birth (AMAB)). Although I understand sex and gender as distinct, the history of medicine and its marginalisation of women means the treatment of endo and other ‘women’s diseases’ are primarily affected by issues of gender. In many cases, based on understandings of the time(s), this is inseparable from sex. While I make an effort to refer to people AFAB (rather than women) where appropriate, especially when it comes to broader issues of medical marginalisation, there are many instances in this story when it is relevant and important to use ‘women’, not least because all of my participants are (cis) women.

³ It is interesting, if not galling, to note that ‘hypochondria’ was initially gendered as male in order to distance men from the ‘demeaning’ label of hysteria (Micale, 2008).

⁴ Note also the Labour party’s inclusion of an endometriosis action plan in their 2023 election campaign policies.

interdisciplinary qualitative research investigating societal attitudes and sociological barriers to care (e.g., Ellis et al., 2024). Here, a discursive approach and a critical lens offer real-time access to the (de)construction of barriers within interaction. I aim to contribute to the limited number of existing discursive studies in this area—of chronic pain generally, and endo particularly—by focusing on the role of language to broaden and advance understandings in the field.

1.1 *What is endometriosis?*

Endometriosis (or endo) is a disease where endometrial-like tissue, typically found in the lining of the uterus, is found elsewhere in the body. Associated with severe pain and fertility issues, there is no known cause or cure. Treatment focuses on managing symptoms, often through preventing menstruation. Worldwide, receiving a diagnosis takes an average of 6–12 years (Arruda et al., 2003; Hadfield et al., 1996) despite affecting ~10% of women (Zondervan et al., 2020), a trend also found within Aotearoa New Zealand (Tewhaiti-Smith et al., 2022).

The myth of people with endometriosis as “white, middle-class, over-educated, socially and economically privileged” women who “resisted the biological imperative of having children” (Cleghorn, 2021, pp. 8–9) continues to impact their care and treatment (Carpan, 2003; Seear, 2016). This falsity originates from studies of private (and thus overwhelmingly white, etc.) patients in the US during the early twentieth century (Meigs, 1941). It was not until the 1970s that researchers in the US acknowledged that many Black women also have endometriosis (Chatman, 1976), and it took decades more to discover that their endometrial growths are often more severe, and in different places, than white women’s (Shade et al., 2012). Thus, race and socioeconomic status compound insidiously with existing gender biases to perpetuate inequities in access to care and treatment.

While these statistics are essential introductions to the inequities of endo, it is important to recognise that they are symptoms of a greater issue, not the critical problem themselves. This is a trap that I fell into, initiating this research with a misguided focus on diagnosis rather than what is truly important for those with endo: their pain⁵ and how they manage it. My participants, who refused to centre their stories around diagnosis and focused on their experiences holistically, jolted me out of this thinking. By analysing what was important to them, not my own preconceived notions, it became apparent that some of the most significant barriers to care are ‘legitimacy’ and practices of delegitimation.

1.2 *The concept of Il/legitimacy*

Legitimacy, and the opposing illegitimacy, is an interactional achievement that ratifies (or denies) someone’s positioning of themselves as unwell or in pain. My conceptualisation draws from the sociology of diagnosis (e.g., Jutel & Dew, 2014) and aligns with sociocultural linguistics, namely Bucholtz and Hall’s principle of authorisation and illegitimation (2005).

⁵ This idea of ‘pain’ encompasses both the physiological pain characteristic of endo, and the mental and emotional toll it takes on those who have it—what could be more broadly termed ‘suffering’ (Wemyss-Gorman, 2021).

Within the medical system, legitimacy typically comes from diagnosis and treatment. Doctors⁶ act as gatekeepers to legitimacy by determining what is ‘real’ and who is ‘doctorable’ (Edwards, 2021). They can confer, prolong, or withhold diagnoses and, thereby, ratify or deny patient legitimacy. Il/legitimacy has wide-reaching implications, from treatment to the endorsement of normally unacceptable behaviour such as absence from work and commitments. Achieving legitimacy, then, is highly valued by patients although it must be noted that this ‘achievement’ is not static and must be constantly ‘proved’, as my data shows.

1.2.1 Invisible pain

Legitimacy is problematic for diseases such as endo which are characterised by ‘invisible pain’. Modern medicine cannot ‘see’ this pain through empirical evidence,⁷ prompting suspicion in a system that ascribes to the idea that ‘seeing is believing’ (Engel, 1977). For invisible pain to be made visible, it must be expressed through language, leaving it (and the person in pain) open to hegemonic ideologies perpetuated by the ways people use language to ‘see’ and understand the world. The need for this pain to be ‘spoken into being’ was exemplified by Bree (a participant) during our discussion:

Some people kind of think that [the pain’s] gone if you don’t talk about it, which is quite interesting. Like some of my friends are like, oh you’re doing so well lately. Like I just didn’t verbalise anything in a while - you want to hear about it, here we go.

Language is of great importance in ‘making real’ this invisible pain. Yet, as Bree acknowledges here, no one wants to hear about someone else’s pain. People with invisible, chronic pain must enact a delicate balancing act: constantly verbalising their pain risks their construction as moaners or hypochondriacs (especially considering gendered ideologies around ‘complaining’ women (Werner et al., 2004)). But if their pain is not talked about then it does not exist.

This ongoing form of delegitimisation is suffered by many people with invisible pain, illnesses, and disabilities. With endo (and other ‘women’s diseases’), there is a further, double invisibility: the pain is medically invisible, but it is also invisible because it occurs in people AFAB. Influenced by the gendered history of medicine, women’s reporting of pain and knowledge of their own bodies is treated with suspicion and disbelief, an effect heightened by the intersections of gender and other identities. Therefore, persistent weight is placed on having a ‘legitimate’ justification for pain and ‘properly’ enacting this in language (e.g., Bucholtz & Hall 2005). For people with invisible pain, this ‘proof’ is a hugely important resource against the delegitimisation they face in the ongoing achievement of legitimacy.

⁶ Throughout this dissertation, I tend to use ‘doctor’ as a shorthand for the more cumbersome ‘medical professional’, although I acknowledge that a wide variety of professions are included under the broader healthcare umbrella.

⁷ Importantly, invisibility is a spectrum and not a binary: diseases that are not technically invisible to medicine can therefore still be invisible to most people (family, friends, colleagues, and strangers; see also Hirschmann’s (2014) typology of invisible disabilities), making these issues relevant for a multitude of illnesses.

2. Gender and Discourse

2.1 Foucauldian discourse

In my exploration of legitimacy in discourse, I am guided by Foucauldian thought, aligning with the understanding of discourse as “practices that systematically form the objects of which they speak” (Foucault, 1972 p. 49).

This approach prioritises exposing how particular discourses construct reality (what is ‘normal’ and ‘legitimate’) by making it possible to do some things but not others—essentially, by constraining agency (Cheek, 2012; also Sutherland et al.’s 2016 discussion of agency). By closely examining individual and institutional practices, we can see how they are enabled by particular systems of thought and ways of seeing the world (Foucault, 1972). In this sense, social practices are inseparable from the entrenched hegemonies of power and knowledge that lie at the centre of our constrained agency/ies (Cheek, 2012). Thus, by analysing practices, we can understand and challenge these constraints (e.g., Hodges et al., 2014).

Interrogating ‘natural’ ideas and taken-for-granted ‘truths’ lets me expose the manufactured nature of societal understandings, founded as they are on processes of historical (de)legitimation and accumulation of thought (Tamboukou, 1999). Problematising these—‘making them strange’—draws attention to their normalisation, refutes their universality, and illuminates how they can become strange once more, benefitting those they harm.

Although constrained by the scope of this project, I incorporate the spirit of Foucauldian genealogy (Tamboukou, 1999) where possible. I understand that historical events and understandings have laid the scene for the emergence of current discourse(s) and ‘truths’ that are then perpetuated (thus reinforced and legitimated) through everyday discourse. Looking at the past reveals traces of discourse which inform our understanding of the present. Acknowledging this constructed nature paves the way for future discursive shifts that accommodate more equitable understandings—“thinking differently” rather than “accepting and legitimating what are already ‘truths’ of our world” (Tamboukou, 1999, p. 203).

2.2 Critical feminist perspective

Much of this historicity is built upon gendered hegemonies; therefore, a critical feminist lens⁸ aligns with my emphasis on Foucauldian genealogy. It also exposes the harmful impact of patriarchal systems by centring on women’s voices and experiences. I draw from many areas of feminist history, particularly the understanding that ‘the personal is political’ arising from the Women’s Liberation Movement of the 1970s. This acknowledges that personal experiences have something important to say about societal understandings and treatments of gender and pain. Hand in hand with this is my understanding of the distinction between sex and gender, and especially the socially constructed nature of gender—as Simone de Beauvoir states, “one is not born, but rather becomes, a woman” (2011, p. 293).

⁸ My feminist lens is not necessarily taken from any one theory or framework, although no doubt it shares elements with several (for example, Baxter, 2015; Lazar, 2017). Rather, this is the lens through which I interact with the world in my everyday life, and it would be antithetical to my overall theoretical stance not to bring this through to my research.

Particularly relevant to the hegemonic ideologies of gender and knowledge found in my data is Manne's (2019) conceptualisation of misogyny. This involves the policing of gender roles and norms through acknowledging, maintaining, patrolling, and defending these boundaries (Holmes & Marra, 2017). This understanding of misogyny as built and actively maintained through social and linguistic practices is another lens through which the constructed nature of our discourses and understandings can be exposed, and their 'taken-for-grantedness' challenged in a Foucauldian sense.

Integral to the enactment of misogyny in Manne's account (and, as I show in Section 8, to the enactment of delegitimation in my data) is the concept of 'epistemic injustice' (Kidd et al., 2017), or injustice related to knowledge. This encompasses both testimonial and hermeneutical injustice (Fricker, 2007): testimonial injustice occurs when someone's word is not believed, while hermeneutical injustice occurs when someone's experiences are not understood because they do not fit within known categories. Testimonial injustice aligns with existing literature on access and status, particularly Bourdieu's (1991) cultural capital. It is those with limited cultural capital that are most likely to be considered untrustworthy reporters of their own stories. Hermeneutical injustice, meanwhile, occurs due to the exclusion of certain groups, such as women, from positions that shape the language through which we understand our experiences, such as within medicine. This leads to a damaging cycle of invisibility, as I expand upon in Section 3.

An important element of Fricker's (2007) epistemic injustice and Manne's (2019) misogyny is their unconscious nature. It is the post hoc rationalisation of biased misinterpretations, rather than pre-meditated, active decisions, that is so insidious. The justification that there must have been a reason to disbelieve or dismiss someone, that something in their behaviour, appearance, or language was a clue to their unreliability, perpetuates these beliefs and makes them particularly resistant to change. This stands in contrast to Porter et al.'s (2023) 'epistemic sabotage', a kind of hermeneutical injustice that serves to deliberately exclude people (and their embodied knowledge) from positions of power and authority, including that of holding and disseminating 'legitimate' knowledge.

Overall, my critical feminist perspective draws from feminist history and an understanding of the socially constructed nature of gender to expose the harm caused by patriarchal hegemonies. I especially make use of Manne's (2019) conceptualisation of misogyny as the policing of gender boundaries and 'legitimate' womanhood through linguistic practice, often through various forms of epistemic injustice (Fricker, 2007). These dominant discourses of 'legitimate knowledge/women' are particularly salient in my analysis, shaping the achievement of legitimacy through linguistic practices, as I explain now.

2.3 Dominant discourses and linguistic practice

The use of a social constructionist lens allows me to recognise the multifaceted, dynamic, and shifting nature of identities (Bucholtz & Hall, 2005) as they are enacted and co-constructed within interaction. This lens aligns with Foucault by acknowledging that "there is no single point of reference, truth, or reality that is ultimate" and instead that "reality is subjective, relative, and a creation of the human mind" (Phillips, 2023, p. 12). Yet I also understand that not all of these 'truths' are equal, and inequitable material realities such as delayed diagnoses

and treatment manifest from these constructions. Therefore, the constructed nature of these ‘truths’ does not prevent us from taking positions on their legitimacy (Heller et al., 2017).

Although not social constructionists themselves, I use this lens with Bucholtz and Hall’s (2005) principle of authorisation and illegitimation to understand how linguistic practices can confer or deny legitimacy. This concept enables me to highlight how these practices are used to establish or challenge social hierarchies, identities, and norms, emphasising the dynamic and contested nature of language and power. Here, language is a site of social struggle, where individuals and groups negotiate and contest positions within social hierarchies. Analysing linguistic practices and their implications, therefore, uncovers how language reflects and reinforces broader patterns of inequality and power asymmetry.

I use Gee’s (2014) distinction between ‘big D’ and ‘little d’ D/discourse to operationalise these theoretical understandings. This tool helps show how Foucauldian Discourses—“broad expressions of hegemonic ideologies that dominate public life” (Barrett, 2017, p. 7)—emerge in and shape the co-construction of interactional discourses (Bucholtz & Hall, 2005). This, combined with my use of Interactional Sociolinguistic tools and understandings, allows me to connect the macro with the micro in my analysis and to access the broader ideologies in my data. I can thus expose how Discourses are connected to the achievement of il/legitimacy in interaction (e.g., dominant normative Discourses of women’s pain enabling doctors to delegitimise women with endo by dismissing and disbelieving them). How we talk is shaped and constrained by these dominant Discourses, enacted in interaction through linguistic practices of authorisation and illegitimation. And these, as I now explore, are the product of a long history of mistreatment of women in medicine.

3. A History of Women and Medicine

3.1 Women as medicalised ‘Other’

There is a long history of women’s health being overlooked, misunderstood, and pathologised (Cleghorn, 2021). From the very beginning of (Western) medicine, sociocultural constructions and masculinised medical practices characterised women as ‘deficient’ men (and therefore inferior). Throughout, the centrality of the uterus remained unquestioned (Martin, 1987). The ‘wandering womb’ theory blamed the uterus for anything from convulsions to delirium, breathlessness to paralysis as it meandered around the body (Dean-Jones, 1994). Essentially, anything that the doctors of the time could find no other ‘proper’ cause for was determined to be caused by the uterus (Green, 2000). This catch-all category for unexplainable symptoms in women has evolved over time, from the wandering womb to hysteria and mental illness to hormones.⁹ Yet there has been a consistent attitude that the lack of understanding has nothing to do with medicine and everything to do with the unwell women themselves.

There are many examples of this belief that women are to blame for their own—and even others’—illnesses and pain. These range from the Ancient Greek myth of Pandora bringing all sickness to the world by opening the forbidden jar, to the Original Sin of Christian doctrine,

⁹ I would like to acknowledge that each of these labels has worked to advance medicine and knowledge of women’s diseases. The problem is not these labels or diseases themselves, but how they have been used dismissively, seemingly without thought or interrogation.

wherein one of Eve's punishments for eating the apple in the Garden of Eden is pain in childbirth.¹⁰ These attitudes of pain normalisation and blame permeate our culture and society, amplified by neoliberal discourses of personal responsibility (e.g., Morrell, 2021) and ideas of 'healthism'.¹¹ This understanding has been emphasised in Western religious and medical doctrines throughout history and is, therefore, deeply ingrained and internalised. To complain of this pain is, in some views, to disqualify someone as a 'legitimate woman', following the idea that 'the lot of women is to suffer'.¹² The reduction of women's health to reproductive health is also recurrent, for example in the continual prescription of sexual intercourse, and especially pregnancy, as a cure for various ailments (Sirohi et al., 2023), advice that is offered alarmingly often to young girls.

More empathetic understandings have been heavily impeded by the secrecy and shame that obfuscates women's health. For example, it was forbidden under Medieval Christian laws to physically examine women (Green, 2000). This has affected not only the knowledge of medical practitioners but also unwell women throughout history. These women lacked (through no fault of their own) the knowledge, language, and support to explain what was 'wrong' with them, and were mocked and dismissed when they tried (Showalter, 1985). The aura of shame constructed around women's (reproductive) health has been one means of subjugating and denying them knowledge and expertise. Their shame and lack of (medical) education meant they were (and are) not trusted as reliable narrators of their own bodies and experiences, at least by male figures of medical authority (e.g., Wainwright, 2017).

This medical marginalisation has a profound impact, particularly in the exclusion of women from the profession (Boursicot & Roberts, 2009; Ehrenreich & English, 1973) which feeds into institutional ignorance, and thus delegitimisation, of women's issues and pain. Although some progress has been made, as Dusenbery (2018) outlines, women are still excluded from drug and medical trials—even animal trials are overwhelmingly on male mice—and those that do include women have tended not to analyse and report results by sex or gender. A (somewhat ridiculous) double standard emerges here: drug companies have decided that the hormonal changes involved in menstrual cycles are far too complex for drug testing and would interfere with the results, thus also avoiding responsibility for potentially harmful side effects when there is the possibility of pregnancy (Baylis & Ballantyne, 2016). The result, however, is that most drugs are tested only in men, with the potential influence of hormonal changes ultimately wholly ignored (Dusenbery, 2018).¹³

The Othering and exclusion of women from medicine has persisted in the discipline for millennia and remains alarmingly prevalent today. These practices and attitudes lay the

¹⁰ It is interesting, and particularly telling for the findings I discuss in later sections, that both of these stories involve punishing women for being curious and seeking knowledge.

¹¹ Healthism is a term coined by Robert Crawford in 1980, defined as the preoccupation with personal health (Cheek, 2008). Essentially, healthism decrees that it is someone's personal responsibility to be healthy, so if they are unhealthy, then they are not trying hard enough—nothing else comes into the equation.

¹² This is also emergent in, for example, Discourses around 'natural' births versus medicated and/or surgical births. The former is (in many circles) seen as 'superior' to the latter. By extension, people who have natural births are seen as 'superior women/mothers'.

¹³ It is consequently not actually tested whether most drugs are safe for pregnant people. Instead of 'protecting' those who are pregnant and their unborn children, they are in fact left even more at risk.

foundations for the Discourses I expose in Sections 5 and 6, feeding into the delegitimisation that my participants face.

3.2 Endo and discourse

The majority of studies focusing on endo come from within the biomedical field, emphasising diagnosis and treatment (e.g., Yen et al., 2023). It is qualitative research emerging from biomedicine and surrounding fields, such as medical humanities and nursing, that has provided deeper insight into the lived experiences of individuals with endo. Di Biasi (1995) explored the subjective experiences of women living with endo through poetry and group discussion, demonstrating the profound physical and emotional impact of living with endo and its uncertainty. She emphasised the coping mechanisms they have developed to manage this uncertainty, namely that “if they cannot be in control of their future lives they can certainly be in charge of their past” (Di Biasi, 1995, p. 185). Huntington and Gilmour (2001) utilised a Foucauldian approach to explore representations of knowledge in New Zealand nursing texts on endo, finding that the voice of ‘medical knowledge’ was positioned over the embodied experience of people with endo. Ellis et al. (2022b; 2023) expand understandings of the experience of endo in New Zealand by exploring themes of diagnosis and treatment. They found that diagnostic delays and dismissal by doctors manifested in feelings of doubt before, and relief after, diagnosis.

More specifically discursive work emerges in studies examining the cultural impact on and of endo, such as Jones (2015), who problematises endo as “not merely a physical condition” but a “cultural construction that informs beliefs about the relationship between women’s reproductive anatomy and their social roles” (2015, p. 1083). A significant part of the existing discursive research on endo involves analysing written text as opposed to speech. Emad (2006) proposed the co-creation of a ‘communal body’ of stories when women with endo shared and discussed their illness narratives in online forums, emphasising how the lack of language women have around pain forces them to either express it through alternate methods or be rendered mute. Hays (2020) showed how people with endo orient to normalisation and dismissal of their pain by doctors and society, in turn stemming from the stigma around menstruation and chronic pain, as well as the power imbalance between unwell people and doctors. At the same time, she identified that participants reclaimed power through medical familiarity and using medical terms, thus ‘authorising’ and legitimising themselves. Krebs and Schoenbauer (2020) analysed online forum data, identifying two main discourses: that of psycho-abnormality (women’s pain is ‘all in their heads’) and biological normality (pain is ‘part of being a woman’). They again identified a counter-discourse reclaiming power and agency enacted through the validation of embodied expertise. Especially relevant to the current study is similar research conducted by Bullo (2018) investigating the themes and discourses relating to disempowerment that emerged in women’s spoken recounting of their endo experiences. Her findings indicated that disempowerment was a consequence of a perceived lack of agency, especially around diagnosis and information. Empowerment was achieved by gaining knowledge and resisting passive constructions that constrained agency. Thus, the relevance of knowledge—of the epistemic injustice discussed in the previous section—becomes increasingly clear.

This idea of endorsing or resisting epistemic authority also emerged in Neal and McKenzie's (2011) research on endo blogs, which challenged the primacy of cognitive authority by exploring the benefits of affective authority. Young et al.'s (2018) work analysing interviews with GPs and gynaecologists found that these doctors constructed and endorsed medicine as the holder of authoritative knowledge, while women with endo were reduced to reproductive bodies and constructed as hysterical and 'difficult'. Similar findings emerged from research on constructions of women and their bodies in apps designed to track endo (Quigan, 2020), where biomedical and health professionals were constructed as knowledgeable experts while women's experiential knowledge was minimised. This is especially interesting when compared with research on epistemologies emergent in gynaecological literature on endo (Whelan, 2006). While the discourse of science was used strategically as a tool of authorisation, gynaecologists also used their experience to both assert their own credibility and question others' expertise, further evidencing the (perceived) gaps in knowledge and legitimacy between doctors and unwell people. Overall, doctors' own knowledge and experiences are consistently endorsed as legitimate, in contrast to the delegitimisation of women with endo.

Drawing from the pooled knowledge of this existing literature, my approach analyses the emergence of these themes and Discourses within interaction. Discourses of pain normalisation and dismissal of 'hysterical' patients seem recurrent, further aligning with research on similarly marginalised illnesses and symptoms (Grace, 1995; Vidali, 2013), while the repeated emergence of Discourses of (lack of) knowledge and expertise suggests their relevance for this study. While my data necessarily involves narrative, my analytical approach focuses on both Discourses and their emergence in interaction through co-construction(s) and negotiation. These previous analyses, therefore, provide a base for more interactional analysis. The interdisciplinarity of discourse analysis becomes a particular advantage here, allowing me to draw on the resources of multiple fields (including, but not limited to, biomedicine, medical humanities, history, sociology, and philosophy) in exposing the processes of delegitimisation that my participants face.

3.3 Research questions

I frame my investigation with the following questions:

1. What dominant Discourses emerge in participants' experiences and discussions of endometriosis?
2. How do these Discourses shape the achievement of legitimacy?

I am firstly interested in identifying the dominant Discourses that emerge in my data—that is, Discourses that are hegemonic and foundational to understandings of endo and invisible pain. Once these have been identified, I aim to expose how participants' orientation to them shapes their linguistic achievement of legitimacy. These questions serve as the guiding principles of my research, directing and shaping the application of the methodological and analytical frameworks I now discuss.

4. Talking the Talk: Participants and Data

In this section, I operationalise the theoretical and historical foundations outlined above. First, I describe my methodological stance, which I characterise as person(hood) oriented, ethnographic and critical. I then summarise my participant recruitment and data collection procedures and describe my analytical process, including the analytical tools I utilise (namely, those from Interactional Sociolinguistics and social constructionism).

4.1 Methodological stance

4.1.1 Orientation to personhood

I take a ‘people first’ stance, emphasising an orientation to my participants’ (and my own) personhood and identity. This focus on ‘personhood’ demonstrates my simultaneous understanding of people as individuals and members of larger groups constrained by sociocultural and group norms (e.g., Ahearn, 2001). It also helps, in some small way, to restore agency to my participants and to the conversation around marginalised illnesses in general. Especially considering the historical realities, I find it vital that “people ... always come first” (Dawson, 2019a, p. 55), a priority that aligns with my commitment to researching *with* rather than *on* my participants (Cameron et al., 1993).

This orientation underpinned my methodological decisions and all interactions with participants, especially highlighted in my commitment to creating a safe and comfortable environment for them to share their experiences. I did so by finding private rooms, reiterating participants’ control over the recording before, during, and after the focus groups, and emphasising their agency in choosing what to share: that which was most important and impactful to each of them (e.g., Couper, 2019). Additionally, I maintain an ongoing openness to communication by sharing summaries and analyses of their contributions and receiving questions. As such, I avoid the use of terms such as ‘sufferer’ and ‘patient’ which dilute agency and portray people in medicalised terms, instead favouring ‘person with endo’, ‘person with/in pain’, and similar phrases that prioritise personhood over illness.¹⁴ In discussion with my participants, it was decided that this helped to reclaim the agency and power over their bodies and choices that the medical system often seems to strip away.

I also intentionally acknowledge the difficulty of (and inherent bravery in)¹⁵ recounting private medical information and highly sensitive, stigmatised personal experiences. Overall, I aim to recognise what is radical and powerful in the seemingly mundane, and I refuse to let that be overlooked or dismissed in my own or others’ recounting of this story.

¹⁴ Since terms such as ‘patient’ are common in (bio)medical studies, it is difficult to move away from them completely; however, I endeavour to do so wherever possible.

¹⁵ There is a danger of perpetuating harmful Discourses when using terms like ‘brave’ to describe people with illnesses and disabilities, and I do not intend to come across as patronising. Neither, however, do I wish to downplay my participants opening up and being vulnerable with people they had only just met—there is most certainly bravery in that.

4.1.2 Embracing subjectivity

Aligned with my people-first stance is the importance I place on gaining both etic (outsider) and emic (insider) perspectives (Marra & Lazzaro-Salazar, 2018) to gain a more complete understanding of my data and the d/Discourses within. Although large-scale ethnographic observation was not an option due to this project's constrained nature, I took opportunities to expose myself to this insider perspective whenever possible. I did so by reading readily available books (accessible through local libraries) and online material, including historical accounts and wide-ranging, interdisciplinary literature. I also explored online support sites and communities such as Endo Warriors Aotearoa and Endometriosis New Zealand. I thus developed an understanding of and familiarity with the Discourses that people with endo encounter and use to understand and manage their disease. Through this, as well as my own experience of being a young woman in the medical system¹⁶, I can better understand and account for the individual perspectives and lived experiences in my analysis.

Similarly, incorporating the voices of both people with endo and doctors is crucial. This produces a more holistic understanding of how lay and professional Discourses intersect and co-construct the pain and personhood of people with endo through the negotiation of meaning and identity/ies. Prioritising one of these perspectives over the other can never show the whole picture. Both must be acknowledged to achieve a rich understanding of the complexities at play. Ultimately, I reject objectivity and the 'superiority' of the outside perspective alone (see Heller et al., 2017). I also acknowledge the inherent limitations of my position within the sociocultural structures I seek to analyse and the effect that this position has on my analysis. As a young Pākehā woman, there are many perspectives and understandings that I cannot bring to this research, points I return to in the conclusion.

4.1.3 Critical lens

My critical stance is inseparable from this orientation to personhood. It is impossible to simultaneously prioritise the well-being of my participants and examine the historical foundations of these Discourses without being critical of the active harm they are causing. Part of this involves acknowledging the many power disparities, both revealed in the data analysis and inherent in the data collection itself (Heller et al., 2017). Again, the historical context of research on people with endometriosis must be considered. This involves acknowledging my power as a researcher and the vulnerability of my participants. The power dynamic within the data collection sits within other hierarchies: gender(ed), institutional, and the inherent disparity between doctor/'patient' and sick/well. Neither do I want to downplay the agency my participants had and have in choosing to participate in this research. Perhaps because of the historic silencing, they have consistently shown an eagerness to tell their stories and be heard, something that seems common across people and groups with stigmatised, marginalised illnesses (Wolgemuth et al., 2015).

¹⁶ Ironically, or perhaps not, throughout this research I have been struggling with medical issues of my own. This has provided an interesting set of personal observations and experiences to draw upon, and has especially highlighted to me the omnipotence and power of many of the constraining and harmful Discourses I discuss in Section 5 and beyond.

Overall, it is impossible to highlight these disparities without exposing their impacts and pointing to how these harms can be reduced. Although awareness of these disparities led me to have some expectations about what would be found in the data (namely, something gendered), I had no expectations about *how* these Discourses would emerge. Therefore, I have employed a data-driven approach (e.g., Heller et al., 2017) throughout my research, following where the data (and literature) led me.

4.2 Data collection

I was granted ethics approval for my research on the 15th of May, 2023 (ethics approval #30944). Once this was received, I began participant recruitment. In the interests of participant privacy and safety, I have replaced all names with pseudonyms (chosen in consultation with my participants).

4.2.1 Participant recruitment

I designed a poster to recruit for the focus groups, which I distributed across campus. I posted these in bathroom stalls and public noticeboards around the central Hub of the University. Potential participants were asked to email me to express their interest, leading to responses from Kacey, Ella, Briony (Bree), and Sophie, my four focus group participants.

I emailed medical centres and specialist clinics across Wellington to recruit doctors, drawing from recommendations in a public Facebook group post about endo diagnosis. The doctors and GPs that I chose to contact were, therefore, those with whom users of this group had had positive experiences. I contacted reception and asked them to forward my email to relevant GPs, which led to the response from my interview participant, Eliza.

4.2.2 Focus groups

Focus groups elicit naturalistic interactional data exploring particular experiences, allowing me to analyse the co-construction of identities and the negotiation of meaning (Heller et al., 2017). Each consisted of myself and two participants, and although I oversaw the conversation, I facilitated interaction between participants as much as possible. Using focus groups also allowed participants to share their experiences with other women with endo, enabling them to (re)gain agency in their retellings in a safe, supportive space. This reclamation of voice is something that narrative intrinsically involves and also sits within the tradition of feminist consciousness-raising groups (e.g., Couper, 2019). The focus on narrative and sharing of personal experiences embodies the idea that ‘the personal is political’ (Heberle, 2015). Furthermore, by speaking to multiple women at once, I built in a sort of ‘warranting’ (e.g., Holmes & Hazen, 2014), where their endorsement of each other’s experiences contributes to my analysis.

I held the groups in a private room at the university Hub, several weeks apart. Once formal consent had been signed off, recording began. I introduced myself by explaining how my biomedical and linguistic background had sparked my interest in this issue, making overt my critical approach. I invited each participant to introduce themselves before I began posing questions. From here, talk flowed naturally, and only when it seemed a topic had been

exhausted did I ask another question. I asked broadly about their experience of diagnosis, and especially memorable communication with friends and family, medical professionals, colleagues and educators. Based on my prior readings and existing understandings, I intended these questions to elicit (meta-)discussion while remaining as broad as possible, ensuring participants were free to steer the conversation to their interest. Finally, since I was also interviewing GPs, I asked what questions or statements they wanted me to pass on. I confirmed their demographic information (age, gender, ethnicity, and nationality) and pseudonym by email afterwards, sending summaries to participants who requested them and offering a timeline for when the findings and dissertation would be available.

Focus group 1 participants

Ella and Kacey are 18 and 19, respectively, and both Pākehā from the North Island of Aotearoa New Zealand. They were diagnosed when they were around 16. Our conversation centred around the ongoing management of their pain and their frustrations with the limited understanding and resources.

Focus group 2 participants

Bree and Sophie are 29 and 39, respectively. Bree is Kāi Tahu from the South Island, and Sophie is from Ireland by way of Australia, but is a New Zealand citizen and was diagnosed in New Zealand. They were both diagnosed during Covid-19, and our conversation centred around their ongoing frustrations with poor communication and limited knowledge, especially around fertility.

4.2.3 Interview

Holding interviews again reflects a preference for naturalistic data, and although holding this individually allowed for more focused responses (e.g., Heller et al., 2017), the decision was largely in recognition of the time constraints on GPs. The interview was held at a café in central Wellington after both focus groups. Being semi-structured it largely followed the same procedure, with slightly more focus on eliciting answers to specific questions. I asked about Eliza's experience(s) with diagnosing and managing endo and interacting with people with endo, before posing the questions from focus group participants.

The interview data is supportive in nature and does not play the same role as the focus group data. It is not discursively analysed, instead serving as useful contextual information and further warranting, an informed counter to many of the Discourses and experiences emergent in the focus group data.

Interview participant

Eliza is 50 and Pākehā. She studied medicine at Otago University and received further diplomas in Tropical Medicine and Hygiene and Family Planning in the UK. She is experienced in recognising and managing endo, having worked in women's and sexual health in the UK and New Zealand.

After completing the focus groups and the interview, I had around 150 minutes of data. Once this was transcribed, and indeed during the transcription itself, I began the process of data analysis.

4.3 Data analysis

I began data analysis by going through the data several times to become aware of commonalities. This was informed by my ongoing exposure to both lay and academic literature on endo as well as broader topics of gender and medicine. Once I had noticed these, I highlighted themes and made conceptual connections. I did this by identifying repeated appearances of a particular Discourse through coding for salient terms and constructions. I warranted these interpretations by bringing the data to a group of discourse analysts, who shared my identification of the most salient themes. Arriving at these themes was, therefore, a recursive and iterative process, with the labels and relationships that I use in my analysis emerging as the most cohesive way to tell this story.

4.3.1 Interactional Sociolinguistics and social constructionism

My social constructionist stance lends itself to ‘naturalistic’ interactional data, where meaning is negotiated between participants. As an analytical framework, Interactional Sociolinguistics or IS (the foundation that guides my application of social constructionism) is uniquely suited to capture the complexities of this data, encouraging a focus on connections between micro-linguistic features and broader societal Discourses (Gumperz, 1982). Using this approach, I examine how these societal Discourses influence the interactional achievement of (il)legitimacy and, as a critical sociolinguist, foreground the power differentials and discrimination inherent in these Discourses (see Heller et al., 2017).

Combining Bucholtz and Hall’s (2005) principle of authorisation and illegitimation with my IS-informed social constructionism helped to identify both dominant Discourses and their enactment in linguistic practice(s) in my data. Specifically, authorisation is the process through which certain individuals or groups are granted legitimacy through their language use. This involves the use of certain linguistic features which align with dominant norms or values within a society. Authorisation can therefore be identified in my data through the use of prestigious language, i.e., displaying expertise in specialised jargon to construct an expert identity. The opposing illegitimation is the process of denying legitimacy to certain individuals or groups through their language use. This can occur through linguistic practices that challenge and subvert dominant norms, ideologies, and power structures. Certain styles or varieties associated with stigmatised groups may be illegitimated in mainstream discourse, leading to the marginalisation and disempowerment of those using them. Particularly relevant to the co-construction of meaning in my data is, therefore, the use of gendered and lay linguistic practices in combination with denials of expert identity.

Using IS tools allows me to interpret these micro-level features of interaction in light of macro-level dominant Discourses. I thus utilise my knowledge of the broader sociocultural context to identify ‘contextualisation cues’, features of language and communication “by which speakers signal and listeners interpret” (Gumperz, 1982, p. 131) what is going on within interaction. Contextualisation cues cover a wide range of features, such as “turn taking ... and

content ... as well as pronoun use, discourse markers, pauses, hesitations, and paralinguistic behaviour..." (Marra, 2013, p. 4). This broad definition means that almost anything can act as a contextualisation cue that indexes meaning to others.

4.3.2 *The place of the researcher*

In presenting the data, I have taken out my own contributions for ease of reading. I agree that it is important to include the researcher whenever and wherever possible to understand the impact of my presence and the interactive co-construction, especially with narrative and retelling (De Fina & Georgakopoulou, 2008). However, I have chosen not to do this for two main reasons. The first is the small scale of this project, and the second is to prioritise the voices of my participants and what they find important. My voice is a constant: when I present the data, I want the focus to be entirely on their words. Yet I have no intention of disregarding the impact that my presence has. My participants designed their speech for me as well as for each other, and continually responded to my prompts and reactions. So, although not explicitly included, keep in mind that I laughed along with my participants; responded to their storytelling through agreement (*yeah, mm*) and disappointment (*oh god, oh no*); prompted them with questions; and talked about my own perspective when asked. Throughout the analysis that we now move into, I am fully part of the construction of meaning at all times.

5. Woman's Pain in a Man's World

This section addresses my first research question by exploring the dominant Discourses that emerge in focus group participants' experiences of endometriosis. I examine the Discourses of knowledge and power that provide the foundations for institutionalised medicine, and the Discourses of gender and invisibility that enable the normalisation of women's pain.

5.1 *"But a doctor told me to do it": Discourses of knowledge and power in institutionalised medicine*

The power imbalance between doctors and people seeking healthcare is one of the most prominent underlying issues in medicine. Perhaps unsurprisingly, Discourses of power and gatekeeping—those of the masculinised, positivist, 'rational' discipline of institutionalised medicine—emerge throughout my data. Especially significant are the constructions of who can have power and how they exert it. This first extract exemplifies how power is wielded through access to, or denial of, knowledge. Here, Kacey explains her experience with a GP she constructs as an infallible expert against all evidence to the contrary (see Appendix for transcription conventions).

Excerpt 5.1.1

30:50 – 31:21

- | | | |
|---|--------|--------------------------------|
| 1 | Kacey: | there was definitely //a time\ |
| 2 | Ella: | /yep\\ |

- 3 Kacey: where I was like maybe it will help so I went keto¹⁷ and I got
 4 super sick + yeah + and I was quite young + and my family was
 5 like like don't do this to yourself and I was like but like the
 6 doctor told me it'll help like maybe it's one thing that'll help and
 7 I got extremely ill + from this + like from + doing these diets and
 8 they were like it's not gonna help you like I got li- I was pretty
 9 sick so it's like it's- but a doctor told me to do it you know he's
 10 the one that knows the information
 11 Ella: yeah

The 'infallible doctor' construction emerges in Kacey's prioritisation of the doctor's opinion(s) over her family's advice and her body's response. This is shown in the repetition in lines 5–6 and 9: *but the/a doctor told me*. The progression from *the* doctor to *a* doctor (i.e., from a definite to an indefinite article) gives status to the knowledge of doctors as a collective, not just Kacey's GP. This sets up an assumption that any doctor (as *the one that knows the information*, line 10) must possess more knowledge about this issue than Kacey. This emphasises the recurrent theme that 'knowledge is power' and highlights knowledge (or at least perception of it) as an avenue to use that power. It also shows the link to legitimacy—the doctor (and his opinion) is legitimate because his perceived knowledge and power support them, whereas Kacey's family (and Kacey herself) are illegitimate because they do not have this institutional knowledge and thus lack power.

This 'legitimate' knowledge hierarchy is especially harmful in combination with the persistent opacity of the medical system. Inadequate information makes managing endo more difficult than needed. Lack of understanding and mixed messages from doctors cause confusion and distrust (Huntington & Gilmour, 2005; Seear, 2009). This is especially apparent for areas where endo interacts with other medical and personal decisions, such as fertility. Both Bree and Sophie express in the next extract that they felt left entirely in the dark, with no one explaining or speaking their language.

Excerpt 5.1.2

9:06 – 11:21

- 1 Bree: the the + discussions around f- fertility after the diagnosis were
 2 really really confusing to me + and + was probably like the hardest
 3 part of trying to understand what had happened I just + I I had kind
 4 of felt like nobody was speaking the same language as me when
 5 we were discussing [...] fertility everyone was beating around the
 6 bush + um around this topic to the point where I couldn't
 7 understand what was going on + so yeah so my follow up
 8 appointment after my surgery they were kind of like um + you
 9 know just talk to your partner when you're ready and it'll be fine
 10 um and then the letter that followed that appointment that + like

¹⁷ 'Keto' is a restrictive low-carb diet originally intended to reduce epileptic seizures in children (Wheless, 2008). It is now widely promoted to help weight loss, despite little rigorous study being done on its long-term effects. In Kacey's case, the weight gain that prompted this suggestion was caused by her undiagnosed polycystic ovary syndrome (PCOS), a hormonal condition that often co-occurs with endo.

- 11 summarised our conversation was like do not delay like quite more
 12 a bit more aggressive [laughs] [...] and so me and my partner were
 13 just sitting on the couch staring at this letter crying cause we'd just
 14 + we can't even get anyone to explain it to us what it really means
 15 + um but yeah
 16 Sophie: that sounds awful yeah I'm sorry I was just about to say I I agree
 17 like I couldn't have my partner in there either¹⁸ [...] and it's like that
 18 with a lot of medical encounters right like you you're trying to
 19 remember all the details cos you want to you can't digest it all at
 20 once

The repetition of participants' inability to understand¹⁹ (lines 2, 3, 6, 13–14, and 19) shows its significance, again linking knowledge and power with legitimacy. Bree and Sophie want to know what is happening in their bodies and what it means for their lives. The lack of clarity given to them prevents this, contributing significantly to their confusion (*really really confusing*, line 2) and distress (*the hardest part*, lines 2–3; *staring at this letter crying*, line 13). Language's role in transferring this knowledge is highlighted in lines 4–5 (*nobody was speaking the same language as me, everyone was beating around the bush*). Inadequate communication is further emphasised by the difference between the understanding Bree had after her in-person follow-up (*it'll be fine*, line 9) and the message in the letter she and her partner received, which was perceived as *more aggressive* (lines 11–12). Sophie places importance on *trying to remember all the details* (line 19) so that you can *digest it* (line 19) later to understand what has been said, further signalling the difficulty of communication and receiving knowledge.

Discourses of knowledge and power are strongly linked to legitimacy in my data. Excerpt 5.1.1 shows that within the medical system, institutional knowledge *is* power, and with power comes the ability to confer legitimacy. Excerpt 5.1.2 builds on this to evidence the frustration and helplessness caused by lack of (medical) knowledge, a result of poor communication and the subsequently limited information that people with endo have. As I now show, these dominant Discourses of knowledge and power intersect with dominant Discourses of gender and invisibility to serve as a foundation for subsequent understandings of women's pain.

5.2 "Well periods be painful": Discourses of gender (and invisibility) in women's pain

The masculinist environment of institutionalised medicine (Micale, 2008) unsurprisingly impacts understandings of women's pain, which are built on the discipline's exclusionary and biased history. Particularly damaging are constructions of this pain as something 'natural' that happens to all women, a thread that runs through this whole section. People are primed to minimise and normalise women's pain, further contributing to its invisibility (e.g., Hirschmann, 2014; Kempner, 2017; May 2022; Pryma, 2017). The consequences of this are exemplified in Extract 5.2.1. Here, Kacey and Ella respond to my question about pain management, explaining that the interventions they currently have access to are helping

¹⁸ This references the fact that both Bree and Sophie had their laparoscopic surgeries (a diagnostic requirement for endo) during the Covid-19 pandemic and were thus unable to bring their partners (or any support person) in with them.

¹⁹ That is, wanting to understand but not being given the tools or resources to do so.

somewhat. The unpredictability of the pain, however, still has significant impacts on their ability to live their lives ‘normally’. This extract highlights issues around the pain visibility, especially the idea that ‘seeing is believing’ which participants consistently oriented to (see also Excerpt 6.1.2).

Excerpt 5.2.1

25:24 – 26:24

- 1 Kacey: but then when people are around and that happens that don’t
- 2 understand + what’s going on and why I’m in that much pain and
- 3 why I can’t talk they’re like is she okay? is she gonna die? like what’s
- 4 going on over there? [...] and like people just like freak out cause
- 5 like it obviously
- 6 Ella: yeah
- 7 Kacey: it’s //painful\
- 8 Ella: /it’s horrid\\ yeah
- 9 Kacey: yeah and like they don’t really know what’s going on cos-
- 10 Ella: yeah
- 11 Kacey: because again it’s not visible pain right like I haven’t just chopped
- 12 my finger off it’s not something they can see because
- 13 it’s + //inside\
- 14 Ella: /yeah\\
- 15 Kacey: like I can’t see it
- 16 Ella: and people don’t know much about non
- 17 Kacey: mm
- 18 Ella: like yeah like non-visible pain like they don’t know that it’s even a
- 19 thing like
- 20 Kacey: yeah
- 21 Ella: yeah
- 22 Kacey: so that definitely makes it hard cause then they’re like oh but you
- 23 don’t look like you’re in pain and I’m like well how do you think a
- 24 cyst bursting pain looks like?

The emphasis on seeing and visibility in this extract emerges in lines 11–12 (*it’s not visible pain, it’s not something they can see*), and lines 15 and 18 (*can’t see it, non-visible*). Kacey distinguishes between visible, and therefore understandable and knowable, pain (*chopped my finger off*, line 12) and her own invisible pain (*it’s inside*, line 13). The overlap with Ella’s agreement at this point (*yeah*, line 14) suggests a shared understanding of this issue, further reinforcing its importance.

The underlying implication is that something that cannot be seen cannot be known and thus holds no power. Because this pain is not visible, it is implied that it is not understandable or knowable (e.g., Kuppers, 2005). The importance of knowing and understanding is further emphasised through repetition: *don’t understand* (lines 1–2), *don’t [really] know* (lines 9, 16, 18). This topic’s significance is shown discursively in the high level of interaction—minimal feedback (*yeah*, lines 6, 8, 10, 14, 20–21; *mm*, line 17), overlapping (lines 7–8, 13–14), and agreement (e.g., *it’s horrid yeah*, line 8), and also through the use of *but*, *yeah*, *and*, and *so* at

the beginning of their significant turns (lines 1, 9, 16, 22). This high-involvement style (Tannen, 2005, p. 40) suggests they are continuing from and building on each other's thoughts, indicating this is an area that both Kacey and Ella feel strongly about. These are shared experiences and familiar frustrations.

This 'seeing is believing' attitude means pain that cannot be seen becomes inherently suspicious, especially when the person in pain is a woman (e.g., Grace, 1995). This delegitimisation occurs in medical contexts, as other extracts evidence, but Excerpt 5.2.1 shows how it also emerges in societal and familial ones. Lines 22–23 are of particular analytical salience, as Kacey revoices the responses she receives to her pain (*oh but you don't look like you're in pain*). This indexes suspicion and disbelief, indicating how the 'performance' of pain (and, by extension, the person in pain themselves) can be judged illegitimate. Thus, invisible pain, especially in women, acts as a sort of contextualisation cue for disbelief.

The focus on pain in Excerpt 5.2.1 (representative of the focus throughout my conversation with Ella and Kacey) is a stark contrast to my discussion with Bree and Sophie in the next excerpt, where pain was very much sidelined up to this point. I suspect this is partially due to their respective ages and, thus, the amount of their lives they have spent in pain (recall that Kacey and Ella are still teenagers while Bree and Sophie are 29 and 39, respectively). The invisibility and normalisation of this pain are thus more entrenched, not just societally, but in their everyday lives. This extract comes from the end of the second focus group, just after a discussion of the chronic pain literature I was reading (e.g., Jackson, 2019). It was only once I had brought up pain that it explicitly emerged in the conversation.

Excerpt 5.2.2

1:03:36 – 1:05:01

- | | | |
|----|---------|---|
| 1 | Bree: | I think that what's interesting as well from this conversation is |
| 2 | | like neither of us really talked about like pain //and that's |
| 3 | | because pain\ |
| 4 | Sophie: | /mm I-\ |
| 5 | Bree: | so normal also very we manage it + it can + it's this- it's the |
| 6 | | other stuff that comes with it the stuff that we are going |
| 7 | | through now ²⁰ that + is the focal point eh? like you almost don't |
| 8 | | think about your pain anymore cos you've got other priorities in |
| 9 | | a way |
| 10 | Sophie: | a- and that's something that I mean I can't it's so funny cause |
| 11 | | that's exactly what was left for me if I was thinking what what is |
| 12 | | it [...] but yeah you you're completely right I it's not that I can |
| 13 | | control it but I can manage that part + um and as you say like |
| 14 | | you just sort of deal with it that's not + the bit that I'm + |
| 15 | | worried about I don't like not not always knowing when it's |
| 16 | | gonna come and it's gonna interrupt plans and all that sort of |
| 17 | | |

²⁰ This is in reference to Bree and Sophie's ongoing fertility journeys, and in particular the frustrations and issues they have with the lack of accessible resources and support (see Excerpts 5.1.2 and 6.2.3).

- 18 stuff but + um + yeah it's it's not //the stuff that I find hard to
navigate yeah\ yeah
19 Bree: /we're like well seasoned at that\\

The meta-discussion here is revelatory. Their pain is *so normal* (line 5) that they *don't think about [it] anymore* (line 8) and *just sort of deal with it* (line 14). It is not the issue that they *find hard to navigate* (line 18) or are *worried about* (line 15). This exposes the normalisation of pain that emerges not just from Discourses of women's pain but from its constant, unending presence in the lives of these women.

Further evidence comes from Sophie's immediate agreement with Bree when she brings up pain (line 4) and her statement that it was *exactly what was left* for her (line 11), again indicative of pain being so taken-for-granted that it has become background and providing evidence of their internalisation of these 'normal' Discourses. Bree's positioning of herself and Sophie as experts who are *well seasoned* (line 19) at managing their pain demonstrates their experience and skilful navigation of these constraints. This recognition and endorsement of expert status is particularly telling since they had only met an hour before. The emphasis on 'management' (lines 5, 13–14, 18) also shows how women are forced to accept and normalise their own pain through lack of resources. When this pain becomes invisible to them, it becomes even more invisible to others—recall the discussion in Section 1 about how it must be spoken into being. However, as these excerpts suggest, normalised medical Discourses and understandings of pain, combined with gender and societal norms, work to prevent this speaking up.

This normalisation of women's pain then extends into an increased urgency and seriousness when women are impacted by something 'real' (for example, fertility issues). In these instances, investigating symptoms and exploring various interventions are warranted and necessary, especially in comparison to 'just pain'. Research shows, for example, that when women with endo present with infertility their time to diagnosis is roughly half that of women who present with chronic pelvic pain (Dmowski et al., 1997). This is precisely what we see in the next extract, where Sophie responds to my concept of 'legitimacy' and how it may be reflected in her own experiences.

Excerpt 5.2.3

14:09 – 14:38

- 1 Sophie: yeah I mean in my experience I guess once I was categorised or
2 being seen as somebody who was trying to conceive + that maybe
3 gave me that + access and that that I hate the word status but like
4 that + category of a person who no okay this is a thing that they
5 need to be referred for and they need to be seen for um + it's a solid
6 reason that + they should have access to the surgery I don't know

In lines 5–6, Sophie's desire to start a family is constructed as a *solid reason* to have access to surgery and is linguistically emphasised by her use of *need* (line 5) and *should* (line 6). Yet this prioritisation of (in)fertility as a 'real' issue does not overcome the problems posed by the medical system's poor communication and hierarchy of power and knowledge. Sophie,

therefore, exposes the hegemonies underlying the medical system that perpetuate the ongoing normalisation of this hierarchy: that pain alone is not a ‘solid’ reason to intervene and does not ‘need’ to be treated. This is particularly worthy of attention in light of my GP participant Eliza’s personal experience, as she mentioned the “main presentation” she sees in her medical practice is “chronic pain”, and “not so much ... people coming in with infertility”. This further emphasises the urgent need to address these normative Discourses, in order to recognise and treat women’s pain as real.

Whether people with endo are focused on their pain (such as Kacey and Ella) or their infertility (such as Bree and Sophie), these dominant Discourses of knowledge, power, and gender remain—shaping understandings of ‘what’ and ‘who’ is acceptable in the health system. And although I artificially separate them here for ease of presentation, they are entirely interrelated, continuing to influence and inform each other. Furthermore, as I show in this next section, they are foundational to practices of delegitimisation, working together in multiple ways to shape the achievement of (il)legitimacy.

6. Delegitimisation Exposed: To Shun and To Shame

This section turns the focus to *how* these dominant Discourses shape the achievement of legitimacy. Here, I analyse the specific ways legitimacy is constrained by exposing recurrent Discourses of delegitimisation: ‘shunning’ women by disbelieving and dismissing them (e.g., Bullo, 2018) and ‘shaming’ women by blaming and holding them responsible (e.g., Jones, 2015; Lusk, 2023). This analysis works in tandem with the following section, in which I analyse how my participants work to achieve legitimacy on their own terms by resisting and subverting Discourses of disbelief and shame.

6.1 “It’s not bad, you’re being dramatic”: Shunning discourses of disbelief and dismissal

Shunning Discourses are a recurrent theme in participants’ retellings of their endometriosis experiences, emerging in practices of ignoring, disbelieving, and dismissing. This shunning involves legitimacy, and particularly *who* is considered to be an arbiter of ‘legitimacy’. Those who are constructed as illegitimate are then disbelieved and dismissed. Importantly, however, participants’ stories also reveal a struggle against this delegitimisation, reverberating throughout the data. The discursive tension surrounding il/legitimacy is shown in Excerpt 6.1.1. Here, the ‘spectrum’ of legitimacy becomes apparent, with Discourses of disbelief and dismissal (and especially the consequences for people with endo) being qualified and described.

Excerpt 6.1.1

35:52 – 36:42

- | | | |
|---|--------|--|
| 1 | Ella: | and you do feel like a sense of like almost relief when you find |
| 2 | | someone that does |
| 3 | Kacey: | mm |
| 4 | Ella: | um justify + your + like feelings and pain + //like it is like\ |
| 5 | Kacey: | /yeah for sure\\ |

- 6 Ella: even though they don't solve the problem it's still like a oh yeah
 7 like I'm not like this isn't normal like I am disadvantaged by this
 8 this does get in the way I shouldn't beat myself up about it for not
 9 doing something some days because this is
 10 Kacey: yeah
 11 Ella: just the circumstances that I've been given so
 12 Kacey: yeah for sure
 13 Ella: so it's helpful when people justify + your + and it's just like the
 14 complete opposite like it just tears you down when + like
 15 something like + someone says oh no you know it's not or yeah
 16 it's not bad or you're being dramatic or something
 17 Kacey: yeah
 18 Ella: so yeah
 19 Kacey: yeah so finding that person that'll actually believe you
 20 Ella: yeah
 21 Kacey: and like help

Throughout this extract, minimal feedback (*mm*, line 3; *yeah [for sure]*, lines 5, 10, 12, 17, 20), agreement (especially lines 17–21), and overlapping (lines 4–5) suggest the importance of this particular topic for both women through their high-involvement style of interaction (Tannen, 2005). The *sense of relief* (line 1) that comes when a doctor [*justifies*] *your feelings and pain* (line 4) evidences the common desire to have problems answered and further illuminates the impact that Discourses of disbelief and delegitimisation have on people seeking these answers. This also aligns with Eliza's experiences of people with endo who have "been struggling with pelvic pains for a long time" who come in "anxious ... and miserable" and "a little bit desperate" and leave their consultation "a bit relieved" that "something's been done". This relief comes not just from receiving answers (and hopefully a reduction of pain), but also from finally being listened to and believed—in turn highlighting how common being ignored and disbelieved is (e.g., Ellis et al., 2022b).

Ella's discussion of the positive impacts of validation in lines 6–16 also exposes the consequences of delegitimisation: while disbelief perpetuates the normalised pain Discourses of Section 5, legitimisation resists this (*this isn't normal*, line 7). Line 14 sets up the distinction between these practices as *opposites*, and lines 14–16 explicitly show disbelief and dismissal (*it's not bad, tears you down*), fuelled by the normalisation and minimisation of women's pain (*you're being dramatic*, line 16). This use of *dramatic* is particularly telling, pointing again to the salience of gender and notions of women as inherently suspicious. This aligns with previous research on both endo and other stigmatised illnesses, where an absence of 'legitimate' reasons for pain suggests an 'illegitimate' reason, such as neurosis (Grace, 1995; Vidali, 2013; Young et al., 2018).

Importantly, while this extract sheds light on the benefits of legitimisation for personal validation and gaining access to treatment²¹, being believed is not constructed as helpful in and of itself. Kacey indicates this through the explicit separation of *belief* and *help* in lines 19

²¹ The question of why a diagnosis is required for pain to be treated, of course, is still to be answered—though il/legitimacy no doubt plays a role there too.

and 21, and it also emerges in Ella's construction of belief as not *solving the problem* (line 6). This speaks directly to the lack of resources and options available to people with endo—even when they are believed, it can still feel like nothing is (or can) be done to help them. The impact of these shunning Discourses is shown in the next extract, where Ella and Kacey discuss the disbelief and dismissal they have faced, while simultaneously countering with the compassionate, insightful, and (pro)active legitimisation they have also received.

Excerpt 6.1.2

14:23 – 16:14

- | | | |
|----|--------|---|
| 1 | Ella: | I'd say that first interaction for me with a gyno was really |
| 2 | | positive and her ever since she's been really great + um and |
| 3 | | I've like referred loads to- loads of people to her because she's |
| 4 | | just young very like proactive + very like kind and like |
| 5 | | understanding whereas you know obviously I had this male |
| 6 | | gyno in Tauranga and he was just like + cutthroat like you |
| 7 | | know + very like sort of why are you almost in the industry if + |
| 8 | | you're not gonna be + so + like caring about a a a situation |
| 9 | | which you can't see so it's not like + visible pain it's you know |
| 10 | | something that people just almost have to take your word for |
| 11 | | so you need to be very like like tiptoe around it because you |
| 12 | | don't actually know how someone's + coping with it |
| 13 | | [...] |
| 14 | Kacey: | yeah probably similar like the first GP that I saw + was very |
| 15 | | like ugh it's just growing pains like suck it up you'll be okay + |
| 16 | | um and like I saw him a few times and like wouldn't do any |
| 17 | | referrals for me literally + really couldn't care less um he was |
| 18 | | like pretty bad and then when I went to the new GP she was |
| 19 | | the same real proactive real helpful + um and like knew heaps |
| 20 | | of contacts in like women's health um at the hospital at home |
| 21 | | and she was really good and like got me in to see specialists |
| 22 | | and stuff really easily um and referred me to people that she |
| 23 | | knew would be helpful |

Several discursive moves arise as salient to processes of (de)legitimation in this extract. First is the contrast made between the positive experiences with doctors who are *young* (line 4), *proactive* (lines 4, 19), *kind* (line 4), *understanding* (line 5), and *helpful* (line 23), as against the negative experiences with doctors who are *male* (line 5), *cutthroat* (line 6), *not ... caring* (line 8) and *couldn't care less* (line 17). The construction of youth as positive is interesting, potentially pointing toward an equitable shift in education and attitudes (e.g., Hoffmann et al., 2022). Gender is also salient—note, for example, the distinction between the *cutthroat* male gyno (line 6) versus the *kind and understanding* female GP (lines 4–5).²²

²² It must be noted that this dichotomy plays into harmful gendered ideals of women as 'carers' who carry out significant, often unrecognised, emotional labour by dispensing 'moral goods' such as care and affection (Manne, 2019). This was something Eliza commented on, suggesting that in her experience "most women do track down a female doctor" because "they should be good at" looking after people, especially other women. Importantly, though, Hoffmann et al. (2022), among others, found mixed results on the impact of doctors'

Notably, Ella exerts a claim to power and agency through her use of *referred* in line 3. In a medical context, ‘referral’ is an action normally reserved for doctors (see line 17). By using this herself, Ella arguably positions her expertise and knowledge as at least equal to that of doctors, rejecting the idea that they are the sole power and agents within this system. This subversion continues in lines 6–8, where Ella’s anger at her treatment (*he was ... cutthroat, why are you ... in the industry*), although hedged (*very like sort of, almost*; also seen in the many pauses), pushes back against the acceptability of this attitude and lack of compassion in doctors.

Line 9 provides a further example of the ‘seeing is believing’ metaphor. Ella’s use of *people* (and not just ‘doctors’) in line 10 suggests that this is a difficulty she encounters both inside and outside of the medical system. Her use of *take your word for* in line 10 emphasises the importance of language and belief when communicating this pain, and extends the metaphor further to assert that ‘seeing’ invokes trust as well as belief (ironic considering that trust is exactly what is needed when pain cannot be seen (e.g., Candlin & Crichton, 2013)). Lines 11–12 (*tip toe around it, you don’t actually know*) offer a more implicit extension, incorporating the idea that seeing is both ‘understanding’ and ‘knowing’. These nuanced understandings of ‘seeing is believing’ have great consequences for the treatment and understanding of pain, as I discuss in later sections.

Finally, in lines 15–16, Kacey’s retelling of her doctor’s dismissal (*it’s just growing pains ... suck it up*) emphasises the dangerous normalisation of (certain types of) pain, recalling again the Discourses of women’s pain. The underlying message from this assertion is that this type of pain is routine (*it’s just growing pains*), and that to express concern is neither warranted (*you’ll be okay*) nor encouraged. The use of the phrase *suck it up* reveals Kacey’s perception of this dismissive attitude. This is Kacey’s retelling (and therefore a ‘constructed dialogue’ (Tannen et al., 2015)), so we must be careful to distinguish between what Kacey and Ella (and, elsewhere, Sophie and Bree) are actively constructing in ‘the now’, i.e., in their interaction with me (and each other), and what they are *re*-constructing in retellings of other interactions and experiences. It is unlikely that the doctor used these exact phrases in his interaction with Kacey. However, it is indicative of Kacey’s perception of his dismissive attitude that this is how she describes the interaction. Taken together, the Discourses and phrasing point to Kacey’s experience of being constructed as ‘dramatic’ and ‘childish’, connecting to historical gender stereotypes that remain common within the medical space (again, echoing Grace, 1995; Vidali, 2013; Young et al., 2018).

Practices of delegitimation are self-evident in moments where women are not believed or trusted—when neither they nor their information is considered legitimate. The normalisation of not just women’s pain but this constant disbelief and suspicion is especially evident in the next excerpt, where even empirical, ‘organic’ evidence (normally highly valued by positivist medicine (e.g., Pryma, 2017)) is not enough for Ella’s gynaecologist (notably, the same one as in Excerpt 6.1.2).

gender on overall gender bias in their updated review of the literature. And although they could not be included, other experiences recounted in these focus groups also showed this is not a definitive binary.

Excerpt 6.1.3

5:18 – 6:20

- 1 Ella: I've had + a few people tell me it's different things or even one
 2 gynaecologist say + actually + um it doesn't even seem like you had
 3 endo or something like that when I went to a gynaecologist had the
 4 operation they sent it to the lab they said I have it like I've got this
 5 record saying I had it and then I've got this person who I've been to
 6 a few times saying actually what if you don't have it let's try + all
 7 these other random things

Here, the shunning of Ella's knowledge and experience is clearly foregrounded in her retelling. She has already had the surgery and tests (lines 3–4) but continues to be subjected to doubt. Especially notable in her retelling is her dismissal of the gynaecologists' ability to know her and her body (*this person who I've been to a few times*, lines 5–6). This again exposes Ella's perception of the dismissive attitude she received from the gynaecologist, which she is turning back on him.

The extract further reveals the uncertainty and mixed messaging (*different things*, line 1; *random things*, line 7), suggestive of the trial-and-error process often applied to endo, something that Kacey and Ella both discussed being frustrated by. The description of these as *random* highlights a common power disparity in the patient-doctor relationship, wherein the doctor does not explain fully or properly the rationale behind their decisions. This is again an expression of medical Discourses of knowledge and power, demonstrative of how doctors' advice has attained an unquestionable status. To patients, however, the tests or trial medications can then seem random and confusing, which can lead to distrust. The pronoun use in line 6 is also of note—Ella paraphrases the doctor as saying *let's try*, an interesting (and arguably superficial) use of inclusive pronouns in a situation where Ella seemingly lacks the power to negotiate or determine the direction of her own medical care.

Once more, Eliza's experiences shed further light on these Discourses. From the beginning, she reassures people “that I'm listening to them and ... that we're gonna get to the bottom [of] whatever's going on as much as we can”. She will address pain and symptoms immediately so people “don't have to delay things” and “can get started”, although she also lets them know “if you're really worried, we can refer you”. She explicitly acknowledges that “people are really haunted by” ongoing delegitimisation, so that “by the time they come to me, they're very keen to get labelled ... to hear a specialist say this is what it is”. Eliza's experiences therefore help expose these hegemonic practices of shunning by evidencing both the effects that delegitimisation has, and that alternative approaches are possible.

These excerpts have shown how the achievement of legitimacy is shaped by Discourses of disbelief and dismissal. These emerge in practices of shunning women, reducing their power and agency by delegitimising their knowledge and experiences. While Discourses of disbelief are readily resisted by my participants, the same cannot be said for the more insidious Discourses of blame and responsibility encountered in the next section.

6.2 “If they find nothing, that’s gonna be so embarrassing for me”: Shaming discourses of responsibility and blame

Working in concert with shunning Discourses of disbelief and dismissal are shaming Discourses of personal responsibility and blame. These are deeply engrained in society and embedded in dominant Discourses of power and knowledge. Heavily gendered, and thus readily applied to women (cf. Knarston, 2021 for their application in cases of violence against women), these shaming Discourses work to convince people struggling with both illness and the medical system that this is all, essentially, their own fault.

In the following excerpt, Sophie is responding to Bree’s account of how she finally managed to make progress towards her diagnosis. Here again, knowledge plays a key role in the achievement (or not) of legitimacy. Yet this (harmful) lack of knowledge is not blamed on the doctor. Instead, Sophie turns this blame on herself, reflecting her internalisation of these Discourses of blame and personal responsibility.²³

Excerpt 6.2.1

16:26 – 17:18

- | | | |
|----|---------|--|
| 1 | Sophie: | yeah I think + I mean I I feel kind of [sighs] I don’t wanna say I |
| 2 | | feel dumb but like I do in that like I I didn’t even it took me years |
| 3 | | before it even occurred to me that there was something wrong |
| 4 | | but like that + pain like when I first started getting my periods |
| 5 | | they were extremely painful I was put on the pill pretty much- |
| 6 | | and very regular I was put on the pill pretty much straight away |
| 7 | | + and I remember- I have a very + blended + family my mum and |
| 8 | | my stepmum were both like super anxious about me being put |
| 9 | | on the pill at such a young age + but I feel like you know it’s a |
| 10 | | little bit longer ago I feel like- this is in Ireland I and I I suspect it |
| 11 | | might have been the same here + like + endo was not as much |
| 12 | | there wasn’t + awareness around it like it certainly never came |
| 13 | | up with our family GP at the time that that was even a possibility |

Here, the (dis)possession of knowledge emerges as salient: lack of *awareness* (line 12), *never came up* (lines 12–13), *even a possibility* (line 13) all show, once again, how significant information is. The emphasis on *young age* in line 9 is potentially also related, connecting to the lack of knowledge around reproductive anatomy (and reproduction in general) that is so common in young girls. The fact that *this is in Ireland* (line 10), which generally ascribes to a more conservative view on sexual education (Górnicka & Doyle, 2023), strengthens this significance—although, as Sophie notes in lines 10–11, this same situation undoubtedly played out (and is playing out) in countries and societies around the globe.

²³ I want to note that self-blame in medical situations is pernicious, omnipresent, and incredibly difficult to resist, reflecting just how entrenched it is. As I mentioned earlier, my own medical issues have highlighted this. Even while conducting this research, and being acutely aware of these Discourses, I often felt dumb and ashamed—embarrassed both that my body was failing me and that I could do nothing to stop it.

Sophie's self-blame throughout this extract implies that it is entirely up to the person in pain to seek answers, even when women's pain is normalised and there is a risk of being seen as dramatic and hysterical. This is especially evident where Sophie *feel[s] dumb* (line 2) that she did not realise her pain was *something wrong* (line 3). The hesitation and hedging (*[sighs] I don't wanna say ... but like*, lines 1–2) shows reluctance to voice this thought, suggesting embarrassment. Although subtle, this hedging is in some ways a resistance of these Discourses—Sophie knows that objectively she has nothing to feel ashamed of, and yet the feeling is there. Lines 2–3 (*took me years before it even occurred to me that there was something wrong*) further evidence the normalisation of pain, as well as a sense of personal responsibility.

Connections to gender emerge as especially salient in the following excerpt, where Bree reflects on medical communication and the feelings of shame which result from (mis)treatment.

Excerpt 6.2.2

25:27 – 27:26

- | | | |
|----|-------|--|
| 1 | Bree: | I always + especially with my like that final appointment I |
| 2 | | always felt like I was sort of like wasting somebody's time like |
| 3 | | + as though someone was like a little bit annoyed that I was |
| 4 | | like there + um which could have come from like just a bit of |
| 5 | | paranoia from going through so many appointments [...] I had |
| 6 | | this really big anxiety before my [laughs] which is ridiculous to |
| 7 | | think about now before my- in surgery of like oh holy shit what |
| 8 | | if I don't have it? and I've been like saying this the whole time |
| 9 | | and then they get in there and they find nothing that's gonna |
| 10 | | be so embarrassing for me + so when I was like + gearing up |
| 11 | | for my surgery I wasn't nervous about the surgery + I was like |
| 12 | | preparing for the embarrassment of not having it cos you |
| 13 | | know I was so convinced + you know like + that something was |
| 14 | | going on but + why would I be believed after all this you know |
| 15 | | + so I think that yeah + I didn't really think that + the way that |
| 16 | | people had spoken to me throughout had had much of a toll |
| 17 | | until I looked back after my surgery and realised like I was too |
| 18 | | scared to even enquire about this + because I thought I'd be |
| 19 | | humiliated um when in fact it's just + you know + the buildup |
| 20 | | of all these conversations that have made me feel a bit like + |
| 21 | | crazy |

This excerpt shows Discourses of personal responsibility and blame again emerging in self-doubt through Bree downplaying, discrediting, and delegitimising herself (e.g., *ridiculous to think about now*, lines 6–7), likely as a result of being consistently subject to it from others.

Gender is ever-present here: it emerges in Discourses of hysteria, where Bree constructs herself and is constructed as hysterical and neurotic (*I was so convinced ... something was going on but ... why would I be believed*, lines 13–14). Hedging and indirect (rather than direct)

accusations of mistreatment by doctors (*the way that people had spoken to me*, lines 15–16) are likely a consequence of this gendering, in that this indirectness is a more stereotypically ‘feminine’ way to express complaint (e.g., Holmes, 2006). Blame and shame are also deeply gendered (Werner et al., 2004), as is the pathologisation of *paranoia* (line 5) and feeling *crazy* (line 21) throughout this extract. The embarrassment and humiliation that Bree feels (and fears: lines 9–10, 11–12, 17–19) seem to be a consequence of the personal responsibility that is foisted upon her for her disorder, her illness, and her pain. This heavily gendered aspect of personal responsibility comes through in feeling that she is taking up (and therefore *wasting*) time and space (line 2).

This shame—and the confusion that results from lack of information—extends beyond receiving treatment and into ongoing (self) management. As mentioned above, the onus is continually placed on people with endo rather than on the system, which either cannot, or will not, accommodate them. The lack of support and knowledge further exacerbates these feelings of shame and personal responsibility, as evidenced in the following extract, where Sophie and Bree discuss their feelings of isolation and medical abandonment.

Excerpt 6.2.3

27:36 – 30:25

- | | | |
|----|---------|---|
| 1 | Sophie: | I mean after diagnosis I would've liked to know a bit more about |
| 2 | | okay so how do you manage this? like what does it mean? into |
| 3 | | the future? [...] I I just feel kind of still kind of feel in the dark |
| 4 | | about some of that + um + I'm sure there's information out there |
| 5 | | that I can go and + find but I I don't know that I would |
| 6 | | instinctively go to a medical professional for it cos that's |
| 7 | | definitely not where I found it in the past + um [tuts] yeah |
| 8 | Bree: | (2) yeah the three things that I was told was like manage your |
| 9 | | pain + which I guess they just meant painkillers + like diet and |
| 10 | | exercise and mental health and I just remember being like so |
| 11 | | shafted by such little information that it was like it's it's gonna |
| 12 | | sound really dramatic when I say it out loud but it was like + you |
| 13 | | know I all I read that is is like okay so you've gotta like get off |
| 14 | | your ass you've gotta take pills all the time and you should just try |
| 15 | | not to fucking kill yourself like is that the solution because there's |
| 16 | | no there was no here's a therapist here's a group here's a |
| 17 | | anything it's just like you + and then also this kind of this isolation |
| 18 | | that they've put you in [...] um and it just felt really bizarre that |
| 19 | | it's like oh is this it? like I think but I think a lot of people kind of |
| 20 | | glamorise those aspects of just health in New Zealand where you |
| 21 | | think that there's gonna be this lovely follow-up program to |
| 22 | | anything that happens to you but there's just not |

Here, a sense of isolation and confusion (*what does it mean?*, line 2; *feel in the dark*, line 3; *shafted by such little information*, line 11; *this isolation that they've put you in*, lines 17–18) emerges. At the same time, evident in lines 5–7 is a pushback against the ‘infallible doctor’ construction, as Sophie admits that she *would[n't] instinctively go to a medical professional*

for information as *that's definitely not where I found it in the past*. Particularly emergent in line 5 is the sense of personal responsibility—that it is her duty to search for this information herself rather than her right to receive it. Again, there is evidence of downplaying and delegitimising of themselves (e.g., *it's gonna sound really dramatic when I say it out loud*, lines 11–12).

Particularly interesting is the use of *they* in line 18, which suggests an interpretation of intentionality. In many ways, this abandonment and isolation ties into the institutional Discourses of medicine seen in Excerpt 6.1.3. Once medicine has done its job (i.e., diagnosing), then the system prefers people to disappear—as patients ‘should’ once they have been treated. This is a system that works well for acute, temporary pain. The fact that this is not possible for people with endo is not, so the underlying assumption goes, the fault of medicine, a Discourse that has become hegemonic and therefore unassailable to critique. It must instead be the fault of someone else, most likely the people (and especially women and others who are medically marginalised) who are in pain.

Overall, then, this attitude ties into ideas of healthism, wherein if pain persists it means the unwell person is not doing enough to heal themselves (Cheek, 2008). This again highlights the limited nature of understandings of chronic pain and long-term diseases such as endo, and thus the cycle of invisibility and delegitimation—shunning and shaming—continues. And yet, as I have mentioned throughout, these women consistently respond to constraints by subverting and resisting. This is the focus of Section 7.

7. Persistence and Resistance

This section continues to focus on *how* dominant Discourses shape the achievement of legitimacy. Here, I analyse the ways in which participants resist delegitimising practices by challenging hierarchies of knowledge, thus knocking out the very foundations of dominant Discourses of knowledge, power, and gender.

7.1 Challenging knowledge, valuing experience

Extract 7.1.1 continues from Excerpt 5.1.1, part of which is included in italics (recall Kacey's retelling of the keto diet she was put on by her doctor, against the advice of her family). In the initial extract, Kacey had demonstrated the power of the ‘infallible doctor’ construction, and described how she herself had ‘bought into’ this idea of knowledge and power. Yet, as this continuation shows, Kacey's ideas of legitimacy, power, and knowledge have changed over time.

Excerpt 7.1.1

30:50 – 31:21

- | | | |
|---|--------|---|
| 1 | Kacey: | <i>[...] I was pretty sick so it's like it's- but a doctor told me to do it</i> |
| 2 | | <i>you know he's the one that knows the information</i> |
| 3 | Ella: | <i>yeah</i> |
| 4 | Kacey: | when in fact he doesn't [laughs] |

Here, in line 4, Kacey subverts the ‘infallible doctor’ construction she had created earlier in the retelling by denying his claim to possess *the information* (line 2), thus pushing back against his power and status. Ella’s tacit agreement and approval (*yeah*, line 3) indexes their shared experience of navigating this Discourse and their changing relationship to it as people with endo.

This subversion of Discourses of knowledge and power—challenging what and who can be considered ‘legitimate’—is continued by Ella in the next extract (which is, in turn, a continuation from Excerpt 6.1.3, included in italics). Here, Ella both upholds and subverts the prioritisation of ‘legitimate’ medical knowledge in different ways, using her own biomedical competence as a resource to establish her expertise, while at the same time positioning her lived experience as equal to biomedicine.

Excerpt 7.1.2

5:18 – 6:20

- 1 Ella: *I’ve had + a few people tell me it’s different things or even one*
- 2 *gynaecologist say + actually + um it doesn’t even seem like you had*
- 3 *endo or something like that when I went to a gynaecologist had the*
- 4 *operation they sent it to the lab they said I have it like I’ve got this*
- 5 *record saying I had it and then I’ve got this person who I’ve been to*
- 6 *a few times saying actually what if you don’t have it let’s try + all*
- 7 *these other random things* well that’s just (2) that’s irrelevant
- 8 because I know I did have it like it’s + yeah it’s like almost like a
- 9 feeling like you know + so that was frustrating um + but then + I just
- 10 kind of almost like ignored him but I was lucky that I had like a good
- 11 support system like my GP and my mum and stuff being like + oh
- 12 like don’t worry about that you know you’ve just gotta keep persisting

Ella indexes her knowledge of professional, institutional language through her use of *gynaecologist* (lines 2 and 3), notable as she had been using ‘gyno’ before this point. Throughout, she positions herself as an expert when retelling events that may ‘threaten’ her expertise. Using *people* and *person* instead of professional titles (such as ‘gynaecologist’ or ‘doctor’) in lines 1 and 5 arguably serves to deny these individuals higher status and demote them to ‘ordinary’—or at the very least, establish that they are no different to her. This is carried through in her minimising of the gynaecologist’s words as *something like that* in line 3, indicating that for her, his words are not worth listening to or retelling, and again turning the dismissal and disbelief she felt back on the doctor. She returns to this in lines 7 and 10 by judging his opinion as *irrelevant* and *ignore[ing] him*, again constructing herself as an equal expert on the side of science and evidence, while still resisting the traditional medical power structure. This emphasis on scientific and empirical processes is especially evident in lines 3–5, where she step-by-step demonstrates her ‘credentials’ and her knowledge of the diagnostic process (*went to the gynaecologist had the operation they sent it to the lab they said I have it*).

At the same time, however, Ella values her embodied experience and positions this as equal to (bio)medical knowledge, as seen in lines 8–9, where she embraces emotion as a valid way of knowing (*it's almost like a feeling like you know*). Emotion also emerges in her description of encountering disbelief as *frustrating* (line 9), the result of not being listened to and understood, and of having her claim of expertise denied.

This claiming of personal expertise as equal to biomedical knowledge is also seen in the following extract, where Bree discusses her communication with various medical professionals throughout her diagnosis—the *they* she refers to in line 1.

Excerpt 7.1.3

9:06 – 11:21

- | | | |
|---|-------|--|
| 1 | Bree: | it felt like kind of like when they talked about it it's like why do you |
| 2 | | need the diagnosis? and I'm like I don't know do I need it? and I do |
| 3 | | know like a few girls who just say that they have endo + and they |
| 4 | | don't have the surgery to confirm it because they're like they don't |
| 5 | | really see the difference |

Here again, the two elements of resistance can be seen: both the questioning of the taken-for-granted status of biomedical knowledge—*do I need it?*, line 2—and the positioning of personal experience as equal to this professional knowledge anyway—*they don't really see the difference*, lines 4–5. At the same time, however, the engrained orientation to scientific knowledge and empirical 'proof' (Seear, 2009) can still be seen in lines 3–4 (*they don't have the surgery to confirm it*), again demonstrating the dominance of these Discourses even while they are being resisted (Bourdieu, 1991).

7.2 Speaking up and speaking loud

Resistance of dominant Discourses of gender, especially the normalisation and invisibility of women's pain, is particularly exemplified by persistent self-advocacy. The ability to speak up for oneself emerges as a crucial skill when navigating Discourses of disbelief and dismissal, with community and network support being critical to this (Foster, 2016). Age and experience of the medical system thus become resources to draw upon, as shown by Bree in the first extract. Yet this advocacy is undeniably still constrained, reflecting neoliberal Discourses of personal responsibility where the onus is on the person with endo to advocate for themselves.

Excerpt 7.2.1

15:21 – 16:13

- | | | |
|---|-------|--|
| 1 | Bree: | I think um it comes down to a little bit as well like your |
| 2 | | personality in that space as well like um when I was younger I |
| 3 | | was like painfully agreeable and polite and so + when I went |
| 4 | | in for my later appointments I would take in like scripts that |
| 5 | | more like + you know like my friends would write me scripts |
| 6 | | that were like + you know I am this person this is what I've |
| 7 | | experienced and with those scripts I was able to get more |

- 8 movement because I was able to like speak from like a more
 9 certain place + um because I was like no longer trusting the
 10 opinion of the person I was like being like you are the person
 11 that leads me to this person so can you just get outta the way
 12 so I can go here and it's just like it's a very impolite way to be
 13 um but it got me + places + more so than it did before

This gendered element of personal responsibility is particularly evident in line 12 (*it's a very impolite way to be*), where Bree evokes the 'unacceptability' of women essentially asking for quality care. Of note, too, is her emphasis on age. As a *painfully agreeable and polite* (line 3) younger woman, Bree recounts her reliance on *scripts* (lines 4–7) in medical encounters. This speaks to the importance of presentation, performance, and rehearsal to the achievement of legitimacy—only by playing a role, and therefore moving beyond the gendered norms of 'acceptability' for young women (Manne, 2019), was Bree able to achieve medical traction. This also evidences the way that knowledge accumulated on this journey becomes an invaluable resource for legitimacy.

Bree's narrative resistance in this extract is a challenge to hierarchies of power but is still encumbered by neoliberal, 'healthist' ideas of personal responsibility (Cheek, 2008). This contrasts with the next excerpt in which Ella resists Discourses of both shunning and shaming in her experience with a doctor in the emergency department who focused on (his characterisation of) her overuse of painkillers rather than her constant, debilitating pain.

Excerpt 7.2.2

6:23 – 7:27

- 1 Ella: I've been down every path that's an accessible an option and
 2 nothing seems to + be a solution so this is my solution and he was
 3 like well you need to stop taking the painkillers well you come up
 4 with a better solution + so I think I've been quite lucky that I've had
 5 a good support system but like as I was saying in the boarding house
 6 there were a few girls who would just get declined and they'd be
 7 told like no we don't do the surgery on you like sorry like move on +
 8 sort of thing and it was I just had to kind of be like no you've gotta
 9 really stick it to them

Resistance emerges as salient in three main ways in this extract. Ella foregrounds the role of her *good support system* in line 5 and highlights her own role in supporting other women through her advice and encouragement (*no you've gotta really stick it to them*, lines 8–9), something which has also been highlighted as important in the literature (e.g., Foster, 2016). Affirmation and validation, both internal and from community and network support, are therefore presented as key to legitimisation.

Particularly striking in this extract is Ella's narrative challenge in lines 3–4 (*well you come up with a better solution*), where she harnesses the affordances of constructed dialogue (Tannen, 2015) to skilfully resist these Discourses and move responsibility back towards medicine. Through this, she (re)positions herself as agentive and an expert and subverts and resists the

shaming Discourses that are repeatedly applied to all of these women throughout my data. Even if this was not her exact phrasing in the original interaction, her reconstruction of it here, in a space that allowed her to reclaim her agency, indicates that this Discourse of resistance is relevant to her experience of endo.

Throughout the data, there is an association between age and (in)experience, for example, in ‘normal’ Discourses working to withhold knowledge of one’s own body (perpetuated by a lack of education and awareness (Bobel et al., 2020)). As women age, then, they gain knowledge both of their own bodies and of how to operate within the medical system. This knowledge confers power and agency, which in turn enables the achievement of legitimacy. Throughout, advocacy and support (especially the sharing of information and encouragement) remain vital (Foster, 2016). At the same time, however, societal ideologies and understandings of gender are shifting, and young women are increasingly empowered to take up space and advocate for themselves. I suspect that this shift strongly influences the ability of younger women to resist these Discourses of blame and responsibility more, and more successfully, than older women, who had a much less generous space to operate within. This is in no way to imply that any young person has it easy when navigating these issues—the experiences in this dissertation should speak for themselves. It is simply to note that there are some positive shifts already taking place, which can and should be encouraged to create lasting future change, as I explore more in Section 8.

8. Gender and Knowing

This section explores the deep links between the concepts that emerged in my analysis, tying together the threads to expose a full picture of the struggle for legitimacy that my participants encounter as both legitimate endo ‘patients’ and legitimate women. The constraints they face, a product of historical and continuing dispossession of knowledge and other epistemic injustices, are ever-present. Yet this assumed status is constantly questioned and challenged. I argue that this tension is evidence of a changing discursive landscape, shifts that aim to accommodate a more equitable understanding of pain and illness—epistemic justice, in a way.

In the stories of Bree, Sophie, Kacey, and Ella, we ‘see’ these discursive processes and tensions in action, the ongoing construction of medical ‘truths’ that keep people and illnesses in hierarchy. Salient throughout the data is the underlying tension between achieving legitimacy in the medical system, which requires persistent advocacy and resistance of dominant Discourses (*you’ve gotta really stick it to them*, Ella, Excerpt 7.2.2), and maintaining legitimacy as a woman, which ‘typically’ involves being *agreeable and polite* (Bree, Excerpt 7.2.1). Here, the term ‘unwell woman’ becomes a contradiction: someone who is unwell deserves care, but the ‘female role’ involves giving, and not taking, care and related social goods (Manne, 2019). By desiring quality care—recall Bree’s ‘script’ in Excerpt 7.2.1—these women are subverting their ‘place in society’ and becoming lightning rods for misogyny. Their perceived status as ‘illegitimate women’ then bleeds into a perception of them as ‘illegitimate patients’, who are not deserving of care and respect (Jones, 2015)—an ironic catch-22, considering that remaining ‘legitimate’ in gender norms would delegitimise their pain. This catch-22 takes its toll. The shame and humiliation felt by *wasting somebody’s time* (Bree, Excerpt 6.2.2) is amplified by gender norms and linguistic practices of delegitimation, preventing access to

healthcare, as Bree recalled in Excerpt 6.2.2 (*I was too scared to even enquire*; also Ellis et al. 2022b, 2023). The balance between the roles of ‘legitimate patient’ and ‘legitimate woman’ therefore appears paramount to the achievement of legitimacy. The ‘failure’ to achieve legitimacy comes when this balance is deemed inadequate, and as I explore now, this is through no fault of the women in question.

8.1 Epistemic injustice

In this data, women with endo are subject to injustice by being ignored, disbelieved, and having their ability to be knowers and have knowledge questioned. Related to the tension between legitimate patient- and woman-hood is tension surrounding what is ‘legitimate knowledge’, what is a way of ‘legitimately knowing’, and especially *who* is a ‘legitimate knower’ (cf. Pohlhaus’ (2012) ‘marginalised knowers’). These hierarchies of knowledge follow those entrenched within society, with the knowledge of institutionalised medicine, and the ways of knowing associated with that tradition, held in the highest esteem (i.e., knowledge that is empirical, visible, and ‘objective’ (Micale, 2008)). This emerges in the positioning of doctors as epistemic authorities *that know the information* (Kacey, Excerpt 5.1.1; also Quigan, 2020; Young et al., 2018), in comparison to women with endo who are *dramatic* (Ella, Excerpt 6.1.1) and need to *suck it up* (Kacey, Excerpt 6.1.2). Dominant Discourses and linguistic practices uphold these institutional hierarchies of epistemology by delegitimising the personal knowledge and embodied experience that Kacey, Ella, Bree, and Sophie hold.

In returning to their stories, the power of epistemic injustice (Kidd et al., 2017) in interpreting this tension becomes clear. It serves both as a tool for delegitimation and a concept upon which we can scaffold our understanding of how practices of delegitimation (Bucholtz & Hall, 2005) emerge from these Discourses. This helps to make these Discourses of gender and knowing meaningful by showing how they translate into and emerge within discourses. Fricker’s (2007) subclassifications of epistemic injustice as the denial of voice (testimonial injustice) and dispossession of knowledge (hermeneutical injustice) are particularly useful in adding depth and nuance to existing linguistic analyses, as these elements emerge (and converge) constantly throughout the data.

We can see these injustices occur in Ella’s experiences with her gynaecologist (*it doesn’t even seem like you had endo*, Excerpt 6.1.3) and with an emergency department doctor (*well you need to stop taking the painkillers*, Excerpt 7.2.2). In the former, not just Ella’s word but the word of previous doctors is disbelieved, while in the latter, Ella recalls being constructed as lacking in (legitimate) knowledge and needing to be educated. Her resistance of this positioning acts as a contextualisation cue, indexing the social category of a ‘problem patient’ who ignores medical advice and is both illegitimate and illicit. Her agency thus becomes problematic, and she is recontextualised as undeserving of empathy (and even treatment). Post hoc rationalisation of this (mis)treatment (recall Section 2.2.1), where, for example, the ED doctor justifies his mistreatment by ‘identifying’ in Ella’s speech contextualisation cues to her illegitimacy, perpetuates these injustices. The long-term effects of testimonial injustice can be especially seen in Bree’s recounting of the lead-up to her surgery in Excerpt 6.2.1, where she *was ... preparing for the embarrassment of not having endo* despite being *so convinced* she had it, *why would [she] be believed* after all that had happened.

Hermeneutical injustice is tied particularly to pain Discourses, where pain is *so normal* (Bree, Excerpt 5.2.2) that it took Sophie *years before it even occurred ... that there was something wrong* (Excerpt 6.2.1). Even being put on the pill at a very young age, it *never came up* with Sophie's family GP *that [endo] was even a possibility*. This lack of knowledge and awareness (*they don't know that [invisible pain's] even a thing*, Ella, Excerpt 5.2.1) makes the process of managing endo *hard to navigate* (Sophie, Excerpt 5.2.2) since there is *such little information* (Bree, Excerpt 6.2.3) given that it feels like *nobody [is] speaking the same language* (Bree, Excerpt 5.1.2). The result is that women with endo *still kind of feel in the dark about what ... it mean[s] into the future* (Sophie, Excerpt 6.2.3). In this system where knowledge is power and power begets legitimacy, gatekeeping that knowledge from people with endo (even if unintentional) limits both their power and legitimacy (Bullo, 2018).

Not being believed is therefore related to gendered, institutionally-supported Discourses of knowing which have gained 'taken-for-granted' status over time and are routinely marshalled, especially in medical encounters. This lays the groundwork for constructions of disbelief, blame, and responsibility to flourish, and the implacability of these Discourses means these constructions effectively remain unassailable. They serve to systematically marginalise and delegitimise the experiences of those with endo (Hays, 2020) where invisible pain seems to act as a contextualisation cue for disbelief (*but you don't look like you're in pain*, Kacey, Excerpt 5.2.1). This disbelief is enabled by entrenched understandings of gender and gender roles, where women are *agreeable and polite* (Bree, Excerpt 7.2.1) and their pain is *not bad* (Ella, Excerpt 6.1.1) and completely 'normal' (*it's just growing pains*, Kacey, Excerpt 6.1.2). There is, therefore, a normalisation of not just women's pain but of being suspicious of women's pain, interrogating and not just *taking their word for* (Ella, Excerpt 6.1.2; Krebs & Schoenbauer, 2020) it—treatment that is much more rarely applied to men and those less medically marginalised.

This emergence is unsurprising given the evidence over time of women's symptoms being treated as 'psychological' and men's as 'physical' (i.e., that women's pain is hysterical and imagined while men's is real and organic (Casper & O'Donnell, 2020)). The negative effects of these dominating Discourses build up over time, normalising a hierarchy of who deserves compassion and care and Othering those who do not 'fit' the established parameters of what it 'means' to be ill or in pain. This once again establishes the impacts that these 'constructed' beliefs have on material reality, justifying the necessity of work to identify and problematise these harmful 'truths' (Heller et al., 2017).²⁴

And yet, the counter Discourses in my data show important evidence of a changing discursive landscape, where power shifts are destabilising the assumed 'truth' of medicine's epistemological stance (that is, the predominance of science and scientific Discourses alone (e.g., Huntington & Gilmour, 2001; Whelan, 2006)) and making it possible to simultaneously hold emotion and experience as epistemology (Foster, 2016; Neal & McKenzie, 2011), where knowledge is *almost like a feeling* (Ella, Excerpt 7.1.2). And this brings me to my own conceptualisation: that of 'epistemic justice'.

²⁴ Additionally, when taking into account the current biopsychosocial model of (chronic) pain, this mental load actually worsens the pain and increases suffering (Gatchel, 2013; Wemyss-Gorman, 2021), further validating efforts to address this problem.

8.2 Epistemic justice

Epistemic justice takes the form of resisting and subverting delegitimising Discourses and practices, and especially the dominant Discourses of knowledge underpinning delegitimation. These are attempts to actively reframe events and identities in reaction to where participants have been positioned within medical and sociocultural understandings. Part of this resistance is *no longer trusting the opinion of the* (Bree, Excerpt 7.2.1) ‘experts’, questioning received knowledge and biomedical hierarchies of epistemology (*they don’t really see the difference; do I need [a diagnosis]?* Bree, Excerpt 7.1.3).

Resistance is often achieved through advocacy and firmness, as Bree’s successful use of *scripts* and being *impolite* attests (Excerpt 7.2.1). Community support and gaining knowledge independently is also linked to this ‘expert’ distrust (Emad, 2006; Foster, 2016; Seear, 2009), especially highlighted by Ella’s *good support system* (Excerpt 7.1.2) and Sophie’s acknowledgement that doctors are *not where I found [information] in the past* (Excerpt 6.2.3). Note that this is not an eschewing of medicine completely—participants actively and happily engage with doctors who are *very like kind and like understanding* (Ella, Excerpt 6.1.2). It is only when experiencing delegitimation that women *don’t worry about doctors and keep persisting* (Ella, Excerpt 7.1.2).

Sufficient solo management may also play a role in this resistance, especially post-diagnosis (Di Biasi, 1995). This ability to *just sort of deal with it* (Sophie, Excerpt 5.2.2) becomes a part of showing knowledge and proving your credentials. This expertise also involves, and arguably necessitates, expert manoeuvring of the medical profession and system on and in its own terms, as Bree’s ‘script’ (Excerpt 7.2.1) again shows. Thus, discursive legitimisation may well plant the seeds for agentic action (Dawson, 2019b). This emphasis on management once more exposes the ubiquity of neoliberal Discourses of personal responsibility, with the responsibility still falling on the shoulders of the unwell people rather than the medical professionals. Notably, however, the understanding that *this isn’t normal like I am disadvantaged by this* (Ella, Excerpt 6.1.1) resists both normative Discourses of women’s pain and neoliberal Discourses of personal responsibility.

This tension between understandings and constructions of personal and medical responsibility and expertise shows how epistemic injustice and the gendered Discourses that support stigma and maintain illegitimacy are dynamic and changing. Sophie, Bree, Ella, and Kacey’s voices, therefore, add to the growing collective of people pushing back against deeply rooted medical marginalisation, which is hugely promising for societal discursive shift. The struggle against delegitimation seen in the shifting of these ‘discursive faultlines’ (Menard-Warwick, 2013) suggests a change (or at least a change in progress) in attitudes and understandings of legitimacy and agency within and outside the medical system. This discursive tension thus highlights the cracks in our current ways of seeing the world, exposing how the constructed can be deconstructed and the invisible made visible.

9. The Gates of Medicine, Opened?

I now return to my research questions before outlining the study’s theoretical, analytical, and methodological contributions and implications. My first research question asked *what*

dominant Discourses emerged in participants' retellings of their experiences of endo. I showed in Section 5 that Discourses of gender and knowledge emerge as particularly salient, constraining understandings of pain and therefore both legitimacy and agency by normalising women's pain and denying them knowledge and power.

My second research question asked *how* these dominant Discourses shaped the achievement of legitimacy. In Sections 6 and 7, I showed that these normative understandings of women's pain resulted in practices of delegitimisation through 'shunning' and 'shaming'. By analysing participants' stories, I revealed how widely-held beliefs that something must be seen to be believed intersect with gendered and historical Discourses of women as unreliable narrators, resulting in the treatment of women's pain with suspicion and disbelief. Unwell women are, therefore, stripped of their power and agency by being made invisible. Intersections of gender, race, and other identities, including patient identity, contribute to further injustice (and therefore denial of legitimacy). However, participants showed their skilful navigation of these constraints by questioning received knowledge and remaining persistent and resistant in order to achieve legitimacy for themselves.

The theoretical, analytical, and methodological contributions of this research are clear. Utilising the framework of epistemic justice not only adds depth and nuance to my identification of delegitimising practices and Discourses but also allows for the identification of 'epistemic justice' in practices of resistance and subversion. These highlight the tension surrounding our current understandings of endo and invisible pain, and this conceptualisation therefore illuminates a path towards addressing this issue. Additionally, my incorporation of both people with endo and doctors in my approach has allowed me to account for multiple perspectives and warrant my understanding of the underlying discursive tensions. As well as highlighting the value of interactional data, this approach exposes the harm caused by delegitimising practices and illuminates the path(s) forward, thus bringing theory into conversation with practice. Finally, the use of focus groups in research with marginalised groups such as this allows me to uphold the lived experience of people with endo, thus providing a way to maintain, and possibly even recover, epistemic dignity for participants.

By highlighting the ideological and epistemological basis of the delegitimisation participants' face, I lay the groundwork for future work investigating the (de)construction of these barriers within interaction. In particular, research analysing the enactment of (de)legitimisation within patient-doctor interactions would seem an obvious avenue to pursue. This would add to a growing base of research identifying issues with current tools for communicating and diagnosing pain, and especially around developing improved methods for pain communication (e.g., Bullo, 2020; Bullo & Weckesser, 2021; Bullo & Hearn, 2024). Additionally, as I first noted in Section 4, this study examines only a subset of endo experiences. My own identity/ies as a young Pākehā woman researching with ciswomen, who are also mostly young and mostly Pākehā, means there is a much wider spectrum of experiences to explore. While there have been some studies looking at the impact of race and indigenous identity on experiences of endometriosis (see especially Ellis et al., 2024), there is overall a gap in these wider understandings, which I want to see addressed. In particular, I see a need for research exploring how diverse gender identities impact the diagnosis and treatment of 'women's diseases' such as endo. The study, therefore, has implications for

enacting societal change, both in the treatment of women's pain specifically and the diagnosing and treatment of invisible (chronic) pain more generally, as I now expand upon.

9.1 *Cassandra, still screaming*

The research lends further weight to the view that endometriosis is not only a medical issue but a social and political one (see also Jones, 2015). The exclusion of women from medicine throughout history contributes heavily to the disbelief and suspicion that women and other marginalised groups face within the medical system today, an experience common across invisible illnesses and disabilities. Treating this pain as unbearable, serious, and real is still far too uncommon. This accounts for the current state of not just endometriosis care, but a truly unacceptable gap in research and understanding of illnesses primarily affecting people AFAB.

Within medicine, diagnosis of these illnesses often seems like an end goal in and of itself, especially for chronic disorders such as endo, where there are very limited treatment options. For these illnesses, my data suggests that once a diagnosis has been given there is a prevailing attitude that the medical system has done all it can, and the rest is up to the individual. This can be seen in the dissatisfaction Ella, Kacey, Bree and Sophie felt towards available treatment options and information, reinforcing earlier findings by Ellis et al. (2022b; 2024). Healthism and the focus on self-management tie into these harmful Discourses of responsibility and blame which seem to target women so easily, a product of medical and sociocultural Othering. While self-management may be necessary for people with endo (for the moment), it is unjust to leave them to deal with their pain and suffering unsupported and alone.

Additionally, it is vital that we acknowledge the (deeply unfair) burden this pressure for self-management and self-advocacy places on people who are already unwell and in pain. Given the historical realities of imposing categories and understandings upon them, people with endo must be included in this conversation. And yet, this still poses an arguably undue burden. The tension between wanting to remain private and wanting to speak out as an example for others is something I discussed particularly with Bree and Sophie, and there is no easy answer. This is, in turn, one of the largest underlying issues at play—it is vital that we work on empowering people to advocate for themselves, but unless we also train others to listen, Cassandra's screaming will still be ignored.

9.2 *Where to from here?*

This broader area of pain management is one that I believe my discourse-focused research has particular implications and importance for. With chronic pain increasing and seemingly becoming the next great frontier for (bio)medicine (e.g., Wemyss-Gorman, 2021), it is past time to focus on how to holistically support people with invisible illnesses and disabilities. The most obvious solution remains, as it has always been, for doctors to *listen* to people, to *acknowledge* their embodied expertise, and to work with them—an approach that doctors such as Eliza are, in fact, already taking.

Overall, women (and others who are medically marginalised) must have their pain understood and treated as real, and biases in judgements of pain need to be challenged. It is crucial to address the gendered discourses and systemic inadequacies within the medical system in

order to provide better care and achieve epistemic justice for people with endometriosis. This is no easy feat, especially in the face of medical hegemonies, but if these ‘truths’ have been constructed then they can be deconstructed again. I recognise that it is difficult to unpick countless layers of normalised and taken-for-granted Discourses—after all, it was only by refocusing on what my participants were *really* telling me that I saw my own misguided framing. But this is necessary work, which must start somewhere. My hope is that my research both adds to the growing number of voices calling for such a reckoning and helps provide a roadmap for the enactment of societal change through epistemic justice, advanced by equitable partnerships between doctors and unwell people. Thus, we can open the gates to an age of medical care that is truly inclusive and just, where Cassandra is heeded, and pain does not have to be seen to be believed.

References

- Agarwal, S. K., Chapron, C., Giudice, L. C., Laufer, M. R., Leyland, N., Missmer, S. A., Singh, S. S., & Taylor, H. S. (2019). Clinical diagnosis of endometriosis: A call to action. *American Journal of Obstetrics and Gynecology*, 220(4), 354.e1–354.e12. <https://doi.org/10.1016/j.ajog.2018.12.039>
- Ahearn, L. M. (2001). Language and agency. *Annual Review of Anthropology*, 30(1), 109–137. <https://doi.org/10.1146/annurev.anthro.30.1.109>
- Arruda, M. S., Petta, C. A., Abrão, M. S., & Benetti-Pinto, C. L. (2003). Time elapsed from onset of symptoms to diagnosis of endometriosis in a cohort study of Brazilian women. *Human Reproduction*, 18(4), 756–759. <https://doi.org/10.1093/humrep/deg136>
- Barrett, R. (2017). *From drag queens to leathermen: Language, gender, and gay male subcultures*. Oxford University Press.
- Baynton, D. (2001). Disability and the justification of inequality in American history. In P. K. Longmore & L. Umansky (Eds.), *The new disability history: American perspectives* (pp. 34–57). NYU Press.
- Baxter, J. (2015). Feminist poststructural discourse analysis. In K. Tracy, C. Ilie & T. Sandel (Eds.) *The international encyclopedia of language and social interaction* (Vol. 1, pp. 613–618). Wiley.
- Baylis, F., & Ballantyne, A. (2016). *Clinical research involving pregnant women*. Springer.
- Bird, C. E., & Rieker, P. P. (2008). *Gender and health: The effects of constrained choices and social policies*. Cambridge University Press.
- Bobel, C., Winkler, I. T., Fahs, B., Hasson, K. A., Kissling, E. A., & Roberts, T. (2020). *The Palgrave handbook of critical menstruation studies*. Springer Nature.
- Boston Women’s Health Collective (1970). *Our bodies, ourselves*. New England Free Press.
- Bourdieu, P. (1991). *Language and symbolic power*. Harvard University Press.
- Boursicot, K., & Roberts, T. (2009). Widening participation in medical education: Challenging elitism and exclusion. *Higher Education Policy*, 22(1), 19–36. <https://doi.org/10.1057/hep.2008.35>

- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4–5), 585–614. <https://doi.org/10.1177/1461445605054407>
- Bullo, S. (2018). Exploring disempowerment in women's accounts of endometriosis experiences. *Discourse & Communication*, 12(6), 569–586. <https://doi.org/10.1177/1750481318771430>
- Bullo, S. (2020). “I feel like I’m being stabbed by a thousand tiny men”: The challenges of communicating endometriosis pain. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 24(5), 476–492. <https://doi.org/10.1177/1363459318817943>
- Bullo, S., & Weckesser, A. (2021). Addressing challenges in endometriosis pain communication between patients and doctors: The role of language. *Frontiers in Global Women's Health*, 2(1), 764693. <https://doi.org/10.3389/fgwh.2021.764693>
- Bullo, S., & Hearn, J. H. (2024). Visual reconstructions of endometriosis pain: An interdisciplinary visual methodology for illness representation. *British Journal of Health Psychology*, 29(3), 676–693. <https://doi.org/10.1111/bjhp.12720>
- Cameron, D., Frazer, E., Harvey, P., Rampton, B., & Richardson, K. (1993). Ethics, advocacy and empowerment: Issues of method in researching language. *Language & Communication*, 13(2), 81–94. [https://doi.org/10.1016/0271-5309\(93\)90001-4](https://doi.org/10.1016/0271-5309(93)90001-4)
- Candlin, C. N., & Crichton, J. (2013). *Discourses of trust*. Springer Nature.
- Carpan, C. (2003). Representations of endometriosis in the popular press: “The career woman’s disease”. *Atlantis: Critical Studies in Gender, Culture & Social Justice*, 27(2), 32–40.
- Caplan, P. J. (2005). *The myth of women’s masochism*. iUniverse.
- Casper, S. T., & O'Donnell, K. (2020). The punch-drunk boxer and the battered wife: Gender and brain injury research. *Social Science & Medicine*, 245(1), 112688. <https://doi.org/10.1016/j.socscimed.2019.112688>
- Chatman, D. L. (1976). Endometriosis in the Black woman. *American Journal of Obstetrics and Gynecology*, 125(7), 987–989. [https://doi.org/10.1016/0002-9378\(76\)90502-0](https://doi.org/10.1016/0002-9378(76)90502-0)
- Cheek, J. (2008). Healthism: A new conservatism? *Qualitative Health Research*, 18(7), 974–982. <https://doi.org/10.1177/1049732308320444>
- Cheek, J. (2012). Foucauldian discourse analysis. In L. M. Given (Ed.) *The SAGE encyclopedia of qualitative research methods* (pp. 356–357). SAGE.
- Chen, E. H., Shofer, F. S., Dean, A. J., Hollander, J. E., Baxt, W. G., Robey, J. L., Sease, K. L., & Mills, A. M. (2008). Gender disparity in analgesic treatment of emergency department patients with acute abdominal pain. *Academic Emergency Medicine*, 15(5), 414–418. <https://doi.org/10.1111/j.1553-2712.2008.00100.x>
- Clark, A. (1995). *The struggle for the breeches: Gender and the making of the British working class*. University of California Press.
- Cleghorn, E. (2021). *Unwell women: A journey through medicine and myth in a man-made world*. Weidenfeld & Nicolson.

- Couper, S. (2019). *The power of pleasure: Contributions from embodied sociolinguistics*. [Master's dissertation, Victoria University of Wellington].
- Dawson, S. (2019a). *Identities and ideologies in study abroad contexts: Negotiating nationality, gender, and sexuality*. [Doctoral thesis, Victoria University of Wellington].
- Dawson, S. (2019b). 'Bitch I'm back, by popular demand'. *Gender and Language*, 13(4), 449–468. <https://doi.org/10.1558/genl.39399>
- de Beauvoir, S. D. (2011). *The second sex*. Vintage.
- De Fina, A., & Georgakopoulou, A. (2008). Analysing narratives as practices. *Qualitative Research*, 8(3), 379–387. <https://doi.org/10.1177/1468794106093634>
- Dean-Jones, L. (1994). *Women's bodies in Classical Greek science*. Oxford University Press.
- Di Biasi, E. (1995). *The meaning of endometriosis to females experiencing the disease*. [Doctoral thesis, Adelphi University].
- Dmowski, W. P., Lesniewicz, R., Rana, N., Pepping, P., & Noursalehi, M. (1997). Changing trends in the diagnosis of endometriosis: A comparative study of women with pelvic endometriosis presenting with chronic pelvic pain or infertility. *Fertility and Sterility*, 67(2), 238–243. [https://doi.org/10.1016/s0015-0282\(97\)81904-8](https://doi.org/10.1016/s0015-0282(97)81904-8)
- Dusenbery, M. (2018). *Doing harm: The truth about how bad medicine and lazy science leave women dismissed, misdiagnosed, and sick*. HarperOne.
- Edwards, M. J. (2021). Functional neurological disorder: Lighting the way to a new paradigm for medicine. *Brain*, 144(11), 3279–3282. <https://doi.org/10.1093/brain/awab358>
- Ehrenreich, B., & English, D. (1973). *Witches, midwives, and nurses: A history of women healers*. The Feminist Press.
- Ellis, K., Munro, D., & Clarke, J. (2022a). Endometriosis is undervalued: A call to action. *Frontiers in Global Women's Health*, 3(1), 902371. <https://doi.org/10.3389/fgwh.2022.902371>
- Ellis, K., Munro, D., & Wood, R. (2022b). The experiences of endometriosis patients with diagnosis and treatment in New Zealand. *Frontiers in Global Women's Health*, 3(1), 991045. <https://doi.org/10.3389/fgwh.2022.991045>
- Ellis, K., Munro, D., & Wood, R. (2023). Dismissal informs the priorities of endometriosis patients in New Zealand. *Frontiers in Medicine*, 10(1), 1185769. <https://doi.org/10.3389/fmed.2023.1185769>
- Ellis, K., Tewhaiti-Smith, J., Munro, D., & Wood, R. (2024). The perspectives of Maori and Pasifika mate Kirikōpū (Endometriosis) patients in Aotearoa New Zealand. *Societies*, 14(4), 46. <https://doi.org/10.3390/soc14040046>
- Emad, M. C. (2006). At WITSENDO: Communal embodiment through storytelling in women's experiences with endometriosis. *Women's Studies International Forum*, 29(2), 197–207. <https://doi.org/10.1016/j.wsif.2006.03.005>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136. <https://doi.org/10.1126/science.847460>

- Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.
- Foster, D. (2016). 'Keep complaining til someone listens': Exchanges of tacit healthcare knowledge in online illness communities. *Social Science & Medicine*, 166(1), 25–32. <https://doi.org/10.1016/j.socscimed.2016.08.007>
- Foucault, M. (1972). *The archaeology of knowledge*. Routledge.
- Gatchel, R. J. (2013). The biopsychosocial model of chronic pain. In A. Dougall & R. J. Gatchel (Eds.), *Clinical insights: Chronic pain* (pp. 5–18). Future Medicine.
- Gee, J. P. (2014). *An introduction to discourse analysis: Theory and method*. Routledge.
- Górnicka, B., & Doyle, M. (2023). *Sex and sexualities in Ireland: Interdisciplinary perspectives*. Palgrave Macmillan.
- Grace, V. M. (1995). Problems women patients experience in the medical encounter for chronic pelvic pain: A New Zealand study. *Health Care for Women International*, 16(6), 509–519. <https://doi.org/10.1080/07399339509516206>
- Green, M. H. (2000). From “Diseases of women” to “Secrets of women”: The transformation of Gynecological literature in the later Middle Ages. *Journal of Medieval and Early Modern Studies*, 30(1), 5–40. <https://doi.org/10.1215/10829636-30-1-5>
- Gumperz, J. J. (1982). *Discourse strategies*. Cambridge University Press.
- Hadfield, R., Mardon, H., Barlow, D., & Kennedy, S. (1996). Delay in the diagnosis of endometriosis: A survey of women from the USA and the UK. *Human Reproduction*, 11(4), 878–880. <https://doi.org/10.1093/oxfordjournals.humrep.a019270>
- Hamberg, K., Risberg, G., Johansson, E. E., & Westman, G. (2002). Gender bias in physicians' management of neck pain: A study of the answers in a Swedish national examination. *Journal of Women's Health & Gender-Based Medicine*, 11(7), 653–666. <https://doi.org/10.1089/152460902760360595>
- Hays, S. (2020). *“It’s just a bad period” and other ways of dismissing women’s pain: An ethnographic look into the experience of endometriosis*. [Honour’s thesis, University of Central Florida].
- Heberle, R. (2015). The personal is political. In L. Disch & M. Hawkesworth (Eds.), *The Oxford handbook of feminist theory* (pp. 593–609). Oxford University Press.
- Heller, M., Pietikäinen, S., & Pujolar, J. (2017). *Critical sociolinguistic research methods: Studying language issues that matter*. Routledge.
- Hirschmann, N. (2014). Invisible disability: Seeing, being, power. In N. Hirschmann & B. Linker (Eds.), *Civil disabilities: Citizenship, membership, and belonging* (pp. 204–222). University of Pennsylvania Press.
- Hodges, B. D., Martimianakis, M. A., McNaughton, N., & Whitehead, C. (2014). Medical education... meet Michel Foucault. *Medical Education*, 48(6), 563–571. <https://doi.org/10.1111/medu.12411>

- Hoffmann, D. E., Fillingim, R. B., & Veasley, C. (2022). The woman who cried pain: Do sex-based disparities still exist in the experience and treatment of pain? *Journal of Law, Medicine & Ethics*, 50(3), 519–541. <https://doi.org/10.1017/jme.2022.91>
- Holmes, J. (2006). *Gendered talk at work: Constructing social identity through workplace interaction*. Blackwell.
- Holmes, J., & Hazen, K. (2014). *Research methods in sociolinguistics: A practical guide*. Wiley.
- Holmes, J., & Marra, M. (2017). You're a proper tradesman mate: Identity struggles and workplace transitions in New Zealand. In D. van de Mierop & S. Schnurr (Eds.), *Identity struggles: Evidence from workplaces around the world* (pp. 127–146). John Benjamins.
- Huntington, A. D., & Gilmour, J. A. (2001). Re-thinking representations, re-writing nursing texts: Possibilities through feminist and Foucauldian thought. *Journal of Advanced Nursing*, 35(6), 902–908. <https://doi.org/10.1046/j.1365-2648.2001.01927.x>
- Huntington, A., & Gilmour, J. A. (2005). A life shaped by pain: Women and endometriosis. *Journal of Clinical Nursing*, 14(9), 1124–1132. <https://doi.org/10.1111/j.1365-2702.2005.01231.x>
- Jackson, G. (2019). *Pain and prejudice: A call to arms for women and their bodies*. Allen & Unwin.
- Jones, C. E. (2015). Wandering wombs and “Female Troubles”: The hysterical origins, symptoms, and treatments of endometriosis. *Women's Studies*, 44(8), 1083–1113. <https://doi.org/10.1080/00497878.2015.1078212>
- Jutel, A., & Dew, K. (2014). *Social issues in diagnosis: An introduction for students and clinicians*. JHU Press.
- Kempner, J. (2017). Invisible people with invisible pain: A commentary on “Even my sister says I'm acting like a crazy to get a check”: Race, gender, and moral boundary-work in women's claims of disabling chronic pain. *Social Science & Medicine*, 189(1), 152–154. <https://doi.org/10.1016/j.socscimed.2017.06.009>
- Kidd, I. J., Medina, J., & Gaile Pohlhaus, J. (2017). *The Routledge handbook of epistemic injustice*. Routledge.
- Knarston, F. (2021). *Discourses of blame in New Zealand: Reporting on male homicides against women*. [Honour's dissertation, Victoria University of Wellington].
- Krebs, E., & Schoenbauer, K. V. (2020). Hysterics and heresy: Using Dialogism to explore the problematics of endometriosis diagnosis. *Health Communication*, 35(8), 1013–1022. <https://doi.org/10.1080/10410236.2019.1606136>
- Kuppers, P. (2005). Bodies, hysteria, pain: Staging the invisible. In C. Sandahl & P. Auslander (Eds.), *Bodies in commotion: Disability & performance* (pp. 147–162). University of Michigan Press.
- Lazar, M. (2017). Feminist critical discourse analysis. In J. Flowerdew & J. Richardson (Eds.), *The Routledge handbook of critical discourse studies* (pp. 372–387). Routledge.

- Lusk, P. (2023). Emotion, ethics, epistemology: What can shame 'do' in medical education? *Journal of Evaluation in Clinical Practice*, 29(7), 1135–1142. <https://doi.org/10.1111/jep.13782>
- Manne, K. (2019). *Down girl: The logic of misogyny*. Penguin.
- Marra, M. (2013). Discourse analysis and conversation analysis. In C. Chapelle (Ed.), *The encyclopaedia of applied linguistics*. Blackwell.
- Marra, M., & Lazzaro-Salazar M. (2018). Ethnographic methods in pragmatics. In A. Jucker, K. Schneider & W. Bublitz (Eds.) *Methods in pragmatics* (pp. 343–366). De Gruyter Mouton.
- Martin, E. (1987). *The woman in the body: A cultural analysis of reproduction*. Beacon Press.
- May, M. (2022). *Erased: Representations of women's bodies in chronic invisible pain*. [Doctoral thesis, University of Waikato].
- Meigs, J. V. (1941). Endometriosis—Its significance. *Annals of Surgery*, 114(5), 866–874. <https://doi.org/10.1097/00000658-194111000-00007>
- Menard-Warwick, J. (2013). *English language teachers on the discursive faultlines: Identities, ideologies and pedagogies*. Multilingual Matters.
- Micale, M. S. (2008). *Hysterical men: The hidden history of male nervous illness*. Harvard University Press.
- Morrell, S. (2021). *Troubling chick lit: Exposing hidden messages of Neoliberalism and exclusion*. [Honour's dissertation, Victoria University of Wellington].
- Neal, D. M., & McKenzie, P. J. (2011). Putting the pieces together: Endometriosis blogs, cognitive authority, and collaborative information behavior. *Journal of the Medical Library Association: JMLA*, 99(2), 127–134. <https://doi.org/10.3163/1536-5050.99.2.004>
- Quigan, H. (2020). *Controlling the monster: Exploring constructions of women and their bodies in endometriosis apps*. [Master's dissertation, Victoria University of Wellington].
- Phillips, M. J. (2023). Towards a social constructionist, criticalist, Foucauldian-informed qualitative research approach: Opportunities and challenges. *SN Social Sciences*, 3(1), 175. <https://doi.org/10.1007/s43545-023-00774-9>
- Pohlhaus, G. (2012). Relational knowing and epistemic injustice: Toward a theory of willful hermeneutical ignorance. *Hypatia*, 27(4), 715–735. <https://doi.org/10.1111/j.1527-2001.2011.01222.x>
- Porter, T., Watson, N., & Pearson, C. (2023). Epistemic sabotage: The production and disqualification of evidence in disability benefit claims. *Sociology of Health & Illness*, 45(6), 1164–1186. <https://doi.org/10.1111/1467-9566.13593>
- Pryma, J. (2017). "Even my sister says I'm acting like a crazy to get a check": Race, gender, and moral boundary-work in women's claims of disabling chronic pain. *Social Science & Medicine*, 181(1), 66–73. <https://doi.org/10.1016/j.socscimed.2017.03.048>
- Saini, A. (2019). *Superior: The return of race science*. Beacon Press.

- Seear, K. (2009). 'Nobody really knows what it is or how to treat it': Why women with endometriosis do not comply with healthcare advice. *Health, Risk & Society*, 11(4), 367–385. <https://doi.org/10.1080/13698570903013649>
- Seear, K. (2016). *The makings of a modern epidemic: Endometriosis, gender and politics*. Routledge.
- Shade, G. H., Lane, M., & Diamond, M. P. (2012). Endometriosis in the African American woman—racially, a different entity? *Gynecological Surgery*, 9(1), 59–62. <https://doi.org/10.1007/s10397-011-0685-5>
- Showalter, E. (1985). *The female malady: Women, madness, and English culture, 1830–1980*. Pantheon Books.
- Sirohi, D., Freedman, S., Freedman, L., Carrigan, G., Hey-Cunningham, A. J., Hull, M. L., & O'Hara, R. (2023). Patient experiences of being advised by a healthcare professional to get pregnant to manage or treat endometriosis: A cross-sectional study. *BMC Women's Health*, 23(1), 638. <https://doi.org/10.1186/s12905-023-02794-2>
- Sutherland, O., LaMarre, A., Rice, C., Hardt, L., & Jeffrey, N. (2016). Gendered patterns of interaction: A Foucauldian discourse analysis of couple therapy. *Contemporary Family Therapy*, 38(4), 385–399. <https://doi.org/10.1007/s10591-016-9394-6>
- Tamboukou, M. (1999). Writing genealogies: An exploration of Foucault's strategies for doing research. *Discourse: Studies in the Cultural Politics of Education*, 20(2), 201–217. <https://doi.org/10.1080/0159630990200202>
- Tannen, D. (2005). *Conversational style: Analyzing talk among friends*. Oxford University Press.
- Tannen, D., Hamilton, H. E., & Schiffrin, D. (2015). *The handbook of discourse analysis*. Wiley.
- Tewhaiti-Smith, J., Semprini, A., Bush, D., Anderson, A., Eathorne, A., Johnson, N., Girling, J., East, M., Marriott, J., & Armour, M. (2022). An Aotearoa New Zealand survey of the impact and diagnostic delay for endometriosis and chronic pelvic pain. *Scientific Reports*, 12(1), 4425. <https://doi.org/10.1038/s41598-022-08464-x>
- Vidali, A. (2013). Hysterical again: The gastrointestinal woman in medical discourse. *Journal of Medical Humanities*, 34(1), 33–57. <https://doi.org/10.1007/s10912-012-9196-2>
- Waddington, I. (1990). The movement towards the professionalization of medicine. *British Medical Journal*, 301(6754), 688–690. <https://doi.org/10.1136/bmj.301.6754.688>
- Wainwright, E. (2017). *Women healing/Healing women: The genderisation of healing in early Christianity*. Routledge.
- Wemyss-Gorman, P. (2021). *Innovative approaches to chronic pain: Understanding the experience of pain and suffering and the role of healing*. Jessica Kingsley Publishers.
- Werner, A., Isaksen, L. W., & Malterud, K. (2004). 'I am not the kind of woman who complains of everything': Illness stories on self and shame in women with chronic pain. *Social Science & Medicine*, 59(5), 1035–1045. <https://doi.org/10.1016/j.socscimed.2003.12.001>

- Whelan, E. (2009). Negotiating science and experience in medical knowledge: Gynaecologists on endometriosis. *Social Science & Medicine*, 68(8), 1489–1497. <https://doi.org/10.1016/j.socscimed.2009.01.032>
- Wheless, J. W. (2008). History of the ketogenic diet. *Epilepsia*, 49(s8), 3–5. <https://doi.org/10.1111/j.1528-1167.2008.01821.x>
- Wolgemuth, J. R., Erdil-Moody, Z., Opsal, T., Cross, J. E., Kaanta, T., Dickmann, E. M., & Colomer, S. (2014). Participants' experiences of the qualitative interview: Considering the importance of research paradigms. *Qualitative Research*, 15(3), 351–372. <https://doi.org/10.1177/1468794114524222>
- Yen, C., Hamdan, M., Hengrasmee, P., Huang, Z., Jeong, K., Dao, L. A., Lertvikool, S., Mogan, S., Pal, B., Sumapradja, K., Wu, M., Yap-Garcia, M. I., Donovan, C., Christopher, S., & Kim, M. (2023). Improving the diagnosis of endometriosis in Asia-Pacific: Consensus from the Asia-Pacific endometriosis expert panel for endometriosis. *International Journal of Gynecology & Obstetrics*, 163(3), 720–732. <https://doi.org/10.1002/ijgo.15142>
- Young, K., Fisher, J., & Kirkman, M. (2018). “Do mad people get Endo or does Endo make you mad?": Clinicians' discursive constructions of medicine and women with endometriosis. *Feminism & Psychology*, 29(3), 337–356. <https://doi.org/10.1177/0959353518815704>
- Zondervan, K. T., Becker, C. M., & Missmer, S. A. (2020). Endometriosis. *New England Journal of Medicine*, 382(13), 1244–1256. <https://doi.org/10.1056/nejmra1810764>

Appendix: Transcription conventions

// \	Overlapping speech of 'first' speaker
/ \	Overlapping speech of 'second' speaker
+	Untimed pause
[]	Paralinguistic behaviour
?	Obvious question intonation
[...]	Break in the transcript

Career Identity Construction through Relational Talk

Ashleigh Hume

In this paper, I explore the idea of career identity, conceptualised as the intersection between current position, career trajectory, and expertise, as it is constructed through relational talk in the workplace. Using a social constructionist framework, this study employs a discourse analysis approach and builds on previous research in the area of identity construction and workplace discourse analysis. My data uses recordings from a New Zealand academia-adjacent organisation during their morning tea breaks, during which many of the employees participate in a quiz and the main form of talk is relational rather than transactional. Additionally, the nature of the quiz creates a community of practice with its own interactional and social norms. This data allows me to consider not only how career identity is constructed in the workplace but also how it is affected by relational rather than work-related talk, as well as how community norms impact how identity is constructed and displayed. The results show that each sphere of the conceptualisation has a different impact on career identity and that the practice of the quiz allowed participants' professional expertise to shine through. Overall, the biggest finding was that the norms surrounding the quiz, as well as the norms of New Zealand workplaces themselves, made the largest impact on identity construction. With this research, I aim to contribute to the wider field of identity construction in the workplace as well as emphasise the importance of career identity to people's everyday lives, particularly in a world where career experiences are more fluid and dynamic.

1. Introduction

In 2019, I decided to make a complete career change. Unhappy with my career path, I took the plunge and went back to university to study with the intention of becoming an academic. Changing careers like this is not unusual. In modern times, it has become increasingly common to change jobs frequently as opposed to staying in one job for the entirety of one's working life (New Zealand Productivity Commission, 2020). As I moved from my previous career into the realm of academia, I noticed some changes in how I presented myself in conversation with others—for example, I would not only explicitly call myself a linguist and discourse analyst, but I would also position myself as an (albeit emerging) authority on linguistic subjects. Since I worked in tandem with my study, this also came through at my job. This change led me to become interested in the idea of 'career identity' and how people's various work experiences contribute to it.

Due to the changes in my own career identity, I also found myself more cognizant of how others presented themselves and collaboratively constructed their career identities. Although I was happy to move on from my previous career path, I wanted to know whether people's previous jobs—and the expertise gained therein—had an impact on how they positioned themselves now in their current role and whether their previous experiences were still relevant to their identities. Additionally, I wanted to take an understudied area of workplace discourse research—identity construction through relational talk—and see if talking about non-work topics affected how people constructed their career identities. The perfect place for this, I realised, was the organisation's morning tea breaks, which occur every morning at

the same time and primarily consist of relational talk while still existing in a professional sphere and adhering to professional norms. Using data recorded during these morning tea breaks, my goal in this dissertation is to explore career identity construction through the context of social talk and shared practice.

1.1 The changing nature of work

The traditional career path, where one spends the majority of their adult life advancing in one career, has been changing since the 1980s (Chuzikowski, 2012). According to Holland et al. (2024), work practices became ‘standardised’ in the early 20th century, with people defining themselves through their lifelong employment. However, technological advances, globalisation, and economic changes have led to a shift in the nature of work (Sullivan & Al Ariss, 2021), which have both opened up new opportunities and made other jobs obsolete. Rather than being defined by one lifelong profession, people have dynamic and diverse work experiences that contribute to their professional experience (LaPointe, 2010). Instead of committing to one job for life, job transitions are becoming increasingly common.

These changes to the nature of employment mean that ‘job hopping’ has become a way for people to advance in their careers (Carrillo-Tudela et al., 2016). However, career transitions can often cause upheaval in a person’s life, which may impact one’s sense of self and identity. Conversely, a change in one’s sense of identity could also lead to a career transition—such as my own. It should be noted that not all career transitions are voluntary; some people may change careers out of necessity or because some change in their lifestyle demands it. Regardless of the reasons for career transitions, these disparate work experiences have opened space for a new kind of identity focus—that of ‘career identity’, which brings cohesion to a working life that is in constant flux.

1.2 What is ‘career identity’?

The idea of career identity arises from the fact that, for many, what we do for a living is an important part of our identity (Hoyer, 2020). Whereas previously, careers would encompass very few roles over a person’s lifetime, this new world of work means that people have more varied experiences that contribute to their identity, making the idea of career identity more dynamic. This matches the theory of social constructionism, as explored in the next section, which posits that people construct much of their own realities (including identity) through interaction with others and is therefore dynamic and flexible (Vine, 2018). Previously, this type of construction has been studied with regard to professional identity, a large area of research in the healthcare and nursing space (see Fitzgerald, 2020; Frost & Regehr, 2013) and in education (Wiles, 2012).

As opposed to professional identity, which is usually tied to one particular job, career identity encompasses multiple experiences that contribute to a person’s working life, including career aspirations, values, and beliefs (Lysova et al., 2015). However, as Hoyer (2020) points out, these values are not fixed and change over time, leading to career identities becoming dynamic and changeable. This is because people create a career identity over multiple professions in order to stay ‘employable’ (McArdle et al., 2007). In other words, career identity is more than just what you do for work right at this moment. Additionally, it gives

people a sense of direction and helps them deal with work difficulties (Ali Abadi et al., 2023). For myself, my career identity encompasses both my current job and the career I am working towards through my studies. In terms of this research, I wanted to see how people's past experiences and the knowledge they have gained from them impacted the formation of their career identities in their current roles.

Career identity has been studied in multiple fields, from sociology and psychology (e.g., Ali Abadi et al., 2023), to discourse studies (see Greenbank, 2020). However, the notion of career identity has been consistently hard to define, being conflated with ideas of professional identity and employability. According to Ali Abadi et al. (2023), career identity is defined as how central someone's career is to their identity. They argue that career identity development has benefits not only for the employee but also for the organisation. This is because having a solid career identity gives individuals a sense of direction and motivation, which directly impacts their job performance. Hoyer (2020) argues that career identity is "not bound to a specific organisation or professional role" (p. 102) and is instead developed over one's entire working life and is shaped by cultural and societal narratives. Additionally, Wendling and Sagas (2022) state that career identity can begin being developed as early as middle childhood. This demonstrates how central people's careers are to their sense of self.

Discourse, as a field, is an exciting fit for exploring career identity as it focuses on how language is used in everyday contexts as well as how language is impacted by the world around us (Gee, 2005). Previous studies in the discourse area have focused on gender, culture, and leadership in the workplace, as well as the intersection of all three (for example, de Bres et al., 2010; Holmes et al., 2003; Shnurr & Zayts, 2012). There is some research into professional and work identity and how it is co-constructed in interaction between interlocutors. However, the majority of research has focused on work-related contexts such as business meetings (see Angouri & Marra, 2011) rather than non-business contexts. The idea of 'career identity', using this terminology, appears to be understudied in discourse, in particular with regard to social or relational talk in the workplace.

1.3 Aims of this study

This research focuses on the understudied area of career identity construction with regard to social talk in the workplace. Also known as 'relational talk', this type of talk builds rapport and "oils the social wheels" (Vine, 2018, p. 216) and includes any sort of non-work-related social talk, although it can often lead to work-related topics. Social situations in the workplace are times when people can shed their work-related personas (to a certain extent), but they are not exactly the same as social situations in other contexts. For example, social conversations in the workplace differ in that the participants already have some common ground (the work and workplace itself). This mixture of work and non-work talk makes relational workplace talk a rich area in which to observe the co-construction of career identity.

To this end, my study focuses on a New Zealand workplace's morning tea breaks over the course of a week, where the primary form of talk is relational. Additionally, the morning tea break is when the employees of the organisation do the 'five-minute quiz' in the newspaper. Quizzes are a staple of many New Zealand workplaces and give everyone the chance to demonstrate their general knowledge and expertise while also building and maintaining social

relationships with their colleagues. My interest lies in how participants' career identities come through in this context, keeping in mind the norms and culture surrounding the quiz.

An additional aspect of conducting research in this particular workplace is the nature of the organisation itself. As an academia-adjacent, research-focused organisation, it provides a novel context that has previously not been studied in the discourse area. This can provide opportunities for comparison and further study into how the type of work affects career identity construction. It is important to note that I am an employee of this organisation—this insider position gives me insights into the organisational culture and the people in it, as well as a level of trust, that an outside researcher may not have (see Section 4).

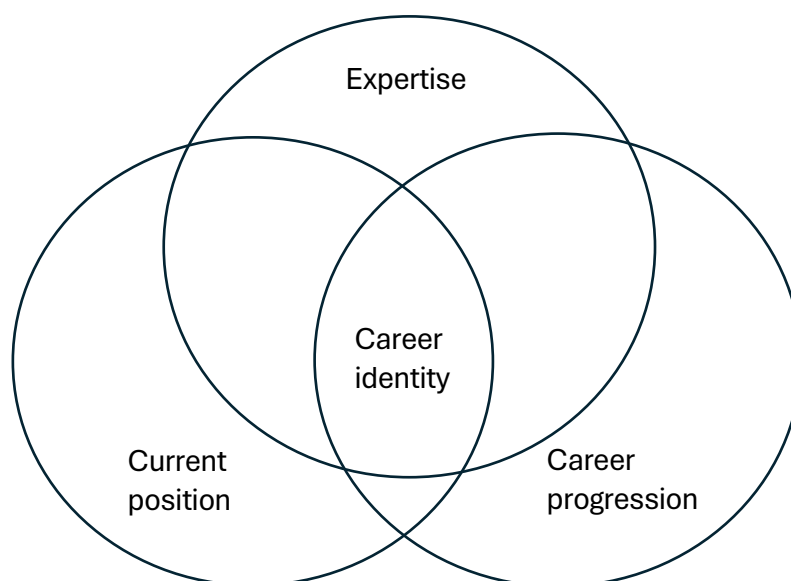
1.4 My approach to analysing identity co-construction

People construct the world around them through discourse and other types of social practice (Vine, 2018); therefore, language is essential to this type of construction as it allows us to both construct and represent our own realities, including our identity. In other words, people perform their identities in conversation, and others interpret and ratify that performance. Therefore, this setting provides the ideal context to study career identity due to the focus on social and relational talk. As with other types of identities, career identity is discursively co-constructed through interaction with others (Holmes & Marra, 2017). Therefore, the best way to see career identity 'in action' is to approach it with a social constructionist lens. Rather than being conceptualised as static or fixed, social constructionist views of identity emphasise co-construction and negotiation in the 'doing' of identity. One facet of identity is that of 'career identity', based on one's consolidated work experiences over a period of time.

Additionally, the context in which this study takes place fits the definition of a 'community of practice', as the participants are involved in a shared practice of doing a quiz. This practice also includes certain norms of behaviour and appropriateness that affect how the participants act, which in turn affects people's identity construction. This will be explored more in Section 2.

Conceptualisation

As Schnurr and Zayts (2012) argue, people's identities can often be at odds with their current job. It is for this reason that career identity needs to encompass more than just one's profession. Given the complexities inherent in capturing the dynamic concept of career identity, I have taken three areas which have shown to have an important impact on the construction of career identity (Boyle, 2021; Hoyer, 2020). With these, I have created a conceptualisation of 'career identity' as the intersection of career trajectory, current employment, and expertise (see Figure 1). This conceptualisation allows me to 'track', as it were, the ways in which people construct their career identities and which area has the most impact.

Figure 1*Conceptualisation of career identity*

2. Theoretical Framework

Social constructionism—mentioned briefly above—is the theory that people construct the social world around them through discourse and other types of social practice (Vine, 2018). Rather than being fixed, social constructionism posits that identity is co-constructed and negotiated in interaction. This idea can be usefully exemplified in relation to career identity. For example, one may ‘do’ their career identity in different ways depending on the context; a person may be more polite and subservient in front of their superiors but may perform a more authoritative kind of identity in front of their subordinates. This exemplifies the idea of identity as being constructed rather than static. Language, and therefore discourse, is essential to this type of construction, as it allows us to both construct and represent our own realities, including our identity, within the confines of the institutions we inhabit. Gee (2005) posits the ideas of ‘little d’ discourse, which represents language in action and everyday usage, and ‘big D’ Discourses, which are societal norms and rules which govern our use of language, such as societal norms around polite language. While this study focuses on little-d discourse, big-D Discourse still plays a role through community norms.

Identity construction continues to expand as an area of interest in the discourse field (see Antaki & Widdicombe, 1998; Vine, 2023) and the social sciences as a whole (Crane, 2012). As Bucholtz and Hall (2005) state, as identity is something that is situated internally, the primary way that these identities are enacted is through discourse and are always ‘partial’, relying on the situational context to create meaning. Angouri and Marra (2011) builds upon these ideas by asserting that identities “pre-exist in a web of institutional realities that constrain moments of interaction” (p. 176). That is to say, identity is built moment-to-moment over a series of interactions, but these interactions are constrained by wider societal norms and what is considered acceptable in the context. They add that while identity is often referred to in the singular, everyone has a multitude of interconnected identities that they enact at any given

time. Further, identities can range from a discursive identity constructed in the moment (such as that of ‘speaker’ and ‘hearer’) to situational identities, such as profession, to ‘transportable identities’, which relate to features such as sex and race that are carried from context to context.

We construct our identities through vocabulary and syntax to signal our membership in a group or category while simultaneously inferring others’ identities by their own linguistic devices (Antaki & Widdicombe, 1998). This is because certain discursive strategies index different cultural and societal categories (Bucholtz & Hall, 2005). Identity construction can also be more overt, in the sense of directly conveying one’s preferred identity (i.e., “I’m the type of person that...”). In the social constructionist paradigm, identity is treated as something that is constantly changing and overlapping (Angouri & Marra, 2011). Additionally, identity is discursively constructed on several levels, from what is being said to the relationship between interactants and the dominant ideologies and power structures surrounding the interaction (De Fina et al., 2009), adding another level of dynamism to this concept.

The nature of having ever-changing and dynamic identities naturally leads to some conflict, as people sometimes have contradictory identities that they ‘do’ at different times. In a work context, there may be tension between the identity that a person wishes to convey and the identity put upon them by their position (Angouri & Marra, 2011). As Bucholtz and Hall (2005) assert, the co-construction of identity also depends on the ‘available’ identities and the identities of other interactants, if only on a temporary level. For example, one person may see themselves as a ‘class clown’, but their position as manager prevents them from enacting this persona in its entirety. With regards to career identity construction specifically, there is an extra layer of complexity as people are faced with gatekeepers (for example, bosses or experts) that affect how they are able to perform acts of identity (Holmes & Marra, 2017). For example, the aforementioned class clown may feel comfortable joking in front of their peers or those on the same institutional level but may think that joking with a superior is inappropriate. Therefore, they are constrained not only by their own role but by the roles of others in the organisation.

To understand this complexity in a workplace organisation, the community of practice (CofP) framework is valuable. This is defined as “an aggregate of people who come together around mutual engagement in an endeavour” (Eckert & McConnell-Ginet, 1992, p. 8). Some CofPs form naturally over a shared activity or issue to solve, and some are created for the purpose of shared learning (McDonald & Cater-Steel, 2017). There are three dimensions of a community of practice: mutual engagement, a joint enterprise, and a shared repertoire (Holmes & Meyerhoff, 1999). The first two dimensions refer to having a certain practice in which the members engage, and the third refers to resources gained over the course of this practice, including linguistic resources such as terminology and norms around appropriateness.

The idea of practice is central to this concept. It differs from traditional communities in that there are certain prerequisites to membership, and there is a difference between core and peripheral membership (Wenger, 1998). Membership, as well as the communities themselves, develops over time based on interactions between members. However, this is not the same as a network, which focuses mainly on relationships; rather, it has a particular

purpose. While CofPs do not necessarily have hierarchies, there can be some leadership roles which members can move into, notably that of the facilitator. The facilitator ensures the CofP is functioning correctly and that everyone is participating (McDonald & Cater-Steel, 2017). In the case of the morning tea quiz in this study, this function is overseen by the quizmaster.

The nature of communities of practice causes people to negotiate their identities with others through the activity in which they participate. It is, therefore, both helped and constrained by the purpose of the community. In entering a CofP, new members must decide which parts of their identity to integrate into the community and may, therefore, negotiate a new identity in order to better fit in (McDonald & Cater-Steel, 2017). As mentioned earlier, there are two kinds of membership into a CofP—core and peripheral. As opposed to core members, peripheral members are not fully integrated into the community. According to King (2019), peripheral members engage in the same activity as core members in a more ‘distant’ sense (i.e., only occasionally participating in the quiz), but are still subject to the norms and rules of the practice. However, peripheral members can attain full membership over time as they learn more of the shared ways of doing in the community and develop identities as insiders. This idea of ‘learning’ plays an important part in communities of practice and contributes to the identity construction of its members (Pyrko et al., 2016; Souza, 2024). Alternatively, peripheral members may also choose to stay on the periphery in the long term.

Talk plays a large part in the community of practice. For example, becoming a core member depends on how well someone adapts to the shared repertoire and interactional norms (Holmes & Woodhams, 2013). Additionally, members of a CofP often have shared stories and jokes that may not make sense to an outsider (Wenger, 1998), adding to the member vs. non-member dynamic. I explore this concept of ‘us vs. them’ in later sections. This is a useful framework to apply to my study because the morning tea quiz breaks, as a community of practice, have their own set of norms that influence the interaction and therefore, the identity construction of the participants.

In the following section, I look at what has been done previously in the discourse field with regard to workplace identities and how my conceptualisation fills the gaps within the literature.

3. Literature Review

3.1 Identity in the workplace

Workplace talk has been extensively studied in the discourse field. In Aotearoa New Zealand, this field has been led by Victoria University of Wellington’s Language in the Workplace project. Led by an ‘appreciative inquiry’ approach, this project is broadly focused on effective communication in the workplace and includes studies on gender, culture, and leadership in relation to language, among numerous other topics (see Holmes, 2000b; Stubbe, 2001). Studies in the area of identity construction in the workplace have largely focused on the intersection between gender and language (e.g., Holmes, 2006; Kendall & Tannen, 1997), cultural differences (e.g., Stubbe & Holmes, 2000), or leadership (e.g., Holmes et al., 2011). The following sections outline some of the main areas that workplace discourse research has focused on.

3.2 Leadership

As opposed to simple management, Holmes et al. (2011) define leadership as developing vision and driving change. Research has shown that leadership, rather than being a fixed role, is a 'dynamic performance' (Shnurr & Zayts, 2012) discursively constructed not only by the person doing the leading but also by those who are being led. Holmes (2006) states that being a leader is intrinsically discursive, as acts of leadership such as giving directives and rapport management are by their nature socially performed. Additionally, leadership research has shown that women in leadership positions are still expected to adhere to traditionally feminine ways of talking, particularly when giving directives (Holmes et al., 2003). This is more salient in some cultures than others, depending on the prevalence of the gender order. Holmes (2006) additionally argues that leadership is a gendered concept, with the common stereotype of the CEO or manager being male. This is supported by the normative nature of masculine speech wherein authoritative and direct speech is preferred. Female managers, therefore, tend to use more collaborative discourse strategies, paying more attention to the interpersonal dimension. Effective leaders make use of both authoritative and collaborative discourse strategies.

Holmes and Marra (2006) state that there are two types of leadership—transactional and transformational. While transactional leadership focuses on meeting objectives and maintaining the status quo, transformational leadership encourages innovation and creativity. One way these types of leadership can be discursively performed is through the use of humour. Humour both helps to create a team and maintain collegial relationships and can also be used to mitigate criticism and directives. Both kinds of leaders use humour in different ways depending on their objectives, but humour is always dependent on the context. In addition, leadership is highly influenced by cultural and societal norms. For example, New Zealand is known for its egalitarian ideology and low power distance (Holmes et al., 2017). This means that leaders often have to act in ways that are relaxed and casual and avoid instances of overt self-promotion. This last idea is also known as the 'tall poppy syndrome' (Holmes et al., 2011) and will be explored more in Section 6. The tall poppy syndrome is a phenomenon which targets those who stand out or above others in some way, which is considered unacceptable in New Zealand society. In this way, everyone is encouraged to be humble no matter their societal or organisational status. This culture of flat hierarchy and equality is exemplified in the context of my workplace, where the organisational leaders join in with both the quiz practice and the humour surrounding it and are often subjects of jokes themselves (see Section 6).

3.3 Professional identity

What exactly constitutes a 'professional identity' differs among fields; however, this identity broadly consists of behaviours and activities that are associated with a particular profession (Fitzgerald, 2020). A profession is defined by certain characteristics: specialised knowledge and skills, an ability to build on this body of knowledge through experience, the ability to make judgment calls in times of uncertainty, and a community of professionals to perform oversight. Hence, one's professional identity is defined by how strongly one performs the behaviours and activities associated with the profession. Additionally, a profession gains prestige from societal recognition; this means that professional identity takes on a social

component along with a work-related one. A person's professional identity requires a certain level of knowledge of their role as well as conforming to certain expectations (Wiles, 2012). While this definition fits some careers, the changing nature of work means that a broader definition may be needed.

Van De Mierop and Shnurr (2017) argue that professional identities are based on portraying oneself as competent. This concept of competence not only covers the skills needed in a particular profession, but also displays the attitudes and norms needed to be part of the 'in-group' associated with the profession. This community aspect is a consistent finding in studies on professional identity that does not necessarily come up in career identity, although one could argue that community norms pervade every facet of working life and identity construction.

In a study of the medical field, Frost and Regehr (2013) state that professional identity is an important aspect of becoming a doctor, to the point of being part of the education prospective doctors receive. However, they note that there is some tension between the growing diversity in the medical field and the idea of 'standardisation' and of what a 'proper' doctor looks like. Considering this, the idea of a professional identity does not always cover the dynamics of a career. Also, in the medical field, Fitzgerald (2020) explores the idea of professional identity as a type of social identity rather than an individual one, as the construction primarily comes from the ratification of others (although this argument could be made for many types of identities). However, there is an element of 'us vs. them' in these definitions of professional identity, as being in a profession necessitates identifying with a certain group, such as nurses. This, by design, separates the professional from others who do not share their position.

This idea was also discussed by Slay and Smith (2011) as going even deeper than social acceptance and ratification. Even one's belief system and inherent attributes are influenced by one's profession. However, they mention that people should adjust their professional identities during periods of career transition. This differs from the idea of professional identity as being attached to one lifelong profession but rather fits in with the definitions of career identity as explored in the next section.

3.4 Career identity

Boyle (2021), from the perspective of the educational sector, conceptualises career identity as encompassing career aspirations, values, and beliefs, and built over the entirety of one's career as opposed to one lifelong profession. They argue that there are two interpretations of career identity; career identity may be stable and act as a sort of internal compass that allows individuals to weather career uncertainty, or it could be constructed and reconstructed over time as people's careers and values change. This is in line with Hoyer's (2020) argument that people's career identities can be 'interrupted' by changing jobs and need to be reconstructed in their new context, keeping people in a state of 'perpetual liminality' wherein they find themselves stuck in between two or more disparate identities for a period of time. Having a concrete career identity helps combat the uncertainties and challenges that come with this state of being, particularly as some may thrive in liminal conditions while others prefer stability. Hoyer also notes that while some people see their career as being more

central to their identities than others, Western society places particular importance on the concept of career. People's career identities, therefore, are not constructed in isolation but rather are shaped by the cultural values and narratives surrounding them.

One of the few studies from a discourse perspective, Greenbank (2020) explores the idea of 'employability', a part of career identity that takes into account the changing nature of work. This focuses on developing personal and professional skills in order to maximise employment potential. However, employable identities, much like other types of identities, are negotiated in interaction—in this case, between employers and colleagues.

There is a gap in career identity studies with regard to relational talk in the workplace. Relational talk refers to a type of social talk in the workplace that serves to maintain and improve relationships between colleagues. This is different to transactional talk, which is talk designed to achieve business outcomes (Holmes & Marra, 2004). My interest lies in exploring how people 'do' their career identity in non-work-related conversations. Seeing how salient career identities are in social talk is an exciting development in the identity field as it shows just how important our working lives are to our everyday identities.

3.5 Research questions

Building on the work that has come before in the area of career identity, I frame my study with the following two research questions:

1. How do people use past experiences and expertise to construct their career identity?
2. How do community norms impact career identity co-construction?

4. Methodology

4.1 Researcher stance

Throughout the research, I took a 'research-with' stance (Cameron et al., 1993). Also known as participatory research, this principle 'shifts the power' of the research design to the participants, turning it into a "collaborative endeavour" (Angouri, 2018, p. 83), meaning that participants have a say in each part of the research process rather than merely being instructed on what they are doing. As opposed to a 'research-on' stance, participatory research aims to make the relationship between researcher and participant more equitable (Bodó et al., 2022). This was particularly important to me because of my insider position (see e.g., Kiesling, 2018; Vine, 2018) as a fellow employee of this research-focused organisation where I had pre-existing relationships with participants, as I wanted them to be collaborators on the research as opposed to subjects of research. This was made easier by the fact that I was also a participant in the data.

Importantly, this insider position also meant that I was able to make use of existing ethnographic understandings in my study. Of immense value in discourse analytic work, an ethnographic approach involves observing and noting organisational culture and norms in order to better understand how these affect workplace discourse (Gee & Handford, 2012;

Heller, 2011). As I had already worked in this organisation for almost two years at the time of data collection, I was in the fortunate position of having accumulated a vast amount of knowledge about the organisation and its norms. For instance, I had a robust understanding of the informal rules and regulations surrounding the morning tea quiz—the specific setting of the research—as well as understandings of my colleagues, as our working relationships gave me insights into their backgrounds and senses of humour. These relationships aided me, in particular, when it came to analysing the construction of career identities.

In this study, I acted in both a research capacity and as a participant, a technique known as ‘insider ethnography’ (Giazitzoglu & Payne, 2018). As opposed to traditional ethnography, this involves a researcher who is already integrated within a community and has an established level of trust and acceptance. However, being part of a community can lead to issues with objectivity and distance; to this end, I have given myself a pseudonym (Amber) and refer to myself in the third person during the analysis to help with seeing myself as a participant and to avoid my own bias as a member of the community as much as possible. Additionally, taking the data to be looked at by a third party (see the section on data analysis below) helped me to keep my assumptions in check and look at the extracts from a different perspective.

These dual roles of participant and researcher, while necessitating plenty of thought around manageability, were integral to my ‘research with’ approach. My position as an insider meant that participants felt more comfortable than they likely would have had I been an unknown researcher. For instance, there was an openness and willingness amongst participants to ask questions and make suggestions about the research. For example, one participant asked if they needed to talk about certain topics, and another made suggestions about what their pseudonym could be. In both these cases, I was able to ease their concerns and take their suggestions into account. It should be noted that despite my position as an insider, I made sure to make my colleagues not feel coerced into participating by emphasising that participation was purely voluntary both in personal conversations and in the consent form and information sheet.

During the data collection period, there was very little awkwardness surrounding the recording device (see section on data collection below). Other than receiving a few comments on the first day of recording (such as one participant asking, “What’s this?” and pointing to the recorder on the table, having forgotten that it was the first day of recording), the participants quickly forgot about the recording devices and acted in accordance with established norms. This matches repeated findings in workplace discourse studies, such as in Holmes (2005), Holmes and Stubbe (2003), and Stubbe and Ingle (1999). This may have been aided by the fact that many of the participants, due to either their work in the organisation or their own degrees, are familiar with participating in research.

4.2 Research context and participants

The research context is the New Zealand Research Institute, a government organisation involved in funding research. The name of the organisation has been pseudonymised in order to protect the identities of both the organisation itself and its employees. Academia-adjacent organisations are relatively understudied in workplace discourse research (see Mählick, 2003),

which provides a rich new context in which to study identity construction. This is a particularly fruitful area in which to study career identity, as the background required to work in an academic organisation is different to that which has been studied previously in corporate and blue-collar workplaces (Stubbe, 2001). Participants are all professionals working at this organisation in a wide variety of roles, from financial to administration to research, both senior and junior. Most of the participants are from New Zealand; however, some are from other countries including the United Kingdom and the United States. The gender ratio of the participants was roughly equal between men and women, and many have an academic or research background. English is the primary language at this organisation, although te reo Māori is also widely used. Although none of the participants identified as Māori, the organisation's focus on kaupapa Māori permeates the organisational culture and affects everyday interaction.

The organisation's morning tea break was the ideal setting to observe naturally occurring relational talk. During these thirty-minute breaks, and importantly for my focus on relational talk at work, staff participate in a morning tea quiz (see Section 1). This happens every morning at 10:30 am and is eagerly anticipated by many of the staff, myself included, who use this time to catch up with colleagues. One person—affectionately known as the 'quizmaster'—reads the quiz, and the rest of the attendees answer, giving everyone the chance to demonstrate their general knowledge in a collegial setting and often generating much laughter. There is also an element of good-natured competition as people try to be the first to answer a question correctly.

The 'five-minute' quiz has been previously researched as a forum for team bonding and sharing knowledge (e.g. Marra et al., 2017) and appears to be a ubiquitous activity in New Zealand workplaces. While the quiz is found in the local newspaper and is the same for everyone who participates, the culture surrounding the quiz also differs between organisations—at the New Zealand Research Institute, the quizmaster has very strict rules surrounding the roles of the quiz participants. For example, they are not to answer a question before she has finished reading it. Doing so results in a 'yellow card', based on the football term, meaning that the interrupting participant is forbidden from answering the next question.

Often, the quiz questions lead to other discussions where people share stories, fun facts, and their own experiences. This kind of social talk also occurs before and after the quiz. The lack of formality surrounding this talk allows people to manifest other areas of their identity as opposed to being in 'work mode', while sharing knowledge that they have outside of their daily work. In Section 1, I introduced my conceptualisation of career identity as being the interaction of current position, career progression, and expertise. Therefore, I theorised that peoples' expertise at certain quiz questions would lead them to talk about previous experiences and thereby construct their career identity.

4.3 Participant recruitment

As a first step, I gauged potential interest in and comfort with the proposed project in informal chats with my colleagues. I was given the opportunity to introduce my research idea at the fortnightly staff meeting, where it was met with universal enthusiasm and support. The fact

that this organisation focuses on research may have contributed to their enthusiasm. I received ethics approval for my research on 9 October 2023 (ethics approval #0000031241). Once this was received, I approached the CEO of the organisation to receive formal permission to record, which was granted. I then sent an invitation to all employees via the staff email list, containing information about the study and consent forms. Those willing to participate signed their consent forms and either emailed it back or gave it to me in person. Twenty-six people expressed their interest and gave their consent, over half of the entire staff.

In keeping with my ‘research with’ stance, my intention was to avoid my colleagues feeling pressured into participating or feeling as though they had no input into the research. Therefore, it was made clear through the email, the consent form and information sheet, and my own conversations with participants that they could withdraw from the study at any time up to two weeks after data collection was completed. It was also made clear on forms (and in subsequent informal discussions) that participants were also able to turn off the recording device (see explanation below) at any time if they felt uncomfortable. The fact that this did not happen is usefully indicative of the level of trust and collegiality between me and the other participants. Further, I clarified procedures around what would happen should anyone decide to withdraw their consent to participate. In this eventuality, it was explained on the information sheet that data would be redacted from the transcription, and I would use audio-editing software to remove voices from the recording. The consent form also mentioned that participation or non-participation would not affect our existing professional relationship, an important component of ensuring participants’ comfort.

4.4 Data collection processes and background

To operationalise my theoretical stance on identity as dynamic and discursively constructed, I make use of naturally occurring interactional data as it provides a fitting example of how people talk in everyday contexts (Stubbe, 2001) and is therefore useful when looking at how people construct their own identities. Therefore, audio recordings were chosen as the primary form of recording, in that they are convenient and unobtrusive (see Angouri & Marra, 2011; Holmes, 2000a). I also used a video recording device for the purpose of identifying speakers when I could not distinguish their voices. Accordingly, the video recordings did not contribute to the data analysis and were used only for that particular purpose.

I recorded a week’s worth of morning tea break data, which resulted in two and a half hours of raw data. However, not every day had useable data. For example, day three’s recording contained so much noise and crosstalk as to render it almost inaudible. In terms of practicalities, I arrived at morning tea early to set up the audio recording device, which was set on one of the tables in the organisation’s staff room. There was also a video recorder set up at the end of the table that was used to identify any participants whom I could not identify through voice alone. I made sure to turn these on before people arrived so as not to interrupt the flow of conversation. Before beginning the quiz, the quizmaster made sure to remind everyone that I was recording (i.e., “Just a reminder Ashleigh is recording today”), and I used this time to check if everyone was still comfortable with being recorded. This happened each morning for the five days I was collecting data. An example of this happening can be found in Section 5.

4.5 Data analysis

Guided by the social constructionist approach outlined in Section 2, I examined the data for how participants (myself included) constructed our career identities and how the norms of our community of practice affected this. My insider position again gave me an advantage, as my knowledge of the social talk that usually surrounds the morning tea break allowed me to discern participants' tone. This aided in analysis as I could tell whether a participant was joking or serious, which may not have been easily discernible by an outsider. These understandings added important context to the interpretation of the data.

I listened through each recording multiple times, noting down on a spreadsheet the timestamps where the talk indicated potential co-construction of career identity. I initially looked for moments where participants were discussing their work or elaborating on knowledge shared in the quiz. I noted down the sections that I thought may be relevant but kept them broad. I did this for each recording. After relistening, I narrowed my focus further, using my knowledge of participants' backgrounds to note down instances in which they shared knowledge or expertise related to their careers. After relistening a further time, I transcribed selected extracts that I felt were rich with identity co-construction.

Keeping in mind the shared norms and culture of this community of practice, I used a social constructionist framework to analyse the ways in which career identities are co-constructed through social talk. This was supported by the lens of interactional sociolinguistics, which involves observing not only what is said but how it is said and the context in which it is said. Interactional sociolinguistics (IS) is a framework used to examine small-scale, everyday talk for the ways in which meaning is inferred between multiple parties (Gee & Handford, 2012).

In interactional sociolinguistics, context, knowledge of social norms, and other background information are crucial to interpreting meaning (Gee & Handford, 2012). Additionally, when we speak, we make assumptions about our relationship with our interlocutor(s) (Stracke, 2015). An IS approach contains two key concepts: contextualisation cues and conversational inference (Vine, 2023). Contextualisation cues are the features that indicate how a speaker intends for their words to be understood and can include syntax, dialect, and non-verbal behaviours. Conversational inference, by contrast, is the way a listener interprets the meaning of their conversational partner's talk. Additionally, IS is heavily focused on the researcher's knowledge of the context surrounding talk. Given my insider position and knowledge of organisational norms and context, this approach is a perfect fit for analysis.

Using this approach, I combed through each extract for contextualisation cues that indexed identity construction and helped interpret meaning at the micro-interactional level. To warrant my findings and to get better insight, I took the chosen extracts to the Discourse Analysis Group session at Victoria University of Wellington. During the two sessions, the discourse analysts gave me their own insights into the career identity construction appearing in the data, all the while asking questions and giving advice. This important warranting (Marra, 2012) helped strengthen the analysis and allowed me to see things from a wider perspective. I turn now to this analysis.

5. Analysis

This section addresses my first research question, which asks how people's past experiences and expertise—i.e., the professional knowledge they have accumulated—contribute to the construction of their career identity. This relates most obviously to two sections of my conceptualisation: career progression and expertise; however, it should be noted that their current position also plays a role as this is the place where the identity co-construction is happening. Therefore, all three areas have an impact on career identity, though each area has different impacts for different people.

In this analysis, we will meet a few of the participants. The extracts, and therefore the participants present in them, were chosen for the relevance and salience of their identity construction. One participant, Jan, is the organisation's 'quizmaster' and is present in the majority of the data due to her role as the person who reads the questions and answers (as well as managing the room). Among the other participants are Sean and Ellie, who have PhDs in chemistry; Sophie, who has a PhD in biology; and Amber, who is working towards her Master's degree in linguistics and intends to become an academic in the future.

As introduced in Section 2, the morning tea quiz meets the requirements of a community of practice; it contains a joint enterprise (the doing of the quiz), a shared repertoire (language surrounding the quiz, such as the practice of giving 'yellow cards', and mutual engagement (the participation itself and the socialisation surrounding it). As such, identity construction in this data is both constrained and enhanced by the norms of the quiz. This will be explored more in Section 6.

It should be noted that the collected data is quite 'science-heavy'—this is due both to the nature of the organisation (which has a lot of staff members with scientific backgrounds) and the inordinate number of science-related questions that were coincidentally present in the newspaper quiz that week. During the data collection, much of the identity construction related to the three spheres of my conceptualisation of career identity: expertise, career progression, and current role. I have separated the sections as such below. The transcription conventions used in the following extracts can be found in the Appendix.

5.1 Expertise

The following examples show identity construction with expertise as the primary avenue. As mentioned in Chapter 4, many employees at this workplace have PhDs and have previously worked as academics. While their areas of expertise may not explicitly relate to their current jobs, which require research skills rather than expertise in any particular subject, the sharing of knowledge shows that their previous careers remain an important part of their identities. These identities are supported by the context of the quiz and the norms around it, in that quizzes are, by their nature, activities in which to share knowledge and demonstrate expertise.

One prominent way expertise emerged in my data was in the doing of a 'scientist' identity. The below extract has Sean and Ellie, who both hold PhDs in chemistry, constructing their scientist identity through the expertise they display, while also downplaying said expertise.

Extract 1

Context: During the quiz, Jan reads a science-related question.

7:54 – 8:15 (Day Two)

- 1 Jan: now we have a + bloody science question
- 2 bloody bloody [*general laughter*]
- 3 Sean: [*silly voice*] science yeah
- 4 Jan: what are the chemical elements
- 5 Ellie: [*sharing a look with Sean*] uh oh
- 6 Sean: I won't know
- 7 Jan: [*stumbling a little*] yttrium comma ytterbium comma
- 8 terbium comma and + erbium named after
- 9 Sean: //oh towns\
- 10 Ellie: /named after?\\
- 11 Sean: like names of towns and stuff

In this extract, when Sean hears that this question is science-related, he immediately shows enthusiasm in line 3 with *science yeah* (albeit in a joking and silly way). This immediate response is an early contextualisation cue that suggests science is a part of Sean's identity that he is enthusiastic about. However, when the words *chemical elements* are mentioned in line 4, he and Ellie both immediately express doubt about knowing the answer in lines 5 and 6 (*oh no* and *I won't know*). Despite this downplaying of knowledge, Sean immediately answers the question correctly, using the utterance-initial discourse marker *oh* (line 9), which indicates some surprise or hesitation in showing himself to be correct (Heritage, 1998). Despite no longer working in the chemistry field, Sean still 'does' his scientist identity through this display of expertise accumulated during his time working in the chemistry field.

On the other side of this, Jan, the quizmaster, appears to be distancing herself from scientist identity (Vine, 2018), using the word *bloody* multiple times (see lines 1 and 2) to show that she finds these types of questions annoying or tedious, possibly due to this not being her area of expertise. This use of swearing could also show her solidarity and alignment with the 'non-scientists' of the group (Debray, 2023). There is also an element of 'us vs. them' in this example, as Jan is on the opposite end of the identity spectrum to Sean and Ellie when it comes to science, as she does not have a scientific background. This is shown through Jan's distaste for *bloody science question[s]*, which suggests that she is very opposed to having a scientific identity, whereas Ellie and Sean immediately look at each other, acknowledging that they are both scientists (it should be noted that although I use audio recordings as my primary data set, I was also there to witness this look and found it a pertinent contextualisation cue).

Extract 2

Context: This is a continuation of the same quiz question in Example 1.

8:26 – 8:50 (Day Two)

- 1 Jan: I'm gonna +
- 2 I'm gonna give it to you because I'm being nice today

- 3 Sean: oh //thank you\
 4 Ellie: /cities\\\
 5 Jan: it's um it's named after a s-
 6 Bex: //boroughs\
 7 Ellie: /places\\\
 8 Jan: a Swedish village
 9 Sean: oh yeah
 10 Ellie: //just one?\
 11 Jan: /that's pretty\\ good
 12 Sean: thank you
 13 Ellie: just one village?
 14 Sean: it's the only fact that stood out
 15 from my fourth-year inorganic chemistry course
 16 can't remember a single thing else + nothing
 17 what a waste

This extract highlights the competitive edge that the morning tea quiz often has. Jan is quite strict about giving 'points' to people if their answer is not exactly correct. In this example, she is planning on giving the point to Sean even though the answer is not word-for-word the same as given in the quiz (see line 2 – *I'm going to give it to you because I'm being nice today*). Upon hearing this, Ellie and another participant, Bex, immediately start calling out alternative answers in the hope of displaying their own expertise and 'stealing' the point for themselves (see line 4 *cities*, line 6 *boroughs* and line 7 *places*).

Another example of scientist identity comes in later in the extract. When the correct answer is given in line 8 (*a Swedish village*), Ellie appears to push back against it in lines 10 and 13 (*just one?* and *just one village?*), attempting to assert her knowledge and question the knowledge of the quiz writer (who is not known to participants). However, this line of questioning goes nowhere but does demonstrate that Ellie has a certain confidence in her own knowledge that she did not previously seem willing to show. Here, her scientist identity becomes salient by displaying that underlying confidence in her knowledge (i.e., the expertise that she has developed).

Extract 3

Context: Jan reads out a quiz question. Along with Sean and Ellie, Anaya holds a PhD in chemistry.

13:27 – 14:07 (Day Two)

- 1 Jan: what does the acronym PPE stand for
 2 when referring to gear that is used to protect the body
 3 from injury or infection
 4 Ellie: //personal protective equipment\
 5 Sean: /personal protective equipment\\\
 6 [general laughter]
 7 Ellie: personal protective equipment if you didn't quite understand //that\\-
 8 Sean: /and\\ those biologists not wearing gloves disgusting

- 9 [general laughter]
 10 Bex: why are you pointing at Anaya
 11 Sean: because she- chemistry
 12 us chemists
 13 Bex: I thought you were saying you don't wear PPE
 14 Sean: no no those biologists they don't wear //gloves\
 15 Amber: [jokingly] /some\\ of us don't //wear protective gear\
 16 Ellie: /no biologists don't wear\\ they don't wear-
 17 Sean: they're freaks
 18 Ellie: their feet are //uncovered\
 19 Unknown: /freaky biologists\\
 20 Ellie: they don't wear glasses they don't wear gloves
 21 //they don't even wear black (boots)\-
 22 Sean: [sarcastic quoting voice] /oooh I got contamination\\
 23 I wonder how bro
 24 I wonder how

A scientist identity—and the doing of expertise—is particularly salient in this extract, specifically regarding chemistry and its opposition to other sciences, namely biology. While there is no one 'scientist' identity, Sean and Ellie's shared backgrounds and expertise form a type of chemist identity. This construction begins in lines 4 and 5, where Sean and Ellie answer the question at the exact same time (lines 4 and 5 *personal protective equipment*), leading to the end of their answer to be almost drowned out by laughter from the rest of the group. Ellie then strengthens her own scientist identity by reiterating the answer in line 7 Sean then goes into 'chemist mode' by starting a joke about biologists not wearing protective gear in line 8, placing himself in opposition to biologists by jokingly calling them *disgusting*.

As Sean performs this humorous fantasy scenario (Hay, 2001, see also Salanoa, 2020), he also co-constructs the identities of his fellow chemistry PhDs, Ellie and Anaya, by pointing at them (although only Anaya is mentioned in the dialogue, probably because she is not saying anything). He initially constructs Anaya's chemist identity in line 11 (*because she- chemistry*), before repairing it in line 12 to include himself and Ellie as *us chemists*. There is another element of 'us vs. them' in line 14, where Sean refers to 'those' biologists. Ellie then tries to explain Sean's joke in line 16 (*no biologists don't wear they don't wear*), though she is quickly interrupted by Sean carrying on the joke in line 17 (*they're freaks*). In lines 18 and 20, instead of trying to explain the joke to the non-scientists in the room, she joins in (*their feet are uncovered* and *they don't wear glasses they don't wear gloves*). This Bakhtinian 'double-voicing', whereby two people speak in tandem in order to build on a narrative (Baxter, 2014), contributes to the fantasy scenario, where Sean pretends to be a biologist and says mockingly *oooh I got contamination* in line 22. He then returns to his own voice in lines 23–24 and continues to mock this hypothetical biologist 'Other' (*I wonder how bro I wonder how*).

Once again, Ellie and Sean are co-constructing each other's expert scientist identities, this time by performing the rivalry between chemistry and biology from their perspectives as chemists. While it is a humorous exchange, it also serves to build on their previously established scientist identities. It also feeds into the next extract in which Ellie and another

participant Sophie (who has a background in biology), answer a question at the same moment.

Extract 4

Context: Jan reads a quiz question and mispronounces a scientific word.

8:57 – 9:40 (Day Four)

- 1 Jan: variant Creutzfeldt [*mispronounced*] Jacob
- 2 disease is the human form
- 3 of which animal neurodegenerative disease-
- 4 Ellie: //mad cow disease\
- 5 Sophie: /mad cow disease\\
- 6 Jan: you didn't let me lis- finish [*general laughter*]
- 7 Amber: yellow cards for everyone
- 8 Jan: you're all getting a //yellow card\
- 9 Sophie: /it's pronounced\\ Creutzfeldt-Jakob by the way
- 10 Jan: ok you're not getting a yellow card
- 11 Amber: just cause it's //correct\
- 12 Jan: /ah you're\\ only half right what's the other name for it
- 13 Sophie: bovine spongiform encephalopathy
- 14 Everyone: woah [*applause*]
- 15 Amber: nailed it and in one breath

Sophie's turns are especially interesting here in terms of asserting her expertise and knowledge. After answering the question in unison with Ellie in lines 4 and 5 (*mad cow disease*), she then goes on to correct Jan's pronunciation in line 9 with *it's pronounced Creutzfeldt-Jakob by the way*, displaying an epistemic stance (Holmes & Wilson, 2017) in showing her knowledge. An epistemic stance is a position showing how confident a person is in their knowledge, and this can be seen as an overt display of authority (Jaffe, 2009). She does so again in line 13 by giving the correct scientific name for the disease, which, as Amber asserts in line 15, she does in *one breath*. This lack of hesitation shows a marked difference between her and Ellie and Sean in Extract 1, who both appear to downplay their knowledge. In contrast, Sophie appears quite happy to show that she knows not only the answer, but the correct pronunciations of both names. In qualifying with *by the way* in line 9 after correcting Jan, she appears to show that this knowledge comes naturally to her, while everyone else seems very impressed (see line 14 *woah*).

In each of the above extracts, all three participants display their knowledge in different ways; Sean downplays his expertise, Ellie initially downplays hers but then pushes back when she thinks an answer is wrong, and Sophie is confident in displaying her expertise. However, despite these different stances, the knowledge and expertise displayed by all three appear to be valuable linguistic resources in the enactment of their scientist identities. Since they are no longer working in their respective scientific fields, the fact that they still 'do' their scientist identities indicates that these identities have not been left behind as they have moved into new positions, and therefore contribute to their overall career identities.

5.2 Career progression

All careers progress in some way; however, the exact nature of this progression is unknown unless you are aware of a person's career background and future goals. This section focuses primarily on Amber, who is open about her intentions for her future career. Amber is studying Linguistics and conducting research while working at the Institute. As a result, her identity relates not only to her current job, but the career that she is working towards, that of an academic.

Extract 5

Context: Jan, the quizmaster, stops during one of the quiz questions to remind everyone of the recording during the morning tea break.

12:42 – 13:27 (Day One)

- 1 Jan: um did you remember today um Amber's doing stuff
- 2 [general laughter]
- 3 Charlotte: //no pressure\
- 4 Amber: /I'm recording\ I'm recording these //today\
- 5 Jan: /so um\ Pete be on your best Pete be on your best behaviour
- 6 Amber: well I only ended up having one recorder
- 7 cause the other one didn't work
- 8 so only this table is being recorded so you guys got off easy
- 9 um if you haven't if you haven't signed a consent form
- 10 please sign one I've got some over here
- 11 Jan: //did you hear that\
- 12 Amber: /otherwise\ I will just not put you in the data
- 13 Jan: did you hear that
- 14 if you haven't signed the consent form Ellie's holding one up
- 15 Amber: [jokingly] otherwise yeah I'll just completely ignore you
- 16 and your existence [general laughter]
- 17 just for the data I mean

In this extract, Jan begins the co-construction by bringing the recording devices to everyone's attention. Amber then continues the co-construction by reiterating that she is indeed recording the morning tea break, and also joking with the table that is not being recorded that they *got off easy* (see line 8), as one of the recording devices that was to be used ended up not working. She also uses a mix of seriousness and jocularity in getting participants to sign a consent form. In lines 9–12, she is merely stating the fact that she has consent forms and asks anyone who wishes to participate to sign one, otherwise they will not be present in the data (*if you haven't if you haven't signed a consent form please sign one I've got some over here otherwise I will just not put you in the data*). While most of the participants had already given consent, some had not but came to morning tea hoping to participate. It should be noted that due to the research focus of the organisation most participants frequently conduct or participate in research of their own, and so were already familiar with the process of giving consent. Regardless, Amber makes a joke in lines 15 and 16 to lighten the mood and let people know that it is not a serious issue if they do not sign consent forms, and it is entirely up to

them if they wish to participate (*otherwise yeah I'll just completely ignore you and your existence*). The laughter by the other participants shows that the joke was understood and was not intended to be sincere. Amber's joking tone and the reception of the joke by the other participants show the value of insider ethnography (as introduced in Section 4). What could have been seen as a coercive joke was instead treated as non-serious (as shown by the laughter in line 16), largely due to Amber being known as a jokester within the organisation. This type of information may not have been available to an outside researcher and may have led to an entirely different interpretation of the data.

In line 17, Amber also makes an amendment to that joke to emphasise the lack of seriousness (*just for the data I mean*) in case the joke gets taken seriously and people think Amber is really going to ignore them. This case is an example of self-repair (Hayashi et al., 2013) in case her joke may be taken seriously and ensures that it is not interpreted wrongly. Overall, the joking tone of this extract served to emphasise the importance of fully informed consent and to minimise the pressure anyone may have felt about signing.

It is interesting to note that the only time the marker *um* is used is at the beginning of line 9, when Amber is asking potential participants to sign the consent form. This shows some hesitation and possible discomfort in the position put upon her by Jan initially. So, while Amber is explicitly 'doing' her career identity as a future researcher by gaining consent for her Master's research, this *um* discourse marker may indicate some reluctance to build that identity for herself.

In the next extract, Amber is again 'doing' her researcher identity in an explicit manner while participants are signing consent forms. It should be noted that Amber went through rigorous processes in order to make sure potential participants were fully informed before giving consent (see Section 3). As above, the joking tone serves to avoid pressure and coercion.

Extract 6

Context: People are signing consent forms before the quiz starts.

00:20 – 00:28 (Day Two)

- | | | |
|---|--------|-----------------------|
| 1 | Amber: | sign your life away |
| 2 | | + deal with the devil |
| 3 | | but I'm the devil |
| 4 | John: | researchers eh |

In this example, John and Amber are co-constructing Amber's researcher identity in a humorous way. In the first instance, Amber jokingly tells people to *sign [their] lives away* when signing consent forms (line 1) and continues the joke by insinuating that this is a devil's bargain (*deal with the devil* in line 2). John, who also previously worked as a researcher, makes a comment in mock exasperation (line 4—*researchers eh*), therefore co-constructing Amber's identity as a researcher and continuing the joke, implying that he knows what researchers are like.

This type of humour implies that Amber views her requests for signing consent forms, and indeed her presence as a researcher, as an imposition on her colleagues, and she is attempting to diffuse the tension by taking it to the extreme and putting herself on par with the devil. While both extracts show a researcher identity being co-constructed, they also show a reticence on Amber's part to construct that identity for herself. As above, Amber is simultaneously 'doing' researcher identity and pulling away from it; this reluctance suggests that she does not yet see herself as a 'real' researcher, and so does not yet feel entirely comfortable in being positioned as one. This tension is interesting in light of the next extract where both Jan and Amber co-construct Amber's researcher and linguist identity.

Extract 7

Context: Jan is reading a quiz question.

9:08 – 9:58 (Day Five)

- 1 Jan: um I'm so hungry I could eat a horse is an example
- 2 of which literary device
- 3 also known as + ah- ah exis
- 4 awe exis? Awe exis
- 5 Bex: hyperbole [*jokingly pronounced "hyperbowl"*]
- 6 Amber: [*laughs*] hyperbole
- 7 Jan: tick based on that
- 8 and the word I was trying to say was a-u-x-e-s-i-s
- 9 Amber: //huh I've never heard of that\
- 10 Jan: /does anyone know how to say that\\
- 11 a-u- have you not heard of that word Amber
- 12 Amber: no
- 13 Jan: but you read everything
- 14 Amber: [*jokingly*] I know I've read every book [*general laughter*]
- 15 Charlotte: you've read all the books
- 16 Amber: I've read all of the books +
- 17 [*jokingly*] I'm reading one right //now\
- 18 Jim: /can\\ I just can I ask
- 19 I've been saying hyperbole my whole life
- 20 Amber: it is hyperbole
- 21 Jim: you had a very straight face Bex
- 22 I thought you not even a smirk after it
- 23 Amber: yeah no it's it's hyperbole

Related to Amber's identity as a researcher is her identity as a linguist. In the above extract, Bex is the first to answer the quiz question, jokingly mispronouncing *hyperbole* as *hyperbowl* (line 5). Amber, despite knowing that Bex is joking, corrects her pronunciation in line 6, thereby asserting her authority in linguistic matters. She later maintains this position in line 9 when she expresses surprise at having never heard of the word, *huh I've never heard of that*. This linguist identity is then co-constructed by Jan, who shows surprise (line 11, *have you not heard of that word Amber*) and then ratifies Amber's linguistic knowledge by making a joke about her having read every book in existence (line 13, *but you read everything*). This is an

ongoing joke within the organisation, as can be seen in lines 14 and 15 when both Charlotte and even Amber herself join in the teasing (*I know I've read every book and you've read all the books*). Amber's participation in this joke shows that it is an example of supportive humour (Marra & Holmes, 2002) and is not intended as a mean-spirited comment. Amber is the one to finish the joke off by taking it to the extreme in line 17: *I'm reading one right now* (though she is not, in fact, reading during quiz time).

When Jim asks an earnest question about the pronunciation of hyperbole in lines 18 and 19—*can I ask I've been saying hyperbole my whole life* (note that he pronounces hyperbole correctly here), Amber again reasserts her knowledge by saying *it is hyperbole* (line 20) and reiterating it a final time in line 23 (*yeah no it's it's hyperbole*). This is another example of an epistemic stance. Amber is intending her career to go into the realm of linguistics research, so this example may suggest that she is setting herself up as an authority on the subject to warrant her identity as a future academic.

5.3 Current position

In the majority of the above extracts, one person stands out as being 'in charge', and that is the quizmaster Jan. This is because, unlike the other participants I have highlighted, her career identity comes primarily from her security and confidence in herself and her long-time position in the organisation. This relates to my conceptualisation in the sphere of current position. She constructs her identity through 'doing authority' and asserting her power as the quizmaster. While not directly related to her current job title, her security in her position in the organisation gives her the outlet to assert her authority.

In the first extract, despite her exasperation with *bloody science question[s]* (Extract 1, line 1), Jan still does her best to pronounce the names of the chemical elements correctly, which she does despite some stumbling. It should be noted that at no point does she stop and ask for help, but instead carries on. Similarly, in Extract 4, Jan attempts to pronounce *Creutzfeldt-Jakob*; although she struggles a little, she clearly feels comfortable enough to try. However, it should be noted that she is somewhat playing up her struggle to pronounce it, which is something my insider position helped me to understand (as I know her well enough to know when she is genuinely struggling to pronounce a word). This suggests that Jan feels confident that someone will likely understand what she is trying to say.

In addition to this, Jan asserts her authority by enforcing quiz norms. In extract 2, she 'does' authority by giving Sean the point for the answer despite it not being entirely correct. Sean responds with sincere gratitude, co-constructing Jan's identity as the person 'in charge'. In Extract 4, she scolds Ellie and Sophie for answering the question before she has finished saying it. To help enforce these norms, Amber jumps in saying that everyone should get a yellow card, which Jan reiterates. However, she later recants this and attempts to elicit the correct answer later. This is showing Jan's identity in relation to her current position, where she feels secure in her way of 'doing authority'. This is even more salient in the following example.

Extract 8

Context: The quiz attendees are talking over the quiz and not listening. Rather than waiting, Jan carries on with the quiz. Eventually, she and Ellie work together to regain control of the room, and Jan chides everyone for being noisy.

12:01 – 12:22 (Day Four)

- 1 Jan: ok I better go back to question two
- 2 because you + (fullas) keep laughing
- 3 Ellie: thank you + thank you we'd love to hear it //people\
- 4 Jan: /you'd\\ love to hear it?
- 5 Ellie: I'd love to hear it
- 6 Jan: question number two?
- 7 what about question number three
- 8 Ellie: //yes\
- 9 John: /nah\\ don't want that one
- 10 Jan: what about question number four
- 11 Everyone: yes
- 12 Jan: that's how long it took for you guys to quieten down

This example shows Jan at her most authoritative, scolding the group for talking over her. While she would normally wait for the group to be quiet (or alternatively demand it), in this instance she decided against taking control of the floor and carried on reading the quiz questions as normal, despite no one else paying attention. Once the talking calms down, she starts wresting control of the floor back from the group in lines 1 and 2 (*ok I better go back to question two because you fullas keep laughing*), assisted by Ellie in line 3 (*thank you we'd love to hear it people*). She then mockingly questions the lack of interest in lines 4, 6, and 7 (*you'd love to hear it? Question number two? What about question number three*), to which Ellie continues answering in the affirmative on behalf of the group. John jumps in here to make a joke in line 9 (*nah don't want that one*) but is ignored as Jan continues to assert control in line 10 (*what about question number four*). At this point, everyone is paying attention again and answers in the affirmative. Jan, finally having control of the floor, scolds everyone in line 12 (*that's how long it took for you guys to quieten down*).

While, at first glance, this does not seem to be a typical construction of career identity, it once again shows Jan's position and expertise. She has confidence in her position as quizmaster and shows this by asserting her authority and fighting for control over the room. The fact that John's disruption is completely ignored shows that she is serious about her position as the 'ruler of the room'. In the following section, I will further explore how the community norms of the quiz support these constructions of identity.

6. Discussion

This section returns to my focus on community norms and how they affect the discursive career identity construction analysed in the previous chapter.

The morning tea quiz, with its mutual engagement, joint enterprise, and shared repertoire, fits the definition of a community of practice as introduced in Section 2. This adds to the analysis by putting the data into the immediate context in which it was recorded. As with any other CofP, the community norms have a huge impact on the interaction and behaviour of its members. This quiz practice, specifically, has its own norms that govern participation; for example, interrupting the quizmaster before they have finished reading the question gets the participant a ‘yellow card’ (this is not a physical card, but a metaphorical one used to enforce the ‘no interruptions’ rule). Humour, particularly teasing, is heavily used both to maintain norms and to build rapport between participants. Both supportive humour and jocular abuse (Holmes et al., 2011) are common.

Since the quiz makes up the joint enterprise of the community of practice, there is a big focus on sharing knowledge and expertise—hence much of the focus of this section. However, as became clear in the analysis, there are also norms around how this expertise should be appropriately expressed. As we will see in the following section, different participants displayed their knowledge and expertise in different ways. Sean and Ellie preferred to downplay their knowledge in some ways, while Sophie and Amber tended to be more confident in their displays of expertise.

6.1 Community and cultural norms around knowledge display

As a New Zealand research-based organisation, knowledge is highly valued. However, the workplace culture still functions under the constraints of New Zealand societal norms. One of these norms is that of the ‘tall poppy syndrome’. This is the name given to the phenomenon wherein it is considered unacceptable to self-promote or brag about one’s achievements (Holmes et al., 2011). It is a particularly prevalent idea in New Zealand, which can cause problems for people in positions of authority (Holmes & Riddiford, 2010), who may feel the need to downplay their achievements and expertise. This can be seen in the extracts from the previous section through the participants Sean and Ellie, who continuously downplay their expertise and knowledge, despite having PhDs in the subject they are talking about. In the very first extract, upon being confronted by a ‘science question’ in the quiz, they immediately look at one another and express doubts as to their ability to answer the question. This appears to be the tall poppy syndrome at work, as the two former scientists appear to be openly downplaying their expertise before even knowing what the question will be. Sean then begins his answer with *oh*, indicating surprise at his own knowledge, and ends it with *and stuff* to hedge his answer.

This is taken further in Extract 2, with Sean saying that his answer was *the only fact that stood out from [his] fourth-year inorganic chemistry course*. This is a much more obvious example of the tall poppy at work—Sean is acknowledging his qualification in chemistry while simultaneously implying that he did not remember anything else from his class. Although he answered the question correctly, he appears to be downplaying his knowledge so as not to appear to be bragging; in this case, knowing only one thing from an entire course is an acceptable level of knowledge.

Despite this, Extract 3 shows both Ellie and Sean openly showing their knowledge by answering another ‘science question’ correctly at the same time. Sean then launches into a

fanciful narrative about biologists not wearing protective gear, which Ellie also joins in on. Together they construct an 'us vs. them' narrative, with chemists as the protagonists against the biologists. This is an interesting inversion to the tall poppy phenomenon, as rather than downplaying their own knowledge, they are downplaying the authority and credibility of a different type of scientist. Chemistry and biology have a well-known rivalry in the science world and perhaps having a rival to compare oneself to makes it more acceptable to display expertise.

On the opposite end of the spectrum, some participants appeared very confident in their knowledge. Sophie, who has a biology background, seemed in Extract 4 to be very comfortable in showing her knowledge about the correct names for mad cow disease. She corrected Jan's pronunciation of the name of the disease and was the only one to say its other scientific name, which was met with applause by the rest of the room; the fact that she does not acknowledge this praise suggests that she was not abashed by this overt display of expertise.

Amber also appeared very confident in her knowledge, albeit in a more humorous (and, one could argue, more culturally acceptable) manner. In Extract 7, she corrects Bex's deliberately mispronounced *hyperbole*, despite knowing that it was not a serious answer (as shown by her laughter). She later reinforces this knowledge by reiterating the correct pronunciation and balances out this confidence by carrying on with a long-running organisational joke that she has *read every book*, ironically using hyperbole to explain her knowledge of hyperbole. She then takes the joke to an absurd conclusion by joking that she is reading a book during the quiz. These jokes serve to downplay any potential arrogance and perception that she is bragging, while still projecting a knowledgeable persona, which matches the New Zealand norms in which the organisation operates (Nolan, 2007).

These examples serve to show the different ways in which the tall poppy syndrome affects people's identity construction through the display of knowledge. While each person has their own area of expertise, Sean and Ellie downplay their knowledge while Sophie and Amber do not. However, in Amber's case, her outright display of knowledge is still tempered somewhat by her use of humour to make it more 'acceptable' to have the right answer.

6.2 Competitiveness and support

There is a slight competitive edge to participating in the quiz, as attendees often try to be the first to answer a question correctly. However, the culture is still largely supportive, with participants praising one another on their knowledge (sometimes accompanied by gentle teasing). During the quiz, Jan gives metaphorical points to those who answer a question correctly. Although these points are not measured or explicitly mentioned, this still leads to some competition as people try to answer the fastest. This is seen in Extract 2, where Sean and Ellie answer at the same time; they are both trying to be the first person to answer the question. This happens again in extract 4 with Ellie and Sophie.

Additionally, if someone answers a question incorrectly, others will sometimes jump in and try to get the correct answer. This is seen in Extract 2. Once the quizmaster Jan indicates that Sean's answer is not entirely correct, other participants begin providing alternative answers

in an effort to give the correct answer in Sean's stead. Ellie appears to be pushing back against the answer given in the quiz, indicating some competitiveness with Sean. Despite this competitive edge, however, the culture surrounding the quiz is largely supportive. People are often impressed by others' expertise and react supportively when someone answers a question correctly (particularly if no one else knows the answer). This is shown in Extract 4, when the quiz attendees are so impressed with Sophie's knowledge that they start applauding.

Ellie, in particular, is consistently shown to be a supportive presence in the quiz, even with her competitive edge when it comes to answering questions. In Extract 4, she joins in with Sean's joke about biologists, building upon the humour and displaying solidarity with her fellow chemists. In Extract 5, she supports Amber by holding up the consent forms for the participants to sign. Later, in Extract 8, she helps Jan take back control of the room when everyone is talking over each other. These examples are not only emblematic of the supportive nature of the organisation but also help to maintain this culture.

Both the competitive side and supportive side of this community of practice affect the identity construction of its participants. Ellie both competes for the correct answer and supports others; she does her scientist identity while maintaining the supportive community culture. Jan uses the competitiveness of the room to enforce community norms and to perform her identity as the quizmaster. At times, others like Amber or Ellie also jump in to ratify Jan's identity by enforcing rules on her behalf, such as Amber making a joke about getting a yellow card in Extract 4, or Ellie getting the room's attention in Extract 8. As such, these norms influence the identity co-construction between participants.

6.3 Humour

All extracts contain instances of humour and provide a snapshot of the overall culture surrounding the quiz as well as supporting the identity construction of the participants. This is exemplified in Extract 1 with Jan's dry comment on *bloody* science questions, which is a humorous way of positioning herself as a non-scientist. She later uses humour to reinforce her position as quizmaster, an important aspect of her career identity. In Extract 4, she jokes that everyone is getting a yellow card, light-heartedly reinforcing the norm of non-interruption. In Extract 5, she humorously lets the participants know that *today Amber's doing stuff*. She appears to assume that people will know what she is talking about, therefore reinforcing her authority. Later in the extract, she jokingly tells Pete (the CEO of the organisation) to *be on [his] best behaviour*. The latter example is emblematic of New Zealand's lack of professional hierarchy (Holmes et al., 2017), as even the CEO is not above being teased.

However, this overall jovial demeanour is dropped in the final extract, where Jan chides the room for being disruptive. This is picked up by John, who attempts to make a joke to ease the tension but is ultimately ignored. This suggests that while humour is often used to reinforce and maintain the quiz norms, it is not always effective and sometimes a more overt and serious approach is needed.

Sean is well-known as a jokester in the organisation, and this comes through very clearly in the data. In Extract 1, he says *science yeah* in a silly voice, performing his scientist identity

while entertaining his audience. He puts this entertaining quality to good use in Extract 3, performing a prolonged fantasy scenario about biologists. Ellie joins in to build upon this joke, but it is Sean who takes the lead, bringing the scenario to its humorous conclusion. This is an example of the upbeat mood that surrounds the morning tea quiz as well as Sean and Ellie's chemist identities. Sean also builds upon his scientist identity using humour in Extract 2 while also downplaying his expertise by using the particle *oh* and adding the tag *and stuff*. He humorously pretends to not remember anything from his inorganic chemistry course except for the specific piece of knowledge needed to answer the quiz question. However, the specificity of naming the course serves to reinforce his scientist identity rather than distancing him from it. This suggests that humour is a way to 'soften' a person's display of knowledge so as to make it more acceptable in a Kiwi workplace, where bragging and overt displays of confidence are often frowned upon.

Another participant known for their jokes is Amber, which is displayed multiple times in the extracts. In Extract 4, she helps reinforce the quiz norms by joking that the interrupters should get a yellow card, which prompts Jan to say the same thing. Later in the extract, when Jan rescinds the yellow card, Amber humorously suggests that this only happened because the answer was correct. Finally, she shows her appreciation for Sophie's expertise by saying that she *nailed* the answer, reinforcing the supportive and appreciative environment of the quiz.

Much like Sean, Amber uses humour to both perform her career identity and attempt to distance herself from it. In Extract 5, she uses a joke about ignoring everyone's existence to downplay the seriousness of her research while simultaneously acting as a researcher. She takes this a step further in Extract 6 by comparing herself to the devil while people are signing the research consent forms—this particular example suggests that she thinks of her research requirements as an imposition and is using humour to mitigate any potential offence. Her researcher identity is also co-constructed by John, who immediately builds on the joke by wryly commenting *researchers eh*.

While she provides and leads a lot of the humour, Amber is also a target of supportive teasing (Holmes et al., 2011), which is a staple behaviour at the quiz. The most obvious example of this is the organisational in-joke displayed in Extract 7 that she has read every book in existence. Amber is a linguist and enjoys knowing the answers to literature and language questions, which has led to her being teased in this way. However, this teasing is not meant in a mean-spirited way, as shown by the fact that Amber willingly participates in the joke and builds on it. Overall, humour is an important tool in this community for constructing identities while maintaining community norms.

These instances of humour and their contribution to career identity construction defy the stereotype of humour as 'unproductive' (Vine, 2018). While these particular examples of humour do not serve to accomplish organisational goals, they instead contribute to the overall cohesion and bonding of colleagues as well as the maintenance of CofP norms. Additionally, the professionalism inherent in constructing a career identity also defies this stereotype.

6.4 *The impact of relational talk*

During the morning tea breaks recorded, the main form of talk is relational. This meant that participants were not necessarily in ‘work mode’ and were much more relaxed and casual than they may have been in a different context. The practice of the quiz both facilitates the relational talk and provides constraints on the topics discussed. For example, the science-related quiz questions naturally led to discussions about science. This, in turn, allowed participants with scientific backgrounds to do their scientist identity, which may not have happened had the quiz not provided the talk topic. This provides some insight into how casual discussions can lead to negotiations of career identity, depending on the topic.

Relational talk is often considered peripheral in New Zealand workplaces when compared with transactional talk (Holmes & Marra, 2004). However, relational talk has its own unique functions, namely in creating and maintaining bonds among colleagues. This can be seen in the data, where the norms are enforced by many members of this community of practice, such as the quizmaster Jan and the supportive colleague Ellie. Norms are a critical part of building a community, and as the data has shown, relational talk is one way to make sure those norms are implemented.

Additionally, the relational talk in this data gives a glimpse into the organisational culture and how the employees within it relate to one another. For example, there appears to be a small undercurrent of competitiveness during the quiz. However, the majority of this practice involves collegial support and humour, showcasing the supportive nature of the organisation.

6.5 *Limitations and directions for future research*

As stated above, while the talk during the quiz was relational, it was also guided by the topic of the quiz questions. Therefore, while this does provide some insight into the impact of relational talk, more studies into career identity through relational talk in a different context—for example, colleagues catching up outside of the workplace—would offer more understanding of the impact of people’s career identities on their daily lives. There is a chance, however, that this sort of free-form social talk may not lead to the construction of a career identity at all.

Future research could also be conducted on the usefulness of the conceptualisation brought up in Section 1. While it lent itself well to this particular organisation and community of practice, applying it to other contexts would help shed light on its uses and limitations.

7. Conclusion

What people do for a living contributes to their overall sense of self. However, the changing nature of work means that the idea of ‘career identity’ needs to encompass a wider and more dynamic variety of work experiences rather than focusing on one lifelong profession. In this study, I conceptualised career identity as being the intersection between current position, career trajectory, and expertise, as these are important aspects that contribute to people’s career identities. Career identity is a relatively understudied area in the discourse area, having largely been studied in the healthcare and psychology fields. With regard to discourse, it has

not been studied at all in the form of ‘career identity’. Additionally, it is understudied with regard to relational talk in the workplace. My study aimed to fill some of these gaps.

My study focused on morning tea breaks, during which the employees participate in a newspaper quiz and the primary form of talk is relational. The novel context of ‘relational talk’ added dynamism to career identity construction through the mixture of work and non-work-related talk, as it helped to demonstrate that career identity can be performed even in social talk. This shows just how important people’s work is to their identities.

In this paper, I addressed two research questions:

- 1) How do people use past experiences and expertise to construct their career identity?
- 2) How do community norms impact career identity co-construction?

I applied a social constructionist framework to analyse career identity, treating it as an ever-changing phenomenon and something that one ‘does’, as opposed to something that is inherent and fixed. The findings have demonstrated that career identity is discursively constructed through relational talk in the workplace, primarily through the display of knowledge and expertise. This also opens up opportunities for further study on the impact of relational talk on career identity construction, perhaps with a focus on talk in more explicit social situations outside of the workplace.

Each instance of identity construction related to the spheres of my conceptualisation (career trajectory, current position, and expertise), though not all spheres had the same impact on every person. As the morning tea breaks resulted in the practice of the quiz, expertise tended to be the most impactful of all three spheres, though other contexts may result in the other spheres having more impact. This conceptualisation could be used and expanded upon in further studies as a useful tool for measuring career identity construction.

The norms and culture surrounding the quiz, and those of New Zealand workplaces as a whole, affected how identity was constructed and expertise was displayed. The ‘tall poppy syndrome’, for example, had a large impact on how willing the participants were to display an epistemic stance with regard to their expertise. The findings showed that while some participants downplayed their expertise, others were quite happy to put their knowledge on full display. Additionally, the culture of the quiz itself is both supportive and competitive, leading to different behaviours depending on what the situation called for.

References

- Ali Abadi, H., Coetzer, A., Roxas H., & Pishdar, M. (2023). Informal learning and career identity formation: The mediating role of work engagement. *Personnel Review*, 52(1), 363–381. <https://doi.org/10.1108/PR-02-2021-0121>
- Angouri, J. (2018). Workplace discourse: Issues of theory and method. In J. Angouri (Ed.), *Culture, discourse, and the workplace* (pp. 67–95). Routledge. <https://doi.org/10.4324/9781351068444>

- Angouri, J., & Marra, M. (Eds.). (2011). *Constructing identities at work*. Palgrave MacMillan. <https://doi.org/10.1057/9780230360051>
- Antaki, C., & Widdicombe S. (Eds.). (1998). *Identities in talk*. SAGE Publications. <https://doi.org/10.1017/S0047404501252051>
- Baxter, J. (2014). *Double-voicing at work: Power, gender and linguistic expertise*. Palgrave Macmillan. <https://doi.org/10.1057/9781137348531>
- Bodó, C., Barabás, B., Fazakas, N., Gáspár, J., Jani-Demetriou, B., Laihonon, P., Lajos V., & Szabó, G. (2022). Participation in sociolinguistic research. *Language and Linguistics Compass*, 16(4). <https://doi.org/10.1111/lnc3.12451>
- Boyle, K. (2021). Career identities and Millennials' response to the graduate transition to work: Lessons learned. *Journal of Education and Work*, 35(1), 78–91. <https://doi.org/10.1080/13639080.2021.2009782>
- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4–5), 585–614. <https://doi.org/10.1177/1461445605054407>
- Cameron, D., Frazer, E., Harvey, P., Rampton, B., & Richardson, K. (1993). Ethics, advocacy and empowerment: Issues of method in researching language. *Language & Communication*, 13(2), 81–94. [https://doi.org/10.1016/0271-5309\(93\)90001-4](https://doi.org/10.1016/0271-5309(93)90001-4)
- Carrillo-Tudela, C., Hobijn, B., She, P., & Visschers, L. (2016). The extent and cyclicity of career changes: Evidence for the U.K. *European Economic Review*, 84, 18–41. <https://doi.org/10.1016/j.euroecorev.2015.09.008>
- Crane, L. (2012). Trust me, I'm an expert: Identity construction and knowledge sharing. *Journal of Knowledge Management*, 16(3), 448–460. <https://doi.org/10.1108/13673271211238760>
- de Bres, J., Holmes, J., Marra, M., & Vine, B. (2010). Kia ora matua: Humour and the Māori language in the workplace. *Journal of Asian Pacific Communication*, 20(1), 46–68. <https://doi.org/10.1075/japc.20.1.03deb>
- De Fina, A., Shiffrin, D., & Bamberg, M. (Eds.). (2009). *Discourse and identity*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511584459>
- Debray, C. (2023). Swearing, identity and power in professional interaction. *Journal of Pragmatics* 215, 145–158. <https://doi.org/10.1016/j.pragma.2023.07.002>
- Eckert, P., & McConnell-Ginet, S. (1992). Think practically and look locally: Language and gender as community-based practice. *Annual Review of Anthropology*, 21, 461–490. <https://doi.org/10.1146/annurev.an.21.100192.002333>
- Fitzgerald, A. (2020). Professional identity: A concept analysis. *Nursing Forum*, 55(3), 447–472. <https://doi.org/10.1111/nuf.12450>

- Frost, H., & Regehr G. (2013). "I AM a Doctor": Negotiating the discourses of standardization and diversity in professional identity construction. *Academic Medicine*, 88(10), 1570–1577. <https://doi.org/10.1097/acm.0b013e3182a34b05>
- Gee, J. (2005). *An introduction to discourse analysis: Theory and method* (2nd ed). Routledge. <https://doi.org/10.4324/9781315819679>
- Gee, J., & Handford M. (Eds.). (2012). *The Routledge handbook of discourse analysis*. Routledge. <https://doi.org/10.4324/9780203809068>
- Giazitzoglu, A., & Payne, G. (2018). A 3-level model of insider ethnography. *The Qualitative Report*, 23(5), 1149–1159. <https://doi.org/10.46743/2160-3715/2018.3151>
- Greenbank, E. (2020). *Discursive navigation of employable identities in the narratives of former refugees*. John Benjamins. <https://doi.org/10.1075/sin.27>
- Hay, J. (2001). The pragmatics of humor support. *International Journal of Humor Research*, 14(1), 55–82. <https://doi.org/10.1515/humr.14.1.55>
- Hayashi, M., Raymond, G., & Sidnell, J. (Eds.). (2013). *Conversational repair and human understanding*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511757464.001>
- Heller, M. (2011). *Paths to post-nationalism: A critical ethnography of language and identity*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199746866.001.0001>
- Heritage, J. (1998). Oh-prefaced responses to inquiry. *Language in Society*, 27(3), 291–334. <https://doi.org/10.1017/S0047404598003017>
- Holland, P., Brewster, C., & Kougiannou, N. (Eds.). (2024). *Work, employment and flexibility*. Edward Elgar Publishing.
- Holmes, J. (2000a). Doing collegiality and keeping control at work: Small talk in government departments. In J. Coupland (Ed.), *Small talk* (pp. 32–61). Longman. <https://doi.org/10.4324/9781315838328>
- Holmes, J. (2000b). Politeness, power and provocation: How humour functions in the workplace. *Discourse Studies*, 2(2), 159–185. <https://doi.org/10.1177/1461445600002002002>
- Holmes, J. (2005). Socio-pragmatic aspects of workplace talk. In Y. Kawaguchi, S. Zaima, T. Takagaki, K. Shibano & M. Usami (Eds.), *Linguistic informatics – state of the art and the future: The first international conference on linguistic informatics* (pp. 196–220). John Benjamins. <https://doi.org/10.1075/ubli.1.16hol>
- Holmes, J. (2006). *Gendered talk at work: Constructing gender identity through workplace discourse*. Blackwell.

- Holmes, J., & Meyerhoff, M. (1999). The community of practice: Theories and methodologies in language and gender research. *Language in Society*, 28(2), 173–183. <https://www.jstor.org/stable/4168923>
- Holmes, J., & Marra, M. (2004). Relational practice in the workplace: Women's talk or gendered discourse? *Language in Society*, 33(03), 377–398. <https://doi.org/10.1017/S0047404504043039>
- Holmes, J., Burns, L., Marra, M., Stubbe, M., & Vine, B. (2003). Women managing discourse in the workplace. *Women in Management Review*, 18(8), 414–424. <https://doi.org/10.1108/09649420310507505>
- Holmes, J., & Marra, M. (2006). Humor and leadership style. *Humor*, 19(2), 119–138. <https://doi.org/10.1515/HUMOR.2006.006>
- Holmes, J., Marra, M., & Vine, B. (2011). *Leadership, discourse, and ethnicity*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199730759.001.0001>
- Holmes, J., & Marra, M. (2017). “You’re a proper tradesman mate”: Identity struggles and workplace transitions. In D. Van De Mierop & S. Schnurr (Eds.), *Identity struggles: Evidence from workplaces around the world* (pp. 127–146). Springer. <https://doi.org/10.1075/dapsac.69.07hol>
- Holmes, J., & Riddiford, N. (2010). Professional and personal identity at work: Achieving a synthesis through intercultural workplace talk. *Journal of Intercultural Communication* 10(1), 1–17. <https://doi.org/10.36923/jicc.v10i1.494>
- Holmes, J., & Woodhams, J. (2013). Building interaction: The role of talk in joining a community of practice. *Discourse & Communication*, 7(3), 275–298. <https://doi.org/10.1177/1750481313494500>
- Holmes, J., & Wilson, N. (2017). *An introduction to sociolinguistics*. Taylor & Francis Group. <https://doi.org/10.4324/9780367821852>
- Holmes, J., & Stubbe, M. (2003). *Power and politeness in the workplace: A sociolinguistic analysis of talk at work*. Routledge. <https://doi.org/10.4324/9781315839189>
- Holmes, J., Marra, M., & Lazarro-Salazar, M. (2017). Negotiating the tall poppy syndrome in New Zealand workplaces: Women leaders managing the challenge. *Gender and Language*, 11(1), 1–29. <https://doi.org/10.1558/genl.31236>
- Hoyer, P. (2020). Career identity: An ongoing narrative accomplishment. In A. Brown (Ed.), *The Oxford handbook of identities in organizations* (pp. 101–116). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198827115.013.7>
- Jaffe, A. (Ed.). (2009). *Stance: Sociolinguistic perspectives*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195331646.001.0001>

- Kendall, S., & Tannen, D. (1997). Gender and language in the workplace. In R. Wodak (Ed.), *Gender and discourse* (pp. 81–105). <https://doi.org/10.4135/9781446250204.n5>
- Kiesling, S. (2018). Masculine stances and the linguistics of affect: On masculine ease. *NORMA*, 13(3–4), 191–212. <https://doi.org/10.1080/18902138.2018.1431756>
- King, B. (2019). *Communities of practice in language research: A critical introduction*. Routledge. <https://doi.org/10.4324/9780429283499>
- LaPointe, K. (2010). Narrating career, positioning identity: Career identity as a narrative practice. *Journal of Vocational Behavior*, 77(1), 1–9. <https://doi.org/10.1016/j.jvb.2010.04.003>
- Lysova, E., Richardson, J., Khapova, S., & Jansen, P. (2015). Change-supportive employee behavior: A career identity explanation. *Career Development International*, 20(1), 38–62. <https://doi.org/10.1108/CDI-03-2014-0042>
- McArdle, S., Waters, L., Briscoe, J., & Hall, D. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, 71(2), 247–264. <https://doi.org/10.1016/j.jvb.2007.06.003>
- McDonald, J., & Cater-Steel, A. (Eds.). (2017). *Communities of practice: Facilitating social learning in higher education*. Springer Nature. <https://doi.org/10.1007/978-981-10-2879-3>
- Mählck, P. (2003). Mapping gender in academic workplaces: Ways of reproducing gender inequality within the discourse of equality. [Doctoral thesis, Umeå University].
- Marra, M., & Holmes, J. (2002). Laughing on the inside: Humour and internal politics of the workplace. *Language in the Workplace Occasional Papers* 4, 4–15.
- Marra, M. (2012). Discourse analysis and conversation analysis. In C. Chapelle (Ed.), *The encyclopedia of applied linguistics*. Wiley-Blackwell. <https://doi.org/10.1002/9781405198431.wbeal0320>
- Marra, M., Holmes, J., & Kidner K. (2017). Transitions and interactional competence: Negotiating boundaries through talk. In S. Pekarek Doehler, A. Bangerter, G. de Weck, L. Fillietaz, E. Gonzáles Martines & C. Petitjean (Eds.), *Interactional competences in institutional settings: From school to the workplace* (pp. 227–251). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-46867-9_9
- New Zealand Productivity Commission (2020). *Job-to-job transitions and the regional job ladder*. Retrieved April 2, 2024, from <https://www.productivity.govt.nz/assets/Documents/local-government-insights-2/8c53ba315b/Job-to-job-transitions.pdf>
- Nolan, M. (2007). The reality and myth of New Zealand egalitarianism: Explaining the pattern of a labour historiography at the edge of empires. *Labour History Review*, 72(2), 113–134. <https://doi.org/10.1179/174581807X224560>

- Pyrko, I., Dörfler, V., & Eden, C. (2016). Thinking together: What makes Communities of Practice work? *The Tavistock Institute*, 70(4), 389–409.
<https://doi.org/10.1177/0018726716661040>
- Salanoa, H. (2020). *The communicative competence of Samoan seasonal workers under the Recognised Seasonal Employer (RSE) scheme*. [Doctoral thesis, Victoria University of Wellington].
- Shnurr, S., & Zayts, O. (2012). Be(com)ing a leader: A case study of co-constructing professional identities at work. In J. Angouri & M. Marra (Eds.), *Constructing identities at work* (pp. 40–60). Palgrave MacMillan.
<https://doi.org/10.1057/9780230360051>
- Slay, H., & Smith, D. (2011). Professional identity construction: Using narrative to understand the negotiation of professional and stigmatized cultural identities. *The Tavistock Institute*, 64(1), 85–107. <https://doi.org/10.1177/001872671038429>
- Stracke, E. (Ed.). (2015). *Intersections: Applied linguistics as a meeting place*. Cambridge Scholars Publishing.
- Stubbe, M. (2001). From office to production line: Collecting data for the Wellington Language in the Workplace Project. *Language in the Workplace Occasional Papers* 2, 2–26.
- Stubbe, M., & Holmes, J. (2000). Talking Māori or Pākehā in English: Signalling identity in discourse. In A. Bell & K. Kuiper (Eds.), *New Zealand English* (pp. 249–278). John Benjamins. <https://doi.org/10.1075/veaw.g25.14stu>
- Stubbe, M., & Ingle, M. (1999). Collecting natural interaction data in a factory: Some methodological challenges. *Murdoch Symposium on Talk-in-Interaction*.
- Sullivan, S., & Al Ariss, A. (2021). Making sense of different perspectives on career transitions: A review and agenda for future research. *Human Resource Management Review*, 31(1). <https://doi.org/10.1016/j.hrmr.2019.100727>
- Van De Mierop, D., & Schnurr, S. (Eds.). (2017). *Identity struggles: Evidence from workplaces around the world*. John Benjamins. <https://doi.org/10.1075/dapsac.69>
- Vine, B. (2018). *The Routledge handbook of language in the workplace*. Routledge.
<https://doi.org/10.4324/9781315690001>
- Vine, B. (2023). *Understanding discourse analysis*. Taylor & Francis Group.
<https://doi.org/10.4324/9781003184058>
- Wenger, E. (1998). Communities of practice: Learning as a social system. *The Systems Thinker*, 9(5), 1–5.

- Wendling, E., & Sagas, M. (2022). Career identity statuses derived from the career identity development inventory: A person-centered approach. *Psychological Reports*, 127(5), 2552–2576. <https://doi.org/10.1177/00332941221146703>
- Wiles, F. (2012). 'Not Easily Put Into a Box': Constructing professional identity. *Social Work*, 32(7), 854–866. <https://doi.org/10.1080/02615479.2012.705273>

Appendix: Transcription conventions (following Holmes et al., 2011)

[]: : Paralinguistic and editorial information in square brackets; colon

indicates start and finish

+ Untimed pause of approximately one second

//here\ Overlapping talk. Double slashes indicate beginning and end

/here\\

() Untranscribable talk

(think) Transcriber's best guess at an unclear utterance

- Cut off utterance

“Your Edits are Soo Friggin Good”: K-pop Fandom Identity Co-construction on a YouTube Channel

Christina Fallone

I investigate the role of humor as a tool for creating in-group identity in the online space, building on previous research in the areas of identity, online humor, fan studies, and global media studies. My data set is composed of fan-made YouTube comedic videos and their associated comments sections, centered around K-pop and the group EXO. This data allows me to consider the effect of Web 2.0 multimodal resources on community building in an international and intercultural context. I examine how a content creator edits these videos to discursively create multimodal humor and how the viewing audience collaboratively develops fan practices and identity. My findings suggest a range of mechanisms used by fans (including the content creator herself) to promote solidarity and localize global phenomena. I argue that Web 2.0 resources act as a driver of intercultural communication, and specifically note the impact of Hallyu in international virtual space. While locating my findings within the linguistic research on humorous multimodal discourse, social media, and digital fandoms, I aim to contribute to research on K-pop and Hallyu 2.0 that focuses on “what K-pop means to local fans and how they use it” (Choi & Maliangkay, 2015, p. 7), thereby emphasizing the importance of grassroots fan activities.

1. Exploring Identity Construction through Humor on YouTube

1.1 Why K-pop fandom?

I was once in a K-pop store with a friend to buy an album. We were chatting with the clerk, as fans do, discussing trading our K-pop merchandise. The clerk suddenly looked at my friend and asked her if she was also a fan. We both hesitate in answering as she has only just started listening to K-pop, encouraged by my obsession/enthusiasm. The clerk picked up on our hesitancy and said to her, “Oh are you not an album-buying fan? Just a listening fan?”

This experience and the interesting categories evoked by the clerk highlight the idiosyncrasies of fandoms and of K-pop fandoms in particular. Their existence and prevalence are arguably rooted in a value on participation/production and active consumerism that has melded seamlessly into prosumerism (Burgess & Green, 2009; Jenkins, 2006a): K-pop fans actively engage in buying albums and collecting merchandise, while also redefining what it means to be a ‘fan’, some forms of which do not include product consumerism at all. There are different levels of participation within any fandom. Therefore, I contend that the clerk was not intending to demean my friend for not being ‘enough’ of a fan but rather to gauge her level of engagement with K-pop content.

What, then, does it mean to be a fan? I know my friend considers me much more of a fan than her, but on what grounds? While buying physical albums to get the associated collectables is certainly a ‘die-hard’ fan practice, it obviously does not define fan identity, at least according to the clerk. Our conversation about different members of the groups, trading the collectables from the albums, and discussing which K-pop group was our favorite, all gave me the sense

that there were embedded dimensions which became symbols of a flexible fan identity status. While my friend was learning from me, where did I learn the terms, discourse styles, and necessary information to index my fan identity, as well as collaboratively produce that identity with the clerk at the store? These questions, these dimensions, and the relevance of community membership underpin the research I present here, mirroring in particular the path of my own journey into K-Pop fandom through the resource of YouTube and specifically YouTube fan-made videos.

Using fan video data, my goal in this dissertation is to analyze the ways in which K-pop fan identity is constructed and negotiated online through the use of humor, as a recognizable discourse and pragmatic marker for in-group identity and solidarity building (e.g., Holmes, 2000; Holmes & Marra, 2002; Knobel & Lankshear 2007; Marra, 2022; Newton et al., 2022; Shifman, 2014; Wang & Swann, 2014). My previous, preliminary research focused on K-pop fan edit pages as affinity spaces for community building and fan learning, exploring how commenters position themselves in relation to each other to negotiate identity and foster common interest (Fallone, 2021). My current study will extend these ideas to consider how the video and content creator contributes to this discourse, and how her choices are ratified and supported by the community.

1.2 Fandoms and the internet

To be able to undertake this analysis in a discourse frame, I begin by providing access to the contextual information that underpins my research, from the growing acceptance of K-pop as an international phenomenon to the specific role of social media for fans and related communities. I define my area of research as fans and fandoms, which have been a prominent area of research for some time now (Fiadotava, 2021; Hellekson & Busse, 2006; Jenkins, 2006a, 2006b; Jonsson & Muhonen, 2014; Knobel & Lankshear, 2008).

To set out a baseline definition of fan studies, Turk (2018, p. 539) describes the field as “a very large umbrella sheltering anyone, of any disciplinary background, who studies fans, fandom, or fannish activities”. Bednarek (2017a) and Turk (2018) both highlight that linguistically-oriented research centered around fandom is an underrepresented area and that “the study of fandom arguably represents an important new era for linguistic research” (Bednarek, 2017a, p. 546). While within linguistics a pragmatic approach is highlighted as a potentially rewarding avenue, the community and cultural aspects of fandom communities offer opportunities based on the additional tools provided by discourse analysis and computer-mediated discourse analysis (Adetunji, 2013; Baym, 2015; Bednarek, 2017b; Zappavigna, 2012). I align with this growing field as a discourse analyst (and fan) exploring K-pop fan practices and identity construction.

Fan identity is a complex concept, and often stereotyped in the media as being a “geeky or nerdy obsessed loner-fan”, but it is more productive to conceptualize fan identity in a positive light “as active and creative audiences... who build their own social identity and culture” (Bednarek, 2017a, p. 546). As those who seek out active engagement and consumption, it seems fitting that fans are some of the first adopters and most competent users of Web 2.0 social affordances and practices to facilitate the type of engagement that fans seek (Jenkins, 2006a, 2006b). The internet has “reshaped fan cultures and practices” (Bednarek, 2017a, p.

548), and my goal in this research is to explore how K-pop fans have and are participating in this transformation. I analyze the types of discursive tools these fans use to make these texts their own, specifically in the form of fan edits, and the discourses that are created through this process to co-construct their fan identity.

In 2006, prominent participatory culture scholar Jenkins (2006a, p. 142) pointed out, “as fandom diversifies, it moves from cult status toward the cultural mainstream, with more Internet users engaged in some form of fan activity”. This holds true today as fandom culture and internet culture are seemingly beginning to meld, influencing my selection of this fandom. As far as imagined communities¹ in the modern era go, I contend that the global K-pop fandom takes advantage of the affordances of Web 2.0 better than most other fandoms. Jung and Shim (2014, p. 486) describe K-pop as “one of the most dynamically distributed forms of pop culture in the global pop market through...social distribution networks”, referring to grassroots digital fandom networks. K-pop fans embody *participatory culture* (Jenkins, 2006a), and as a group they are situated at the intersection of several different types of fandoms.

One of the foci of these fans is the K-pop artists, known as ‘idols’. ‘Idols’ are singers and performers that have gone through the South Korean idol trainee program and debuted as a group or as a solo artist². As I will show, idols constitute semi-fictitious figures, being both real people but also carefully curated idealistic characters (Epstein, 2015). This means that the K-pop fandom blends together fictitious fandoms, such as Potterheads (Harry Potter fans) and Trekkies (Star Trek fans), traditional music fans and celebrity fandoms, with parallels to sports fandoms. Understanding this fandom means understanding how community, discourse, and intercultural communication interact and blend.

1.3 The Korean Wave (Hallyu)

It is crucial for my research to understand that K-pop is more than just an international music trend. It is part of a much larger movement labelled the Korean wave, or Hallyu, which refers to the “impulsive spread of South Korean popular culture overseas” (Song, 2020). Hallyu is an example of cultural globalization, which Androutsopolous (2010, p. 205) defines as the process of “increased circulation of cultural artifacts across national and ethnolinguistic borders”. In a global media landscape predominantly influenced by Western and Japanese products and popular media, South Korea has worked to carve its own spot in this landscape (Choi & Maliangkay, 2015; Song, 2020).

The first iteration of Hallyu began in the 1990s with the spread of Korean drama television broadcast shows throughout East and Southeast Asia (Jin & Yoon, 2016). Hallyu, as Western audiences know it, was catalyzed by the viral success of the song Gangnam Style by the Korean pop artist PSY. This music video (which spread like wildfire through YouTube) has been regarded as the definitive moment when the door was opened for K-pop in the US market (Lee, S.J., 2015). Thus began Hallyu 2.0, with an increased focus on social media as a marketing

¹ To use the terminology of Anderson (1983) or the ‘communities of imagination’ described by Wegner (1998).

² Within South Korea, there is a distinction between mainstream music and ‘idol music’ (pop songs performed by idol groups and solo idols). In the West, K-pop is used synonymously with all Korean pop music.

and exposure tactic for entertainment agencies in Korea (Hwang & Epstein, 2016). Ahn (2011, p. 85) highlights that “the driving factors behind the New Korean Wave are largely user led and spurred by the active participation and evangelism of local fans”. This is a prime example of convergent culture, where “corporate convergence co-exists with grassroots convergence” (Jenkins, 2006b, p. 18). The entertainment companies provide original content through their idol promotions and music videos, which then in turn becomes materials that fans can rework to create uniquely fan-controlled cultural artifacts and core generators for the fandoms (Jung, 2015; Lee, S. J., 2015). In academic terms, original content is provided in a top-down corporate-driven fashion, and then reworked and distributed in a bottom-up consumer-driven process (Jenkins, 2006a). K-pop is unique in the size and scope of these convergent culture processes, making its study increasingly important in understanding modern online interaction. This motivates my research and my interest in examining the discursive identity construction involved.

The ability of fans to gather online and create their own media content nurtures current international K-pop fan culture. Mannheim and Tedlock (1995) describe culture as “emergent through dialogical processes” (Bucholtz & Hall 2005, p. 587). I argue that K-pop culture is emergent through the dialogical process of diverse international fans in the online sphere contributing to the fandom as an imagined community (see Shim & Noh, 2012). I follow Bakhtin (1981) in viewing culture as “produced as speakers draw on multiple voices and texts in every utterance” (Bucholtz & Hall 2005, p. 587). My research highlights how K-pop fans must draw on multiple identities to ‘do’ K-pop fan cultural membership through ‘memer’ identity, music fan identity, Korean cultural knowledge, Korean language knowledge, Korean popular media knowledge, and consumer identity. I argue that the social site YouTube offers a ripe context encapsulating this behavior.

1.4 Thesis statement

In sum, K-pop fan groups (a.k.a. fandoms) commonly use the website YouTube as a social networking site to connect members. YouTube channels serve as spaces where members of the imagined K-pop community share knowledge and define group membership, often through viewing and engagement with humorous fan-made videos (Fallone, 2021). The videos and the interaction around these videos become generators and propagators for indexical meanings emergent from the humorous discourse as salient for group members, and sometimes only core group members. These meanings require knowledge not only of Korean pop music, but in-depth knowledge of the music idols, Korean linguistic resources, as well as Korean culture and popular media. An individual can claim a K-pop fan identity and be recognized as a legitimate group member by obtaining knowledge of these indexes through online engagement with the community and with community-produced cultural artifacts.

2. Multimodal K-pop Data for Analysis of Humor

2.1 K-pop fan data selection

The multimodal data I explore in this paper is taken from a YouTube page centered around the K-pop boy group EXO. EXO is a 9-member group formed in 2012 by South Korean entertainment agency SM Entertainment (Ahn, 2011). As outlined in Figure 2.1, the members

of the group consist of Kim Junmyeon (Suho), Kim Minseok (Xiumin), Byun Baekhyun (Baekhyun), Kim Jongdae (Chen), Park Chanyeol (Chanyeol), Kim Jongin (Kai), Zhang Yixing (Lay), Do Kyungsoo (D.O.) and Oh Sehun (Sehun). Names in parenthesis are their official stage names typically used by the K-pop community and the general public. Their official fandom name is EXO-I, bequeathed upon the fans by the company and group.

EXO is considered an incredibly successful group, and the members are recognized as Hallyu stars (Jin, 2018; Jung & Shim, 2014; Oleszczuk & Waszkiewicz, 2020). They are also seen as an extremely diverse and powerful group, often influencing fashion trends and standing out in their subversion of gendered identities through performance and clothing (Oleszczuk & Waszkiewicz, 2020). They are a product of the oldest and largest entertainment in South Korea, SM, which is also a leader and pioneer for Hallyu (Ahn, 2011; Jin and Yoon, 2016; Jung & Shim, 2014).³

Figure 2.1

EXO members



The YouTube page I analyze is “yep4andy”⁴. I consider it to be a prime example of an international fandom account. Yep4andy is a Ukrainian-based content creator whose bio states “hi I’m andy and I make videos (mostly about exo lol)”. The page was established in 2015 and currently has just over 128 million cumulative views. Her total number of subscribers, as of December 2022, is close to half a million.

³ I want to acknowledge that the perspective I take is a purposefully positive one. With this paper, I am not claiming that being a K-pop fan is all ‘sunshine and roses’. Idealistic beauty standards, obsessive behavior, and consumer mindsets all plague K-pop fans (Tresna et al., 2021), much like other fandoms that involve celebrity worship and parasocial relationships (Maltby et al., 2004), if not more so. This becomes apparent in the case of K-pop fans because of the extreme idealistic (and unrealistic) beauty standards of idols (Tresna et al., 2021) and South Korea more generally. Like any study of fandoms, the fan experience is never universal (Hellekson 2018), and my emic understanding comes from my unique fan experience. In my evolution as a K-pop fan, I have aimed to make use of my meta understanding of constructed beauty within the K-pop industry as well as awareness about the pseudo-fake personalities and commoditization of these idols. My goal within this research report is not to comment on the ethical and societal implications of K-pop and idols on society, but to highlight how K-pop fans enact community online and the positive effects of how humor is used as a solidarity tactic and bonding tool.

⁴ <https://www.youtube.com/@yep4andy/about>

2.2 Fan edits as multimodal data

On this account, yep4andy produces a type of comedic edited video commonly referred to as a ‘fan edit’. These videos are edited clips of official K-pop group content, often highlighting a certain feature of the group or adding comedy with the use of editing tools and techniques. Most material for K-pop fan edits comes from interviews, variety shows, talk shows, vlogs, and social media live streams. I conceptualize yep4andy’s fan edits as a form of multimodal ‘fan fiction’, a fan-produced text that is fictional in nature but is based on canon⁵ source material in which both official media and fan narratives are combined to create uniquely fan cultural artifacts (Booth 2017; Hellekson & Busse, 2006; Jenkins, 2006a). Booth (2017, p. 71) states that fan fiction, and by extension fan edits, are themselves “a way of ‘playing’ at professional writing, or playfully subverting the copyright of a commercial product for noncommercial fun.” Arguably then, fan edits as a form are inherently contextualization cues in and of themselves to signal a play frame.

A focus on humor and participation recognizes that fans are active engagers in play and play frames (Nybro Petersen, 2022). In line with their central position within participatory culture, fandoms can thus be conceptualized as playing communities (Nybro Petersen, 2022). This is in line with the notion that the internet itself inherently sits in a humorous frame (Weitz, 2017), making playful fan practices an important area of study for any scholar interested in participatory culture and/or fandom. I analyze these videos with the understanding that the fandom audience recognizes the play frame this video is situated within and is predisposed to finding the video humorous. Sherzer (2014, p. 738) comments that “play often involves culture exploring and working out both its essence and the limits of its possibilities”. The humor they provide is a lens into the fandom culture.

Online comedic videos often use the technique of ‘recombination’ which describes “the ability for multiple cultural codes to be recombined with them and through them” (Gurney, 2011, p. 3). Fan edits fit the category of ‘recombinant’ comedy, which makes them an interesting site of study for identity. The videos in my dataset are examples of entextualized text in Web 2.0. Entextualization is a two-fold process; of “decontextualization—taking discourse material out of its context—and recontextualization—Integrating and modifying this material so that it fits in a new context” (Leppänen et al., 2013, p. 7). This process has been studied by numerous scholars to explore fandom, memes, and internet culture (Androustopolous, 2010, 2014; Boutman & Briggs, 1990; Jenkins, 1992; Leppänen et al., 2013). Investigating sharing practices online, Androustopolous (2010, p. 5) states that “the perspective of entextualization emphasizes the detachment of discourse from its original situational context and the recontextualization of the resulting text in new sites of discourse”. Studying internet texts that use this process becomes important as the creators are showing discursive literacy through coherent decontextualization and recontextualization (Androustopolous, 2010; Bauman & Briggs, 1990; Leppänen et al., 2013).

⁵ Canon in a fan community derives from the term canonical. It usually refers to the officially recognized events that occur in the source media universe (Hellekson & Busse, 2006, p. 9).

2.3 International audience

For a page dedicated to a single topic, audience is an important consideration. I interpret yep4andy's page to be an international EXO fan page. My understanding that these videos are expressly intended for an international or overseas EXO-I fandom comes from the use of the internet lingua franca of English (Shifman, 2014), appealing to a large audience of overseas fans. While the original content is in Korean, yep4andy uses English subtitles for translation, often still retaining the Korean language subtitles that are part of the shows or vlogs that they come from⁶. The videos are typically edited so that scenes change quickly or are cropped so that all the Korean subtitles are not shown. Both this and the primary use of English subtitles suggest that the Korean subtitles and audio are not intended for the audience to understand and for the most part disregarded. Yep4andy also adds 'fake' subtitles, mostly for humorous effect and marked as humorous or fake (with * or through a variety of stylistic text choices) for the audience. When a fake sub overlaps with Korean audio, it becomes apparent that yep4andy's audience is English-speaking and is assumed to not understand Korean.

2.4 Analytic process

Yep4andy's page was chosen for several reasons. I measured its popularity based on established YouTube markers, such as view count, number of likes, and number of comments on the videos (Burgess & Green, 2009; Weitz, 2017) while also taking my own ethnographic knowledge of well-known K-pop fan pages into consideration. As a K-pop fan and EXO-I myself, this is a channel with which I am familiar and regularly engage.

My dataset includes 4 key videos and their accompanying comments. This amounts to 24 minutes and 272 comments, a relatively compact yet large dataset for in-depth multimodal analysis (Norris, 2019). The first video was chosen as it is the most watched and most liked video on the page. This was found using the popularity sort feature that YouTube offers for organizing uploaded videos. The second and third videos were in the top 5 most viewed videos which included all members of the group. The fourth video was chosen as a continuation of my previous research on this page (Fallone, 2021).

Table 2.1.

Key information on videos for analysis (as of December 2022)

Video Code	Video Title	Upload Date	# of views	# of comments	Link
Video 1	<i>just EXO being EXO and ending every TV show ever</i>	Feb 18, 2019	6.5 million	6,448	https://youtu.be/kfDLPtseu0k

⁶ Which are more regularly used than we might expect in English speaking countries (Epstein, personal communication)

Video 2	<i>Just another day in EXO's practice room</i>	Dec 5, 2018	5.1 million	3,746	https://youtu.be/gQZzNEIFmTs
Video 3	<i>it's always a fun time when EXO are together</i>	Dec 28, 2018	3.3 million	2,469	https://youtu.be/XTvhWIDg4n4
Video 4	<i>what happens when EXO goes outside</i>	Mar 12, 2019	1.3 million	2,474	https://youtu.be/al4GwZgnHno

An additional consideration was the type of original content that yep4andy uses for the edits. Two of the videos come from an EXO vlog (video blog), one of the videos comes from an Instagram live stream, and one video is edited from a popular variety show that EXO appeared on. I argue that the different styles of video reflect different performances of the idol identity, a focus which emerges as particularly salient in my analysis. While still corporately produced, the appearance of idols on variety shows and vlogs offers a “purportedly more candid picture of the entertainers as real people by focusing on aspects of their personalities or life stories that the audience can readily empathize with” and allows the idols to “compensate for the aura of unreality Korea’s “idol worship” paradigm instills” (Shin, 2015, p. 138). Instagram Live, on the other hand, is promoted as being not a corporately produced piece of idol media and thereby allows us to see a potentially more naturalistic portrait of each idol.

While the audience is aware of the performative aspect of the reality shows (see Sinkeviciute, 2015), the live offers yep4andy and the fandom a chance to see the idols engaging in purportedly unscripted behavior, which mostly encompasses acting ‘goofy’ in a backstage setting (see Goffman, 1969). By choosing a variety of source material edits, I am able to analyze a wider variety of yep4andy’s editing techniques and different modes of comedy as she styles her videos to cater to the different genres of video.

2.5 Ethics

Since the beginning of research on social media, the ethics of using data pulled from these sites has been under constant evaluation (Kerry, 2019; Spilioti, 2017; Webb et al., 2017), including ethics within fan research (Booth, 2018). My own research will follow the precedent set by Kerry (2019) and Marra and Morrell (2021) in considering YouTube as publicly available data without a paywall, considering also the privacy statement as outlined in YouTube’s terms and conditions.

YouTube terms before December 20th, 2019 state that by posting anything to YouTube, the uploader of the video and authors of the comments are consenting to having their content used as publicly available data. Kerry (2019, p. 103) highlights that “participants are likely to expect an unknown but potentially large audience to be able to access what they have written”. This point is echoed by Locher and Messerli (2020) in their study of timed comments on an open-access Asian TV drama viewing site. Their rationale is that “since viewing comments is not restricted and openly accessible”, it is permissible data to use “with respect to research ethics” (Locher & Messerli, 2020, p. 26). Although this may be the case, basic

ethical considerations will also be taken into account. From my comments, I am omitting all usernames and profile pictures to protect the privacy of the commenters.

Having established my dataset, I move to the theoretical approach used to analyze the fan edits.

3. Humor and Identity in Interaction

3.1 K-pop fan identity co-construction

Fandom studies demand an approach that combines ideas from diverse disciplines in order to more fully understand evolving audience communities (Turk, 2018). The challenge in my approach is to adequately address issues of identity, humor, globalization, and multimodal communication.

In conceptualizing fan identity, and specifically the role of humor practices in the co-construction of identity, I follow the influential set of principles outlined by Bucholtz and Hall (2005, 2010) labelled a “sociocultural linguistic approach”. These five principles (emergence, positionality, indexicality, relationality, and partialness) anchor identity as a discursively constructed phenomenon. By applying an approach that focuses on identity as emerging through indexical processes and as a product of the joint agency of social actors, my goal is to better understand how global K-pop fandoms ‘define’ themselves. The theoretical approach recognizes that this is achieved via the means of salient indexicalities. It similarly accounts for context, allowing me to focus on the constraints and affordances of my chosen online discursive arena.

Bucholtz and Hall’s (2005) five principles explore different facets of the identity construction process: the emergence principle describes identity as discursively produced and emergent in interaction; the positionality principle outlines the process of social actors taking up temporary identity categories, stances, and roles to position themselves in relation to others; the indexicality principle states that identity emerges through indexical processes that rely on the shared understanding between interactants of important indexical meanings; the relationality principle describes how identity can only be oriented and constructed through complementary and overlapping relational processes; and finally, the partialness principle emphasizes that all identities are produced in part intentionally and in part subconsciously, dependent on different contexts and social goals. This makes identity inherently dynamic.

Bucholtz and Hall’s framework has been used extensively by scholars investigating the discursive construction of identity, often with an emphasis on one or more of the principles. For example, Tanskanen focuses on the principle of indexicality in data from an online student discussion thread and “how participants indicate their own and others’ identity positions in interaction” (2018, p. 134). Tanskanen frames identity as negotiated and co-constructed, with special attention paid to the computer-mediated nature of identity, much like I do. By contrast, Enzweiler (2018) highlights the importance of the relationality principle in his research to examine how identity must be co-constructed by multiple social participants and cannot be an autonomous process. Similarly, Mollin (2018) foregrounds the relationality principle in her analysis of the construction of in-group and out-group identity in political

debates through consideration of the ways in which members of opposing sides create boundaries in relation to each other.

While I engage with all five principles in my analysis, I place greater emphasis on the principle of indexicality in investigating in-group humor and identity co-construction. In examining the videos in my data set, I recognize the audience and creator as social actors, but also the idols themselves as constructed by the fandom. I also give analytic priority to the principle of relationality as it pertains to authentication/genuineness. To complement this, I use Coupland's (2003) concept of authentication in order to understand how an expert content creator's claims of K-pop knowledge and the construction of idol identity are authenticated by the audience. The relevance of authenticity to identity takes prescience when we understand authenticity as involving a culturally-based understanding definition of what is authentic and how that authenticity is negotiated in a given situation (Kirner-Ludwig, 2018).

In terms of my analytic practices, humor has been selected as the primary focus for exploring indexicalities. As stated previously, the de facto play frame the internet finds itself in makes shared humor important in indexing group identity. Interestingly, this does not mean that all humor is necessarily a positive part of this construction, but rather that its role and function are necessarily nuanced and changing; the multifarious and multifunctional nature of humor is well documented (see Marra, 2022). For example, Mullan (2022) specifically investigates the more negative effects of social media and community building. She examines how humor is used for inclusion and exclusion and signals belonging in the community. Importantly, in citing Tanskanen (2018, p. 96), Mullan reminds us (2022, p. 96) that we should pay attention to "how the humor shapes the identity of the group through the members' shared ideologies and beliefs."

While I approach the research through a linguistic and discursive lens, in the participatory web we need to reimagine what 'talk' means (Nybro Petersen, 2014) and to adopt a multimodal perspective on discourse (Norris, 2019; Scollon & Levine, 2004). At a base level, I understand multimodal objects as calling upon multiple modes (sound, picture, text, and so on) to achieve a specific communicative function, and that the goal of multimodal studies is "to investigate how meaning is derived through the interaction of language with other multimodal resources" (O'Halloran et al., 2014, pp. 239). For internet research, multimodality is becoming a standard approach: In his study on image macro memes, Yus (2019, p. 106) states that "multimodality is becoming increasingly important nowadays due to the pervasiveness of discourses on the internet that combine different modes of communication". This is especially pertinent on video sharing sites like YouTube.

3.2 YouTube as a discourse arena

Launched in 2005, YouTube is a social networking site, which I define (again following Androutsopolous, 2014, p. 62) as "a bounded communication system that enables the formation of social networks among registered participants and affords them various tools for representation and interaction". YouTube has become one of the most important sources of social and multimodal data since its release (Benson, 2017; Burgess & Green, 2009). Combining multimodal communication, social media affordances, prosumerist practices, and

digital community building, it is a key player in the digital landscape of the modern age (see Benson, 2017 for a full overview).

While much of Web 2.0 discursive research has focused on social media sites like Twitter (Zappavigna, 2011, 2015) and Facebook (Androutsopoulos, 2014; Fiadotava, 2021; Mullan, 2022; Newton et al., 2022; see Weitz, 2017 for an overview), I focus on YouTube because of its particular importance within the K-pop sphere; Jung and Shim's study of Indonesian K-pop fans find it to be "a crucial driving force behind the social distribution of K-pop" (2014, p. 493). YouTube "epitomizes the complexity of modes and media that has by now become the new standard on the participatory web" (Androutsopoulos, 2013, p. 50). One of the additional benefits of YouTube that is particularly conducive to a fandom context is that "its low barriers and the user support it provides in terms of its interface design facilitate "easy entry into the community and legitimate engagement even at the periphery" (Chau, 2010, p. 68 as cited in Androutsopoulos, 2013, p. 49).

YouTube has been the center of many studies concerning community, globalization, and identity, from across a range of academic disciplines. For example, Leppänen and Häkkinen (2012) examine how videos use subtitling and editorial commentary to "entextualize and resemiotise the figure of the Other to western audience" (2012, p. 1). They highlight the way that YouTube practices (described within the category of social media practices) "are increasingly characterized by processes of superdiversification" (Leppänen & Häkkinen, 2012, p. 2).

Similar to my research goals, Sanderson (2022) chooses a cooking YouTube channel to examine how humor sets community boundaries. Through a multimodal analysis, he identifies that the videos signal the channel's audience as having multiple overlapping layers of imagined communities. My own research exploring an alternative type of comedic YouTube video will add to these conceptions of humor as a dialogical process to index identity and community membership.

Like other scholars, I also subscribe to the idea of audience members as co-constructors of identity. The comments sections are crucial spaces for user engagement and, as such, have become an important site of CMD analysis and virtual community research. As an example, Dubovi and Tabak (2020) take an empirical approach to analyze a small corpus of comments, searching for knowledge of co-construction moves. They argue that YouTube creates the opportunity for collaboration and sustained learning. In analyzing user comments, Tanskanen (2021) investigates lexical cohesion and the way commenters enact meaning-making in a mediated and multimodal context. Importantly, she demonstrates that "the video and the comment interaction are not separate entities" (Tanskanen, 2021, p. 9). They are arguably connected and interactionally work together to, for example, co-create a cohesive in-group identity as is the focus of my own study.

Each of these studies has contributed to my thinking and choices in adopting a multimodal lens for investigating YouTube videos, user comments, and as I go on to discuss, the centrality of humor within these interactions.

3.3 Web 2.0 and humor

As online communication has evolved, the internet has transformed humor in two overarching ways: format and scope. Developing forms of online humor are increasingly multimodal (relying on visual/audiovisual modes) and quickly disseminated globally (Shifman, 2014).

One of the most visible new forms is memes, embodying both multimodality and transmissibility. Memes have slowly become a dominant form of internet humor, studied in terms of multimodal humor (e.g., Dynel, 2016; Vásquez & Aslan, 2020), cyberpragmatics (e.g., Yus, 2019), virtual community building and solidarity (e.g., Fiadotava, 2021; Newton et al., 2022), literacy (e.g., Knobel & Lankshear, 2007), and critical studies (e.g., Souza-Leão et al., 2020). Most importantly for virtual communities, memes “have been found to play an important role in collective identity formation” (Newton et al., 2022, p. 1). As memes are transformed and shared “the users create a sense of belonging to a group, even when the members of that group remain anonymous” (Arab & Milner Davis, 2022, p. 6). Newton et al. (2022) examine memes as a tool for group bonding and belonging. They analyze memes found on a Facebook page as semiotic artifacts “which foreground shared feelings and invite alignment” to see how they create a sense of belonging in the virtual community and conceptualize them as “bonding icons” (2022, p. 1). Importantly they demonstrate how “getting” the meme strengthens an individual’s affiliation to the collective identity” (Newton et al., 2022, p. 10). As I demonstrate in the data analysis, memes are a common way in which the fans access shared norms and practices.

Mememes are prototypical of globalization that is possible through internet humor. Fiadotava (2021) reports an analysis of a global fandom Facebook page, exploring how memes are used as a bonding factor to show a “shared sensibility” (2021, p. 259). Fiadotava’s study highlights the importance of online interaction and joking for fandom communities. The new age of participatory culture allows global fan bonding, gathering, and activities, and facilitates easier interaction with the people and objects of the fandom. Humor is particularly important in fan communities as it “often lends further engagement to the experience and receives a positive response from fellow members of the online community” (Fiadotava, 2021, p. 262, e.g., Kytölä 2012). Her observation that it is “next to impossible to be an active football fan without engaging in online activities” (2021, p. 261) holds true for K-pop, as fan activities and content are firmly rooted in social media platforms and YouTube (Jin & Yoon, 2016).

3.4 Identity and humor

To analyze these practices and online identities, I take an approach to identity analysis that is grounded in the interactional process surrounding humorous discourse. At a basic level, “humor is associated with interpersonal functions and with the expression and negotiation of identities” (Wang & Swann, 2014). Whether it occurs in a casual conversation, television sitcom, YouTube video, or standup show, the identities of the audience and the comic performer are central to the comedy and inversely comedy becomes a key tool for identity co-construction between these entities (Lockyer, 2015). Successful humor depends upon sharing an in-group identity as it “needs to draw upon shared knowledge of cultural forms and societal norms to function” (Gurney, 2011, p. 5). This is evident when we examine how

people in specific interactional contexts, such as in the workplace, tell jokes or enact humor support in order to foster solidarity and in-group identity (see, for example, Hay, 2001; Holmes et al., 2011).

Over the years, humor in the workplace has been a fruitful site for research on socialization, identity co-construction, and group belonging (see Mak, 2017). Important to my own research, this stems from the constant development and expansion of the analytical approach of Interactional Sociolinguistics (IS), which is foundational to my analysis of interactionally grounded identity co-construction (see also Holmes et al., 2011). In parallel to the workplace, I argue that fandom culture is specialized, constructed, and peer-taught. Fandoms often function much like a workplace in which fans and content creators organize, mobilize, and accomplish goals together, doing promotional work and supporting the idols in their careers (Lee, S.A., 2015). New and established fans are constantly navigating (new) indexicalities and (re)negotiating norms and behaviors through humorous, collaborative practices.

Fan norms are of particular importance because appropriate versus inappropriate fan behavior is closely monitored by the greater fandom community and is crucial in being considered a legitimate (peripheral or core) member (Wenger, 1998). Shared humor is “an important ingroup/outgroup boundary marker” (Holmes, 2000, p. 272). As Weitz argues (2017, p. 206), “The dynamic between in-groups and out-groups constitutes the social fulcrum for the humor transaction and supplies at least one means for finding allies and nurturing solidarity with them.” In Web 2.0 contexts, fan norms and behaviors are central; while these behaviors are traditionally learned through conventions and in-person gatherings, they are now negotiated in the online sphere (Coppa, 2006; Hellekson, 2018). Fans can deploy humor in online spaces in place of in-person gatherings and meetings.

3.5 Research questions

The studies outlined above offer a useful theoretical/analytical background to my own, placing the fan video as the focus and examining how shared meaning is ratified and legitimized between the content creator and the commenters. I view fans as prosumers, where “user agency is increasingly defined in terms of production and less in terms of consumption” (van Dijck, 2009, p. 46). The joint production and consumption of material related to fan items creates a sense of identity that not only attracts potential fans but is also an active part of making them stay (Nybro Petersen, 2022).

This summary has traversed many disciplines and literature in order to recognize the complexity inherent in analyzing fandoms like the EXO-I community. To analyze these complex modes and media, I will closely examine a YouTube content creator’s use of humor to create their own and others’ fan identity, and also explore audience practices of ratifying and contributing to this identity. To do this, I ask the following questions:

1. How does yep4andy use indexicalities to create humor (across modes)?
2. How is fandom co-constructed on the page?

My overall approach analyzes how humor is used to co-construct global K-pop fan identity through multimodal artifacts, supported by audience reactions and responses in the YouTube comments.

4. Salient Indexicalities Using Multiple Modes

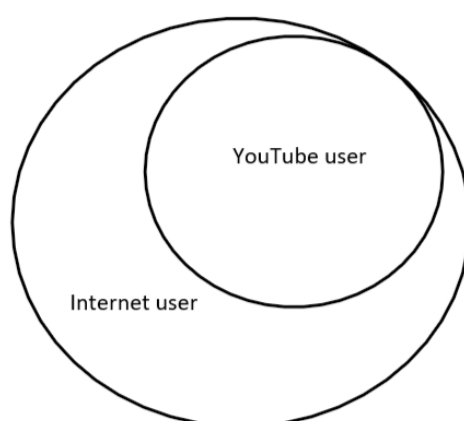
Yep4andy uses a variety of multimodal editing tools to construct a diverse set of solidarity building humorous styles. The humor signals both her own membership of the fandom and that of her audience. This involves operating at the intersection of several overlapping ‘imagined communities’ (see Anderson, 1983) from fandom, to K-pop, to internet users more generally. In this section, I undertake a close analysis to identify the indexical tools and resources she uses to form the basis of her identity as an EXO-L content creator on YouTube.

The principle of indexicality is particularly relevant when looking at humor construction in her videos. Bucholtz and Hall (2010, p. 21) list several “indexical processes”, with the most relevant for this analysis being “overt mention of identity categories and labels”, “implicatures and presuppositions regarding one’s own and others’ identity position”, and “the use of linguistic structures and systems that are ideologically associated with specific personas and groups”. In relation to this last point, I refer back to the multimodal view expanding linguistics to encompass multiple modes of communication. All of these processes can be seen to play out throughout yep4andy’s humorous videos.

The four videos in the data set differ in content and types of jokes. There are, however, several stylistic choices that are consistent throughout. I contend that these consistencies, in part, reflect the broader internet context. Figure 4.1 illustrates the first set of identity categories that emerge both from the literature and from my analysis, namely Internet users and YouTube users. Here I unpack these as nested global and ‘local’ communities (conceptualizing this to accommodate the virtual setting ‘site’ of YouTube as a ‘place’ where people gather locally) (Androutsopolous, 2010; Blommaert, 2005). In similar representations (Hugman, 2021; Marra & Morrell, 2021; Sanderson, 2022), these models embrace the notion of layered simultaneity (Blommaert, 2005) which recognizes that contexts (and by extension identity indexicalities) are at play concurrently, whether consciously or subconsciously; we balance our choices based on the constraints of the overlapping layers.

Figure 4.1

Identities constructed within the embedded layers of yep4andy’s YouTube page



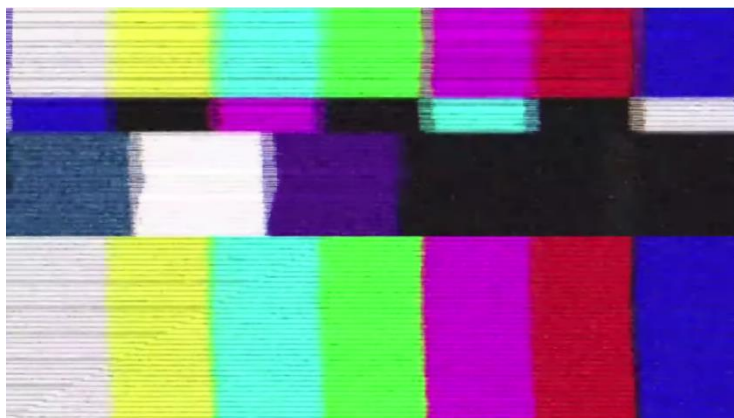
4.1 YouTube conventions and global pop culture references

One of the ways in which yep4andy signals her status is the use of normalized and recognizable YouTube editing tools, including transitions, soundbites, and memes. In doing so, she authenticates her place within the wider YouTube community.

The first example (Example 4.1) illustrates the use of a transitional edit. It consists of a frame of TV test screen static which is regularly interposed within clips, typically acting as a boundary-creating mechanism (see Holmes et al., 2013) between disparate content and joke segments, and arguably functioning as a discourse particle signaling a shift in topic (cf. *okay* in utterance-initial position in spoken interaction e.g., Marra, 2003). This feature is common in YouTube videos in general (see also Sanderson, 2022), allowing yep4andy to index her place as a YouTube content creator.

Example 4.1

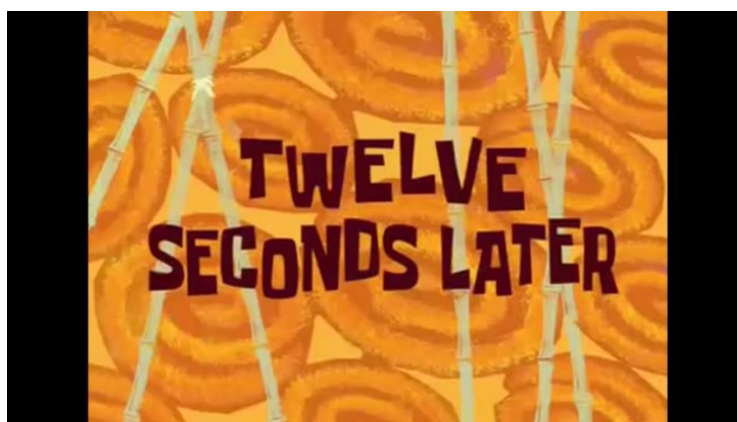
Test screen static



This transition connects the edited scenes in a uniquely multimodal way. Other transitions include internet meme images and sounds, each demonstrating the ‘convergent culture’ of standardized YouTube practices as argued by Jenkins (2006b). A recognizable example of this found across the platform is the use of SpongeBob timecards with the narrator voiceover as seen in Example 4.2.

Example 4.2

Twelve seconds later (https://spongebob.fandom.com/wiki/List_of_time_cards)



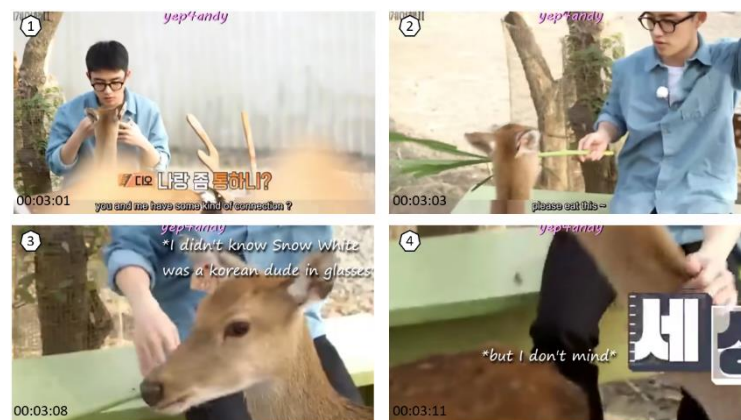
Yep4andy's use of SpongeBob transitions demonstrates meme competency (see Sanderson, 2022 for SpongeBob online popularity on another YouTube channel) and exemplifies how she "combines multiple cultural codes" (Gurney, 2011, p. 3) to create a comedic recombinant video. Even if a viewer is not familiar with SpongeBob, the episode timecards are used frequently online (Know Your Meme, 2012) and illustrate the embedding suggested in Figure 4.1. I also argue that these timecards and their connection to memes and internet humor specifically function as an index of a play frame (see Berger, 1987; Coates, 2007), reinforcing humorous interpretations of the video.

In addition to these primarily visual editing cues, yep4andy uses recognizable YouTube sound bites and memes. As noted in Example 4.2 above, the SpongeBob timecard is usually paired with the original audio narration which has become a meme in its own right. Elsewhere she applies cartoons like sound effects and salient song clips (see, for example the clips in Examples 5.1, 5.2 and 5.4). Each of these sounds has meaning in internet and YouTube space, and numerous sites offer access to the sounds for creators specifically for these purposes (e.g., ItsFrida, 2018). The use of these tools, and their recognizability to the YouTube community, contributes to yep4andy's identity as a competent content creator and an active member of the community, positioning herself within the YouTube space.

In addition to the technical editing aspects of her videos, yep4andy also makes use of well-known, global popular culture tropes and icons to create meaning. This not only allows a K-pop fan audience to engage with the material but also has the potential to appeal to audience members who are not EXO-Is, encouraging them to feel included as legitimate peripheral members (Wenger, 1998).

Example 4.3

Video 4 - Snow White



The joke in Example 4.3 references Snow White (panel 3), a global icon. The Snow White in question is assumed to be the Disney version, evoking the image of a gentle princess surrounded by forest animals (panels 1 and 2). Jenkins (2006a, p. 157) makes the observation that “there is probably no place on the planet where you can escape the shadow of Mickey Mouse”, and this clip is good evidence of the pervasiveness. Yep4andy uses a cultural reference that appeals to a large audience: audience members who are not that familiar with EXO will still understand the humor in the juxtaposition of the European princess and the Korean K-pop idol. Almost contradictorily for EXO-fans, the joke gains additional salience not in the difference, but in the similarity between the two; it plays off the mainstream fan stereotypes of D.O.’s personality as being quiet and gentle/cute (explained later in this analysis). Panel 4 ratifies D.O.’s personality as being desirable by saying **but I don’t mind** which I view as allowing non-fans to understand the approved idol persona.

The deer emerging as a kind of in-video memetic template was found throughout Videos 1 and 4 (as will be demonstrated in upcoming examples). I argue also that deer begins to reflect Zappavigna’s (2012) findings that memetic templates let the audience insert themselves into the scene. Yep4andy utilizes this template to make accessible jokes, to be seen again in Example 4.4, where yep4andy uses teasing behavior to showcase her fan identity and familiarity with the idols. Boxer and Cortés-Conde (1997) describe the functions of teasing as biting or bonding. Here I argue it is reminiscent of bonding used between close acquaintances or family (Adetunji, 2013, p. 150), noting the perceived intimacy with the idols created for both yep4andy and us as viewers.

In this next example, yep4andy uses the deer to create broadly understood humor that has no direct reference to the idols or cultural references.

Example 4.4

Video 1 - What zoo are they from?

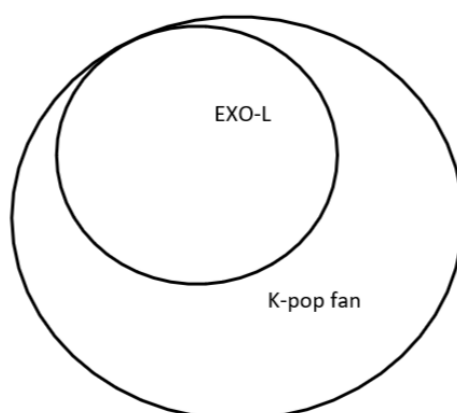


These examples constitute a form of teasing which is used frequently throughout her videos. Yep4andy is able to utilize the ‘actor’ of the deer to deliver the humorous message. The deer has a ‘blank face’, which has been argued elsewhere to be a physical marker of irony (Giora & Attardo, 2014), indicating non-seriousness on the part of the deer and creating humorous sarcasm for yep4andy.

This example clearly highlights yep4andy’s ability to create multimodally-constructed, universally-accessible humor. Even though no direct reference is made to K-pop or to EXO, the audience can extrapolate idol behavior and personalities.

4.2 K-pop indexes

While these general examples show yep4andy’s place within the global context of the internet and on YouTube within the internet context, much of the comedy comes from the K-pop and EXO-I specific group indexes, which we began to see in Example 4.3. As the YouTube page is explicitly centered around the group EXO, a second set of identities emerges from the video: K-pop fan and EXO fan (EXO-I). These are shown in Figure 4.2.

Figure 4.2*Hallyu layers of communities indexed by yep4andy*

As well as creating meaning for her audience, yep4andy's own identity emerges in this video as one versed not only in YouTube content creator expertise but also in the expertise of an EXO fan and through engagement with the 'collective intelligence' (Jenkins, 2006a, 2006b), or cumulative knowledge, of the greater K-pop fan community. Within these videos, contextual knowledge of EXO's position and relationships within the industry emerge as salient in-group indexicalities. This includes references to other groups related to EXO, their status as successful idols, and their relationship with their management company.

In the following two examples from Video 4, yep4andy mentions the K-pop group SHINee, the predecessors to EXO within the SM entertainment agency.

Example 4.5*Video 4 - we prefer shinee*

To begin this example, the idol, Chanyeol is enjoying and engaging with the deer, fondly referring to them as *kids* (panel 1). He then appears overwhelmed (evident in his body

language and facial expression) and backs away (panel 2). Yep4andy uses this opportunity to insert fake subtitling furthering the narrative of the scene in her own way, much as fan fiction builds upon the original material of a book or TV show (Booth, 2017). When yep4andy, using Chanyeol, says **I don't want kids anymore** (panel 3), it seems to be referencing his previous statement. The deer (as fictional entities) then state **we prefer shinee anyway** (panel 4) in reaction to being 'disowned'. This example shows yep4andy's knowledge of K-pop culture and particularly, of acts associated with EXO. She uses banter (Haugh, 2017) to allow the deer and Chanyeol to share a moment of intimacy and build the relationship between the proxy fan and the idol. This is repeated in Example 4.6.

Again, yep4andy draws on contextual knowledge about SHINee and EXO to joke that the deer do not actually want to follow Baekhyun (panel 5), but that Baekhyun could introduce them to a SHINee member, Taemin (**he said he knows Taemin** in panel 6). She uses the fan knowledge that SHINee is the older, more established, and arguably more famous group, to joke that the deer are just using EXO for their connections (which becomes humorous when thinking that the deer is using one very famous group to get to another group). This Taemin joke functions as what is known in stand-up as a 'callback', referencing again the earlier SHINee joke, in which it was established that the deer *prefer shinee anyway*. Callbacks let the audience feel as if they are part of the joke and the experience (Chauvin, 2017), allowing yep4andy to connect with the viewing fandom.

Example 4.6

Video 4 - He knows Taemin



4.3 yep4andy as expert fan

yep4andy also uses teasing, in-group jokes, and insider knowledge to establish herself as an expert in this space. In the following example, a form of teasing is constructed by yep4andy

between the idols themselves. This entire scene is comprised of fake subtitles with no spoken dialogue. Sehun (panel 1–4) is lamenting that he did not participate in a previous season of the video blog show, which consisted of trying many different foods.

The joke plays off the height of the EXO members and several other EXO specific indexes. For core fans, there is important information which contributes to the humor: (1) a subgroup of EXO, EXO-CBX⁷ had an earlier vlog/mukbang (Korean eating show) including Xiumin (featured in panel 6); (2) this subgroup is comprised of three of the shortest members of the group; (3) Sehun and Chanyeol in frames 1–4 and 5 respectively are in their own subgroup, EXO-SC, and are the two tallest members of the group. To conclude the humorous segment, Xiumin acknowledges he is being teased and is seemingly okay with it (frame 6) if we consider that he contributes more humor to add to the ‘gag’ (Cain, 2018) through the label **tall losers** creating a clear moment of “permitted disrespect” (Haugh, 2017, p. 205). yep4andy draws heavily on the techniques found in the earlier sections of analysis: the linguistic information is comprised of fake subtitles she has added which rely on shared knowledge.

Example 4.7

Video 1 - tall losers

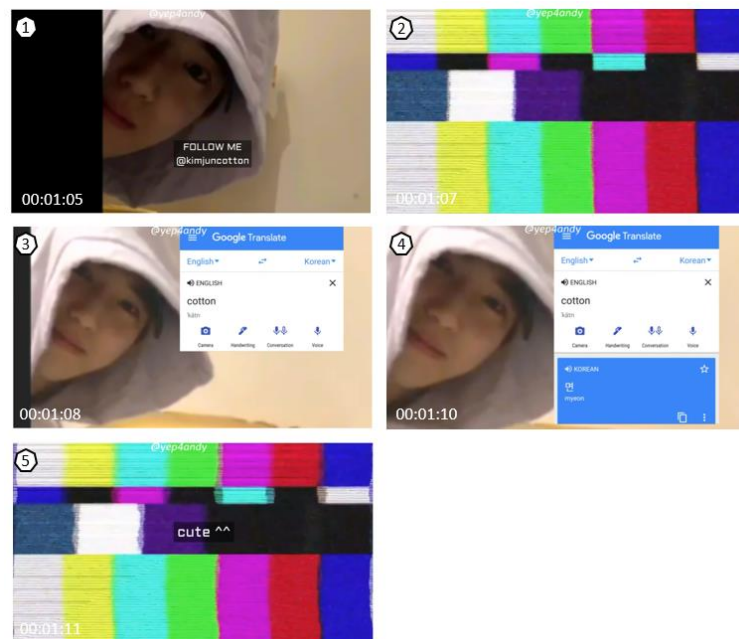


Yep4andy's use of in-depth knowledge of EXO supports her identity construction as an EXO-I and an expert fan. Her status as an expert is indexed in Example 4.8, where she acts as a kind of 'mentor' (see Holmes, 2007) to explain insider knowledge.

⁷ CBX is an acronym for the members in the subgroup: Chen, Baekhyun, and Xiumin.

Example 4.8

Video 2 - kimjuncotton and kimjunmyeon



Even though the joke in this scene is explained visually (i.e., that Suho's username, *kimjuncotton*, is a play on the translation of his real name, Kim Jun-*myeon*, meaning cotton in English (panels 3 and 4)), it still requires a base level of knowledge about the idol's real name. The use of *cute ^^* establishes yep4andy as a fan herself. By appearing to be a first-person reaction, the subtitle acts as an inclusion of her presence as a fan. Interestingly she also aligns with Korean culture by including the emoticon ^^ (Oh, 2015).

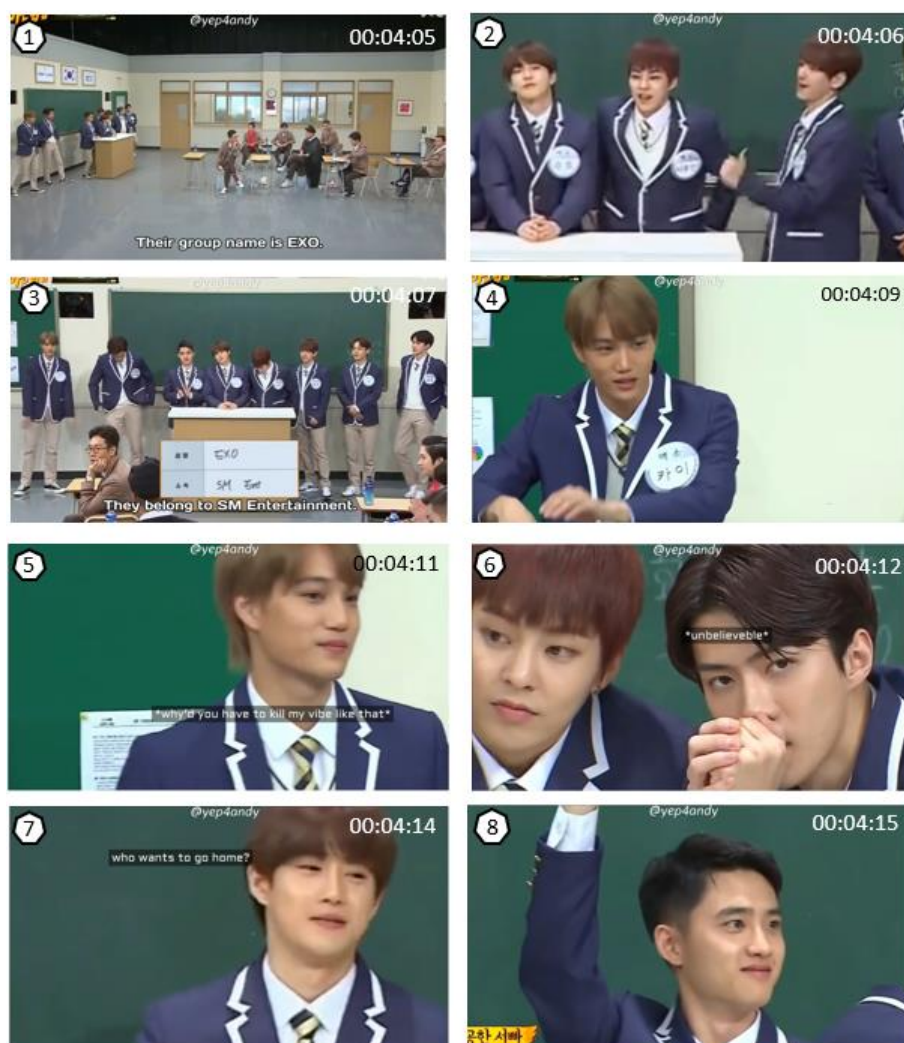
The examples used so far demonstrate the complexity of the indexicalities used by yep4andy as she balances (at least) 4 different cultures/imagined communities when creating for her audience, i.e., the participatory cultures of the internet and YouTube embedded within this, as well as the EXO-I community as part of a wider K-Pop movement. Next, I turn to the values that underpin these indexicalities.

4.4 Fan attitudes and values

EXO sits within its own context, and regular reference is made to the dynamics between EXO and SM Entertainment, their management company. SM's problems with their artists have made the public arena (Lee, S. A., 2015), and this history seems to contribute to an enduring contempt for the company by fans. This history is reflected in the next two examples.

Example 4.9

Video 3 - kill my vibe

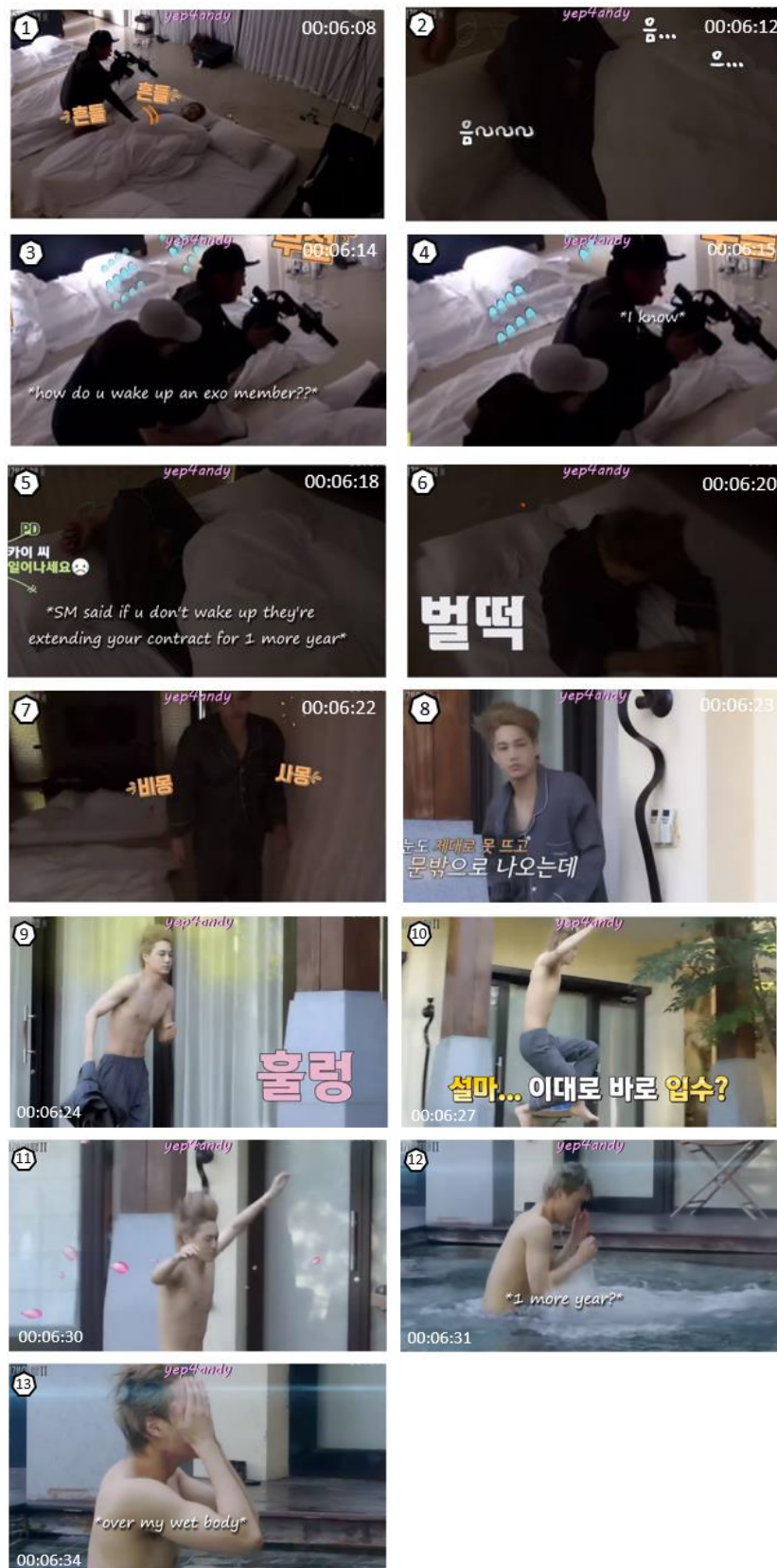


Example 4.10 showcases a fan understanding of the negative undertones surrounding EXO's attitude towards SM. While the group are cheering and excited in panels 1 and 2, after their company SM is mentioned (panel 3), they stop and take on a more serious tone (panel 4). The fake subtitles in panel 5 overtly state that panel 3 *killed my vibe* (i.e., brought down the mood), with the added commentary in frame 6 saying **unbelievable**, again implicitly in reference to frame 3. Although none of the idols (with yep4andy as the author) overtly name SM as the 'vibe killer', the undesignated referent allows yep4andy to make comments about the company and the group's attitude towards them without open hostility to SM. New fans can, we assume, start to pick up on the values underlying the joke and the 'correct' fan attitude to take toward SM.

These attitudes are again implied in Example 4.10, demonstrating the ways in which this form of 'sensemaking' (Andersen et al., 2020) for the novice audience is part of the role of these videos which not only reflect expected values but introduce these values to legitimate peripheral fans.

Example 4.10

Video 1 - over my wet body

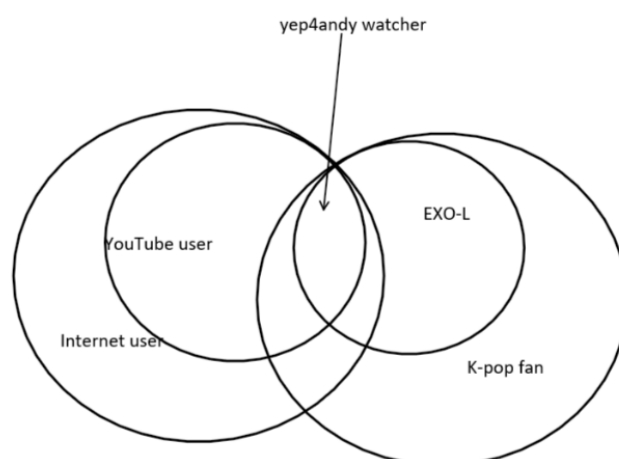


Yep4andy once again uses humor with indexical implicatures that save the idol's face⁸ while making the point that SM is undesirable. Frames 1–4 set up the comedy, with the film crew of the show needing to find a way to wake up the member of EXO (who is, in this case, Kai). Frame 5 presents the joke set-up, **SM said if you don't wake up they're extending your contract for 1 more year**. Frames 6–11 show Kai waking up and jumping into the outdoor pool. The punchline comes in frames 12 and 13 with his reaction **1 more year?* *over my wet body**. I understand this fake subtitle as a play on the phrase 'over my dead body' with added contextual meaning that ties into the visuals of the edit and plays into the joke that he needs to jump in the water with the urgency to wake up. The conclusion contextualizes the earlier frames and informs the audience of the negative attitudes towards the management. She indexes her knowledge using the idols as credible sources who must act covertly to express frustration, without 'crossing the line' and directly attacking SM.

These examples give us evidence of the many different intersecting communities and associated knowledge that yep4andy is drawing on in creating her humor, speaking to diverse expert and non-expert audiences and using indexicalities ranging from accessible tools and devices (e.g., transitions, memes, and sounds), industry terms (e.g., sponsorships), to shared knowledge (e.g., about SHINee and idol names) and shared values (e.g., the oppressive nature of entertainment managers). Clearly, what appears as simple humorous fan-made clip videos are packed full of nuanced and complex indexicalities that reflect layers of communities and cultures in fine balance.

Figure 4.3

International yep4andy K-pop fan layers of community



This updated community identity layers (Figure 4.3) reflects the intersecting of the four key indexical categories to which yep4andy aligns herself. A fifth identity emerges throughout her videos as well, this being idol identity, which is constructed both by the fans and the company in tandem (Epstein, 2015). I now turn to focus on the knowledge and indexicalities that yep4andy draws on to claim her expertise regarding individual members of EXO as the specific focus of her page.

⁸ As defined by Goffman (1955)

4.5 Idol identities

I argue that the most salient indexes that emerge in these videos surround idol identity. The ways in which yep4andy constructs the idols' identities in the fan edits and draws on shared knowledge in her indexicalities speaks to her own expert identity as a fan. Idols and their music are at the core of K-pop fandoms, with idol figures actively 'designed' by their companies to be marketable and desirable (Epstein, 2015). I contend that these idols are semi-fictitious, sitting somewhere between mainstream music artists and fictional characters. Yep4andy's comedy arguably mixes fan practices from both subgroups. One such method is "performative (re-)circulation" as labelled by Bednarek (2017a, p. 560). Although her own research focuses on fans of fictional television, Bednarek notes the potential for these practices to be transferred to different kinds of fandoms, in my case K-pop fans. K-pop idol 'personalities' are co-constructions by the idol, their companies and the fans. Through her videos, yep4andy uses a range of multimodal techniques to invoke, construct, and circulate idol identities.

4.6 Authentic identities

Yep4andy exhibits what Wood and Baughman (2012, p. 338) call "identity control", namely by "reinforc[ing] the respective character's personality as it is constructed" in the media (Bednarek, 2017a, p. 561). Yep4andy regularly uses humor as a discourse strategy in indexing what could be labelled an 'authentic' portrayal of the idols. While the construction of idol identities works similarly to the impersonation of TV characters (Bednarek, 2017b; Nybro Petersen, 2014) because the idols are semi (rather than fully) fictitious, there is still space for ambiguity. Yep4andy makes use of this mystery, constructing humor through the overlap of an idol's 'real' and fan-constructed identities.

In order for the humor to be successful though, the idol identities she portrays must be authentic to the fandom. Coupland describes one of the traits of authenticity as systemic coherence, which rests in being "properly constituted in significant contexts" (2003, p. 419). In line with this, yep4andy's jokes must be grounded and congruent with audience expectations. This is accomplished by transposing comedic moments and selecting minimally edited sequences. Many of these types of moments can be seen in Video 3. One such scene is presented in Example 4.11.

This is a prime example of interactions with the original material as a kind of foundation for the construction of idol personalities, specifically in this case D.O. At the onset of the sequence, the hosts of the show say that the group must have missed them a lot since they were last on the show (panel 3). D.O. responds with the combative remark *we didn't miss you guys that much* (panel 5), presented with a deadpan expression. These are his original words, with no intervention from yep4andy. This remark allows yep4andy to respond in panel 6 with the reactionary *bro* (as 'uttered' by Sehun). She uses alternate font and placement as an additional strategy to help her audience distinguish the fake subs from the real subs.

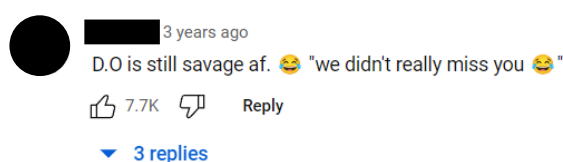
Example 4.11

Video 3 - we didn't miss you that much



Her edit of the members laughing with the additional laugh and comment from Sehun suggests laughter as a mitigation strategy for D.O.'s direct offense to the hosts of the show. The audience also laughs signaling recognition of the alignment with D.O.'s 'personality' as being honest and blunt.

Comment 4.1



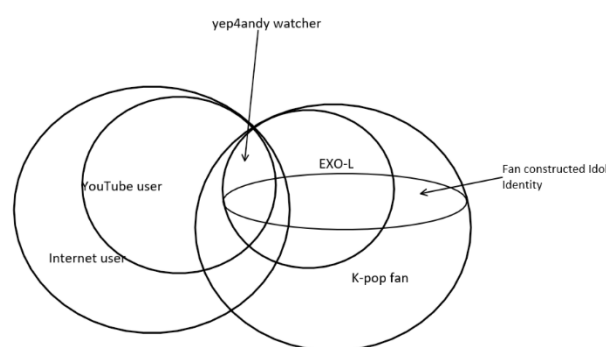
This sets up D.O. as standoffish and unfiltered, supported by the audience as seen in Comment 4.1. The audience member here states what their understanding is (D.O. is still savage) and then supports it with a quote from D.O. in the video. This creates an audience contribution to yep4andy's further interpretation and jokes about D.O. being savage. The use of still also implies that the audience member has a continuing and historical understanding of D.O. and his personality, indexing their own established fan identity through their knowledge of the idol.

This example reinforces his savage persona in an authentic way; yep4andy has not edited that string of dialogue (although she has actively chosen the clip which contributes to the construction). 'Authentic' scenes like this allow yep4andy to build a systematic coherence that then legitimizes her performative recirculation of D.O. (as seen in Examples 4.3, 5.3, and 5.4). This allows the audience to experience and reconcile both the real and the fake.

The repeated teasing, the uptake by the audience, and the engagement with multiple communities all speak to the importance of idol identities in the construction of humor and the embedded and overlapping communities she is addressing in her content: internet, YouTube, K-pop and EXO-L. Figure 4.4 takes the above idol construction into consideration and fits it into the overlapping indexical community layers of Yep4andy's audience, showing its place in the fandom rather than separate from it.

Figure 4.4

Constructed Idol Identity Layers of Community



This fan conception of idol identity here is constructed through the multimodal teasing and 'identity control' (Wood and Boughman, 2012) enacted by the content creator. While yep4andy has built up all these moments, constructed identities for herself and the group, and represented fan values and opinions, these cannot be authenticated in isolation. YouTube comments allow for the ratification and affirmation of all the elements and indexicalities presented in the videos, the focus of the next section.

5. Comments and Co-construction

The second section of my analysis shifts the focus to the comment sections that appear in response to the videos as part of the multimodal semiotic resources of YouTube (Benson, 2017). As was seen briefly in Comment 4.1 (in response to Example 4.11), the comments allow the audience to engage with yep4andy's work and, I argue, co-construct her expert status. Much like the multiple identities indexed in the videos themselves, the comments demonstrate how the videos manifest these identities.

5.1 Humor contextualization and audience contribution

Earlier I unpacked yep4andy's use of indexical processes and multimodal tools in her humorous videos. While some jokes are accessible to peripheral community members, some are only salient to core members. I contend that the comments are key contextualization resources which the non-EXO-L audience can use to unpack in-group humor. This focus stems from an understanding that "comments contextualize the spectacle [of the YouTube video] by offering a range of insights into its production, reception, and subsequent offline dissemination" (Androutsopoulos, 2010, p. 216).

To exemplify this claim, I begin with Example 5.1, in which yep4andy draws on the fandom's 'collective intelligence' (Jenkins, 2006a as noted earlier). The specificity and inaccessibility of the material are arguably reminiscent of gatekeeping, for which the commenters then become facilitators and gate openers (see Holmes, 2007 on mentoring).

Example 5.1.

Video 4 - Luhan foreshadow



The humor in this example relies on the use of multiple intertwining modes. Panels 3 and 4 include a slow-motion camera zoom to signal an emphasis on the stern, questioning look on Sehun's face as he observes a deer (seen in panel 2). Layered on top of this is slowed music, with these two editing techniques arguably suggesting a connection. Audience members with in-group knowledge of EXO since 2013 might recognize the music as being a song by a former member Luhan, but for new fans, this indexicality is likely inaccessible. This music and Sehun's misgivings are repeated in a scene later in the video (Example 5.2), reinforcing its importance.

Example 5.2

Video 2 - I don't trust deer





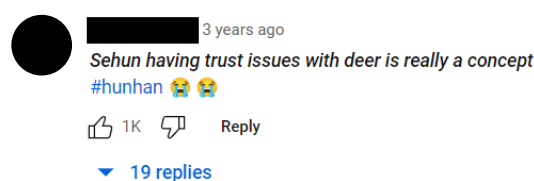
In this example Sehun is again featured, feeding the deer with Suho (panels 1–6). Sehun then begins to mirror the behavior from earlier in the video (Example 5.1), claiming that feeding the deer is *scary* (panel 7). The scene is concluded with the overt statement **I don't trust deer...** (panel 9–10), overlayed with a callback to the song by Luhan in Example 5.1. Core members will know that the singer Luhan's nickname is 'Little Deer'⁹. The combination of Sehun not trusting *deer*, without a determiner, and the music of Luhan in the background creates implicit humor around Sehun's distrust of Luhan.

The need for the combination of modes and indexes means core membership is required for full understanding. Out-group and periphery members may not understand, but for the 'in-group' fans this joke is popular as reflected in the comments. Commenters allude to the meaning and express satisfaction at having understood the joke.

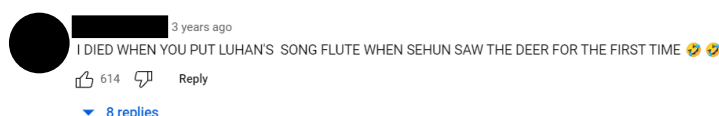
Comment 5.1



Comment 5.2



Comment 5.3



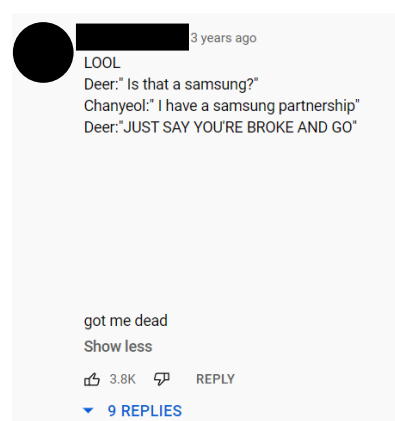
⁹ His nickname in Mandarin is Xiao Lu, which translates to 'little deer' (KProfiles, 2020).

This example foregrounds the importance of comments as contextualization cues. Gumperz (1982, 1992) refers to contextualization as relating to “the ways in which people ‘make sense’ in interactions” (Blommaert, 2005, p. 41). Context and contextualization are dialogical and require a joint contribution. While contextualization might not have been the commenter’s primary goal, it emerges as a central background process throughout the comment section, providing the necessary meaning for new fans to ‘make sense’ of the joke and salient indexes. They range from overt knowledge displays (Comment 5.1) to more cryptic membership indexing, such as using a hashtag to allude to the understood meaning (Comment 5.2; *#hunhan* as a combination of *Sehun* and *Luhan*) (see Zappavigna, 2015 for hashtags). Comment 5.3 also explicitly notes the connections between the different multimodal aspects of the video, allowing the audience to understand the connection between the song, Luhan, and Sehun, as well as emphasizing the commenter’s own understanding and support for the humor (with the use of emojis and *I DIED* as elaborated upon later).

5.2 Humor support and co-construction

In addition to providing information to aid contextualization, the comments also include humor support. The support and ratification of the humorous examples are displayed through echoing, paraphrasing, ‘well attributed [internet] humor support indicators’ (Messerli & Locher, 2021), and overt support statements (Hay, 2001). These forms of comments also act as contextualizers supporting the indexes used by yep4andy and ratifying their salience. In doing so, they authenticate the knowledge and align themselves with the content creator.

Comment 5.4



As seen in Comment 5.4, echoing (Hay, 1995), in this case through repeating the video material in the comments, functions as a humor support strategy to ratify the joke and affirm the humor. The concept of echoing sections of the video in the comments (sometimes exactly, sometimes through paraphrasing) is common on this YouTube page, but also shows the page’s place within the greater internet culture. Davis and Mason (2004, p. 47) claim that “the easiest text-based technique for letting other participants know that you have read their words is to echo, or paraphrase, or in some other way appropriate part of their message”. Other techniques, such as the use of emojis and online descriptive humor support/emotive stance indicators (Messerli & Locher, 2021) like the *got me dead* (which in this example appears after several blank lines and forces the reader to expand the comment), show the

success of the joke. The use of *dead* as a humor support marker is used frequently (Comments 5.3–5.6, 5.8, 5.14, and 5.16), often in tandem with the laughing crying emoji, that is, the concept of laughing so hard that you die. In addition to the verbal markers, the comment's 3.8 thousand likes are further support for the comments humor (Burgess & Green, 2009; Weitz, 2017).

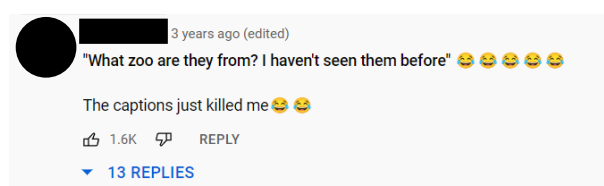
Humor support in the comments also suggests joke popularity. Like Comment 5.4, Comment 5.5 consists of a quotation/echoing of the humorous instance and humor support indicators (*I died* plus the laughing crying emoji) (Messerli & Locher, 2021). Comment 5.5 is the most liked comment for Video 4, arguably signifying that other viewers agree with the commenter's supportive stance of the humor, and indeed recognize the humor in the support strategy itself. I note that, by using fandom-appropriate humor (as measured by likes (Logi & Zappavigna, 2021)), the commenter is both recognizing and enacting fandom norms.

Comment 5.5



Exemplifying this again, Comments 5.6 includes echoing and references to 'dying', with the established use of (repeated) emojis and thousands of likes from other commenters again establishing the success of the joke.

Comment 5.6



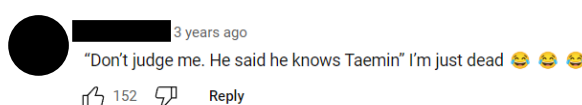
Each of these supportive comments relates to humor in which yep4andy uses the deer as an animator in her videos (corresponding with Examples 4.4). Commenters seemingly affirm the use of the deer by quoting it as the best part of the video and, by extension, yep4andy as successful in her comedy. This illuminates the effectiveness of the deer as a memetic template for yep4andy. I argue this reinforces the function of the template in allowing the fans to enter the scene and voice fan opinions (see Zappavigna, 2012). Together yep4andy as instigator and the audience as responders co-construct fan behavior around the idols and around norms of opinion and thought (cf. the sensemaking noted earlier). This humor support reinforces in-group references that yep4andy makes while simultaneously authenticating the in-group status of the commenters.

In the following examples, yep4andy's references to the wider K-pop fandom via the group SHINee (Examples 4.5 and 4.6) are authenticated and supported by the viewing audience.

Comment 5.7



Comment 5.8



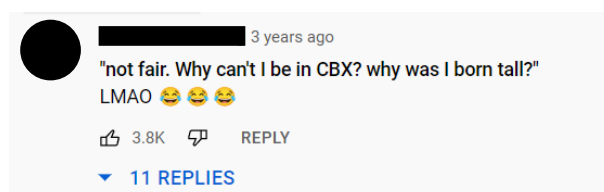
While the jokes themselves are inaccessible to an outsider audience, the comments signal that these references are salient to the community, allowing the out-group viewer to gain this knowledge, or at least to offer them an entree into discovering the shared knowledge. They also ratify yep4andy as an expert for successfully using these specific in-group references.

In addition to the above contextualization and humor support, much of yep4andy's commentary is built around potentially face-threatening comedy that acts to promote solidarity with and between the idols, which the audience often confirms as appropriate through the comments. Examples involving teasing as a technique for claiming intimacy with the idols are supported in Comments 5.9 and 5.10.

Comment 5.9



Comment 5.10



The teasing in the videos and the reactions by the audience align with the view of teasing as contributing “to idiocultural maintenance of a group, providing a way for members to construct a shared reality, sense of meaning, to reinforce norms, and establish group identity”

(Cain, 2018, p. 134; see also Alberts, 1992; Apte, 1985). A distinctive feature is the teasing of the idols, which appears to be recognized as part of EXO-I identity. I now turn to explain the centrality of this focus within the fandom, arguing that it is achieved by ‘authenticating’ the perceived idol identities.

5.3 Authentication of identities

One of the regular techniques used by yep4andy to construct her humor is her use of “identity control” (Wood & Baughman, 2012, p. 338) to portray, reinforce, and develop fan-constructed idol identities. In order for her portrayals to be humorous and credible, she must present them as ‘authentic’. Coupland (2003, p. 419) claims that another central attribute of authenticity is ‘consensus’, arguing that “things must have a high degree of acceptance within a constituency”. The comments section becomes a key place where commenters can reference these personalities and identities as accepted and, in turn, further co-construct these identities.

As mentioned in my previous analysis, D.O.’s personality is a frequent topic of both the videos and the comments. For example, when promoting D.O.’s standoffish behavior, yep4andy includes multiple instances of fake dialogue that contribute to this perceived identity. In Example 5.3, there is some metadiscourse on D.O.’s personality. Kai explicitly reinforces the interpretation that D.O. is standoffish. While Kai attributes this to him being shy, yep4andy extends this to suggest the shyness is a façade representing self-respect, heightening the message to create the humor.

Example 5.3

Video 3 - it’s coz I respect myself



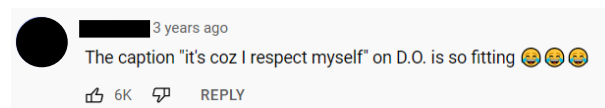
The example mentions *act[ing] cute* (doing ‘aegyo’¹⁰ as featured in Example 5.4), offering metadiscourse on the normative behavior of idols. While this may be non-normative behavior in stereotypical Korean culture, it aligns with new-age Korean ideas of hybridized or ‘soft’ masculinity, which idol behaviors now exemplify (Oleszczuk & Waszkiewics, 2020, p. 122).

¹⁰ Aegyo: “(in Korean popular culture) the quality of being lovable or cute”

The fake subtitle that suggests D.O. doesn't do it *coz I respect myself* (panel 4), puts him in opposition to the other members.

Some of this fake dialogue can be seen as teasing or potentially face threatening (Example 5.3) but, when ratified through the comments (Comments 5.15 and 5.16), it suggests that the characterization is seen as 'accurate' for the fan-constructed identity.

Comment 5.11



In Comment 5.11, the commenter explicitly states that yep4andy's fake subtitles were so *fitting*. The 6000 likes from other viewers also contribute to authenticating this added dialogue. Taking this a step further, the most liked comment across all four videos is a meta-commentary on D.O.'s expected attitudes (Comment 5.12).

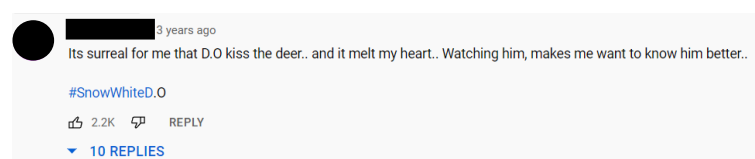
Comment 5.12



Here, the commenter claims that the mere existence of the group is enough to disgust Kyungsoo (D.O.). The hearty support shown through likes on the comment further reinforces this fan conception. These comments demonstrate how the joke functions to fulfil fandom expectations and the co-construction of community norms.

As mentioned at the beginning of this section, the insider information in the jokes acts as a (perhaps unintentional) gatekeeping strategy, denying the audience access to the fan humor. Through the comments, the previously mentioned discursive gatekeeping that Holmes (2007) describes as 'facilitative' allows older fans to provide access to newer fans by making this information accessible. As a final example to illustrate this, the following comment, in response to Example 4.4, sees commenters affirming the comparison between D.O. and Snow White. These comments suggest that the yep4andy's joke has created an opening for new fans. Comment 5.13 highlights this: the commenter states that the joke has intrigued them, and they want to learn more.

Comment 5.13



Comment 5.13 directly attributes their desire to *know him better* to watching his actions, in this case as facilitated by yep4andy's video. These videos allow fans to access, affirm, and co-construct fan values and specifically an EXO-I identity. Yep4andy and the commenters can be seen as taking a mentor position to the anonymous yet ratified new fans watching the video, acting to facilitate entry into the fandom.

By viewing comments and likes as legitimate examples of authentication and co-construction of fan-conceptualized idol identity, the comments section can be framed as the "constituency" referred to by Coupland (2003, p. 419). When understanding the process of authentication in relation to the idols and yep4andy as an expert, her ability to create systematically coherent identities that also represent fan values exemplifies the qualities required to be called authentic (Coupland, 2003, 2010).

The commenters also affirm yep4andy's use of multimodal resources to create appropriate satirical scenarios. In relation to D.O., yep4andy highlights her ability to do this. In Example 5.4, she uses a viral song on YouTube (Baby Shark) and transforms it to fit the context of her video.

Example 5.4

Video 3 - Baby Shark



Here a robot voice says *here's what would happen if you made kyungsoo do aegyo* in panel 1. She then overlays the song Baby Shark over panels 2–4 as D.O. starts dancing. She alters the voice to become robotic, mirroring D.O.'s own awkward behavior and thereby creating a congruent message between different modes, combining mainstream internet culture and the K-pop idol. It is important to note that she has also included the Korean term *aegyo*, indexing her familiarity with Korean and K-pop specific linguistic indexical vocabulary.

This Baby shark scene is the most commented on sequence for the Video 3 and shows yep4andy's success in combining different unrelated memetic modes to create the comment.

Comment 5.14



Comment 5.14 exemplifies this point well, commenting on the comedy of the baby shark part with the use of the repeated humor support phrase *killed me*, and specifying that [the scene] was done well (*great job*). Not only does this comment reinforce the humor, but also yep4andy's editing ability, as while the *great job* has no direct referent, I argue this is directed at yep4andy.

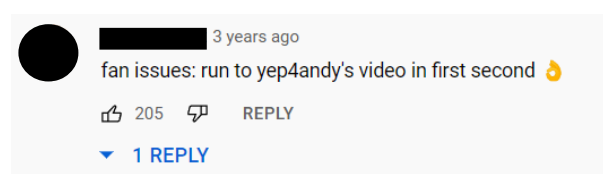
These comments use all the previously mentioned humor support indicators, mainly emojis and references to dying, as well as the use of capitalization for emphasis. The hearty support for her complex multimodally constructed comedic sequences positions her as a successful and expert EXO-I content creator.

5.4 yep4andy as a content creator

To further elaborate on yep4andy's expert identity, I turn to a discussion of her role as a content creator and what this means in the context of the channel and wider EXO-I fandom. Direct support for her role is manifested through the comments in a variety of ways, each capturing the embedded communities with whom she is interacting, whether it is YouTube users, EXO-I fans, or fans aligned with yep4andy's channel in particular.

I begin with the level I conceptualize as the most general, namely YouTube users.

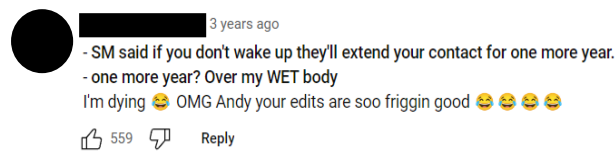
Comment 5.15



Comment 5.15 directly links yep4andy's content with fan behaviors, with the commenter expressing that a *fan issue* is trying to watch yep4andy's videos as soon as they come out. It expresses an eagerness and excitement for the videos, simultaneously and explicitly marking the behavior as common to fans. This formulation also does identity work to position the commenter as a fan.

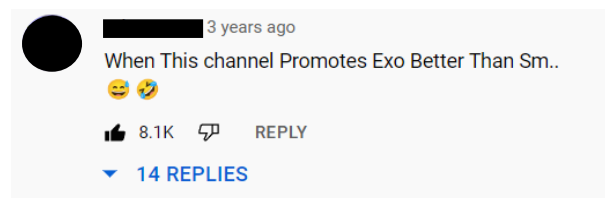
Support specifically for yep4andy also manifests itself overtly. For example, Comment 5.16 combines a multitude of established fan practices into an all-around supportive comment.

Comment 5.16



The commenter uses echoing, the use of the phrase *dying*, emojis and emoji repetition, as well as the statement *your edits are soo friggin good* addressing yep4andy directly as the content creator. Interestingly, this comment shows the variety of multimodal tools available to viewers to engage with yep4andy and her material: memetic structure, font, emojis, and indexical language choices. Acknowledging the service yep4andy is doing for the fandom and the fan item, EXO, represents an additional form of in-group overt support as seen in Comment 5.17.

Comment 5.17



Comment 5.17 works to construct the commenter as a fan, while also supporting the construction of yep4andy as a respected expert. The use of *Sm* (in reference to SM Entertainment) without any other information shows knowledge of EXO's entertainment company, displaying a basic fandom competency. Rather than just a statement, the use of a meme grammatical format (introducing a statement with *When* in creating some sort of scenario) and the laughing emoji particles indicate that a joke is being made. The commenter is disparaging SM Entertainment for their lack of competence in promoting their artists, which is congruent with yep4andy's own attitude shown in her videos (Examples 4.9 and 4.10). The commenter then juxtaposes the negative stance towards SM with support for the competency of yep4andy's channel at pushing the fandom's perceived agenda of spreading EXO content and enthusiasm. With 8.1K likes, this is one of the top comments on this video, highlighting the importance of acknowledging and appreciating the work that the channel does.

These types of interaction also highlight claims by Dynel (2014, p. 44), who notes that in YouTube comments, "recipients [of the video] may sometimes concentrate more on the sender than on the video's content and/on the interaction within". This pattern seemingly suggests the audience recognizes and appreciates that videos are not produced by anonymous large companies or producers, but by other fans who might even just promote the groups better than the company.

These comments used here speak to yep4andy's identity as a successful content creator and position her as an expert fan (see also Hayes & Gee, 2009 on this positioning in the context of fan fiction). The commenters use the comment section to co-construct their own fan identity

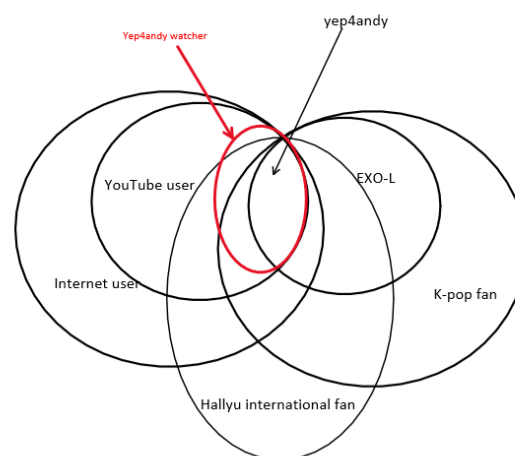
through contextualization, as well as yep4andy's, through humor support, authentication, and acknowledgement of her service. Fandom is shown to be discursively produced between content creators and viewers. Salient indexes emerge through yep4andy's videos, as she constructs humor based on in-group expert knowledge and uses the multimodal affordances of YouTube to enact fan and idol identities. These are then authenticated in the comments sections through audience contribution and support. In the next section, I will elaborate on the complex interplay of the overlapping communities and the salient indexicalities that create a uniquely international K-pop identity.

6. Discussion

The analysis presented in the previous two sections demonstrates that humor in the YouTube space makes use of semiotic resources and engagement with the audience to ratify and affirm the comedic (multimodal) utterances. Through this discursive process between creator and audience, identity emerges, drawing on recognized humorous indexicalities. Much like other studies on fandom (Jenkins, 2006a; Nybro Petersen, 2022), my analysis shows fan identity is inextricably tied to Web 2.0 and internet culture. In the case of K-pop fans, the data suggests that key semiotic meanings are those associated with YouTube, internet humor, Hallyu, and K-pop idols. Combining the analytic findings, and drawing on previous models of layered communities and contexts (e.g., Blommaert, 2005; Hugman, 2021; Marra & Morrell, 2021), I conceptualize yep4andy and her viewers as operating within the following complex identity discourses:

Figure 6.1

yep4andy complete layers of community diagram



These embedded and overlapping communities have been demonstrated as present in the videos, and fans, in turn, position themselves within them. Yep4andy herself creates an identity that sits at the intersection of all the imagined communities her videos invite. I argue that this is part of what makes her an expert, as she has expansive knowledge of the range of salient identity categories that EXO-Ls encompass (see Newon, 2011 on expertness). As shown in my analysis, her watchers may or may not include themselves in all these groupings.

While they are certainly YouTube users, yep4andy makes use of indexical humor that requires only a basic knowledge of internet and YouTube humorous norms and tropes, while also including humorous references that only the most in-group EXO-l could be expected to know. As noted in Section 5, these videos also offer an entry into the EXO-l community for those less knowledgeable watchers.

6.1 Yep4andy and the co-construction of fandom identity

I frame these fan edits not as static objects but as active dialogical processes through which we are able to view fan perceptions of K-pop fan identity and norms. In understanding the emergent processes, these videos highlight how identity is constructed through the indexical meanings that the humor is contingent upon. Creating this humor successfully shows yep4andy's membership in the 'collective intelligence' of the fandom (Jenkins, 2006a).

To see the full intersection of yep4andy's multimodal editing tools and indexical humor, consider Example 6.1. Here, yep4andy indexes internet users, YouTube editors, EXO fans, and k-drama fans in one short example (showing the relevance of the embedded constraints identified in Figure 6.1 alone).

Example 6.1

Video 1 - Am I the only one who's uncomfortable?



This one joke segment contains 10 different modes and references and is an extension of a previous scene in the video. In frame 1, yep4andy makes use again of a SpongeBob reference. In frame 2, we see the Korean subtitles retained from the original show and the translated subtitles for the spoken dialogue. Frame 3 once again shows subtitles of the spoken dialogue, but emphasis on vocal stress and emphasis is added through creative capitalization (Foerster,

2010). This use of alternative capitalization, as well as placing the subtitles in unconventional locations, is common in fan-made subtitles in other media genres (Dwyer, 2014; Nornes, 1999), aligning with the identity of a fan content creator. In frame 4, the shot is a zoom-in on Sehun that pairs with a memetic format audio statement *are you serious?* to add emotional emphasis. Frame 5 includes the original Korean subtitles and Suho uttering the phrase *ok ok* with no English subtitles (although the words appear if closed captions are activated). In frame 6, the use of the * designates that yep4andy has added a fake subtitle¹¹. The whole scene finishes in frame 7 with a zoom-in on D.O. watching the interaction, and the audio *jigeum naman bulpyeonhanga*, translating to the subtitles yep4andy has placed: *am I the only one who's uncomfortable?* This is a viral line from a drama that D.O. starred in. As such, fans of EXO will likely understand the reference if they are invested in the group members' activities outside of strictly EXO music and performance. This line is also said by D.O. in Video 3, grounding the use of the line in reality, while allowing yep4andy to evolve it into a memetic element through repeated practice (Vásquez & Aslan, 2020).

Yep4andy makes deft use of copious multimodal features to create a blend of insider references and symbols of the norms of YouTube to create a humorous scene. This clip again highlights how contingent (yep4andy's) K-pop fandom humor is on shared indexical meanings. While complex, these videos exemplify why deconstructing and analyzing indexical processes is important: "By considering identity formation at multiple indexical levels rather than focusing on only one, we can assemble a much richer portrait of subjectivity and intersubjectivity as they are constituted in interaction" (Bucholtz & Hall, 2010, p. 23). Only through the collective analysis of indexical humor can the full view of identity construction be understood.

The scope of yep4andy's expert status is most obviously seen in her use of fake subtitles. This expert activity is particularly evident in Examples 4.3–4.6, using the deer that appears in the source material. While yep4andy rarely overtly inserts herself into the narrative, her voice is still present in the language of her fake subtitles (for the deer's voice), her use of unconventional subtitle placement and YouTuber-specific editing. This connects to ideas in the field of audiovisual translation surrounding the invisible translator and fans' active rejection of this concept (Nornes, 1999). While audiovisual translators were originally supposed to make their presence as small as possible, 'fansubbers' are acknowledged as making their presence known through the creative use of subtitles, and in doing so, practicing cultural mediation by becoming the bridge across a cultural and linguistic divide (Pérez-González, 2007; Ruth Larsen, 2018). I argue that yep4andy uses the deer and the idols themselves as her way of performing a type of intrusive translation to explain norms, K-pop concepts, and even Korean societal concepts to the audience. Yep4andy is the link between new fans, established fandom, and the idols.

The authentication of her constructed speech and dialogue for the members then plays into the value aspect of authenticity. Her portrayals reinforce fan conceptions of idols and the ratification and emphasis on those identities gain "definite cultural value" (Coupland, 2003, p. 419). They teach new members to understand the salience of the idols' character traits.

¹¹ Interestingly, this is not only a normative convention in her videos and other fake sub videos, but also something which is explicitly stated in the description of the video.

Her jokes thereby create a set of fan norms and values around the EXO content of her humor. Coupland (2003, p. 419) sums up this process: “Authentic things, we might say, are authenticating for people who recognize their authenticity, as well as in themselves being socially authenticated”.

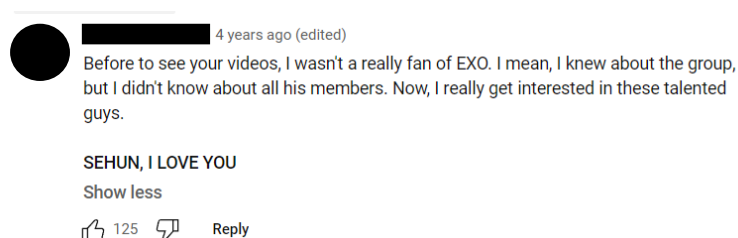
However, yep4andy is not the only participant in the play space. Active membership in participatory culture has become the norm for globalized fandom communities at all levels of engagement (Hellekson, 2018; Jenkins, 2006a, 2006b; Jonsson & Muhonen, 2014; Nybro Petersen, 2017; Turk, 2018). As noted in the literature review and supported by my analysis, the culture surrounding these fandom videos is a collaborative and specialized co-construction. The use of humor itself becomes key to retention within the fandom, as “fandom and play are similar in their ability to facilitate deep absorption for those participating” (Nybro Petersen, 2022, p. 15). The repeated and prolific use of humor supported by viewers reflects the desire to be included in the space.

Incorporating the audience into this, fan edits allow both established and new fans to enjoy the inside jokes and normative fandom comedy. By the end of watching these videos, the consumers have not only knowledge of the idols’ activities outside of producing music but also intimate knowledge of their relationships and personalities (either real or constructed). The videos also introduce surrounding K-pop knowledge about SM (Examples 4.10–4.12), other K-pop groups (Examples 4.6 and 4.7), and popular Korean media shows (Video 3). This gives new fans an opportunity to learn about not only the group but also the important context of their activities and environment. For her own construction, this contextual information indexes yep4andy’s expansive knowledge while simultaneously positioning her as an expert with the authority to teach others (Newon, 2011).

As it pertains to commenter/creator identity co-construction, Section 5 highlights how relationality (Bucholtz & Hall, 2005, 2010), and specifically authenticity, unfolds collaboratively between video and commenters. Authenticity is not “an inherent essence” but “a social process played out in discourse” (Bucholtz & Hall, 2010, p. 24). In examining the comments, we can see “the ways in which identities are discursively verified” (Bucholtz & Hall, 2010, p. 24) by the content creator expert and audience fans. The digital interlocutors ratify and authenticate the positions they have taken up, relating to each other and the video. The comments also highlight the relevance of Coupland’s (2003) concept of authentication as anchored in shared culturally based understandings. Humor, likewise, is dependent upon shared understandings and meanings in constructing in-group/out-group boundaries (Holmes & Marra, 2002).

In reaching this conclusion, I draw again on the comments sections of these videos, in which fellow fans can voice their support and add their own knowledge. Comment 6.1 shows how yep4andy’s identity is co-constructed relationally to new fans.

Comment 6.1



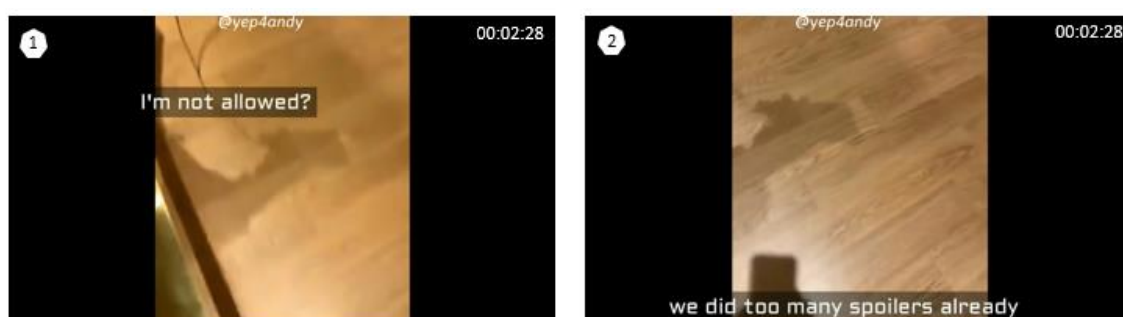
As noted in Section 5, these kinds of direct statements place yep4andy as an authority/expert. This fan attributes their interest in the group to the videos yep4andy makes. They also construct an EXO-I identity (although new) by saying *SEHUN, I LOVE YOU* and, in doing so, establishing their relationship to the idol and status as his supporter.

Extending this support to support for yep4andy, the responses publicly endorse and ratify these videos as legitimate fandom artifacts, and yep4andy's commentary in these videos as being normative information and behavior (see Comments 5.7, 5.13 and 5.19 in particular). The ways in which yep4andy teases the idols (through her use of subtitles) and positions them in relationship to their idol and 'real' selves are accepted by the community and reinforce this salient indexical knowledge.

In the following example, yep4andy presents a slightly modified humorous sequence, which is then reinforced in the comments. Here, Chanyeol plays a snippet of a song from the group's new repackaged album and then is told to hurriedly turn it off. What follows is a meta-commentary about spoilers¹² and discussion about what they are allowed and not allowed to share outside the group. The response that they *did too many already* (frame 2) informs the audience that spoilers are acceptable in moderation, although frowned upon; music videos and albums are supposed to be kept secret until they are released.

Example 6.2

Video 2 – too many spoilers, Frame 1 – Chanyeol, Frame 2 – Suho

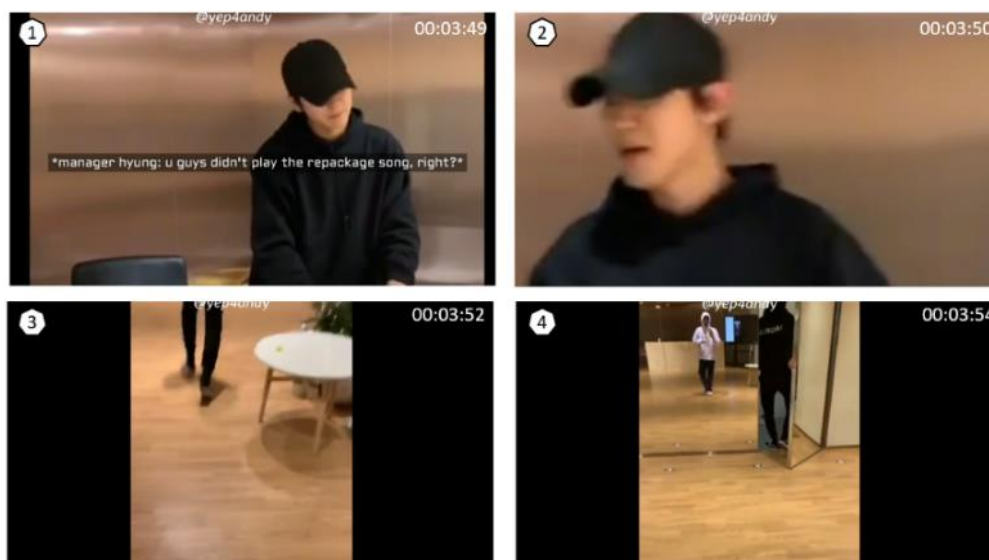


¹² According to a dictionary meaning, a spoiler is defined as “information about the plot of a motion picture or TV program that can spoil a viewer’s sense of surprise or suspense”, but is applied to a K-pop context usually as a hint or piece of information about an upcoming song or album release.

Yep4andy references this moment later in the video where she inserts fake subtitles from the group's manager coming in to ask if anyone had leaked the song, at which point the idols run.

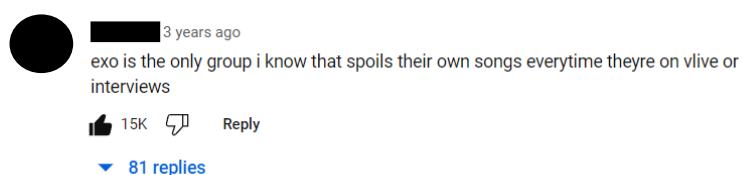
Example 6.3

Video 2 – Repackaged song



This reflects the points made in Examples 4.9 and 4.10, whereby yep4andy is constructing a rebellious narrative for the idols in disobeying their company. Example 6.3's editing suggests they are running from the scolding manager, creating a multimodal, humorous, almost slapstick joking segment with added comical music (in frames 2–4). In this sequence, we see a meaningful example of responses co-constructing the narratives in ongoing and dynamic ways (see Schiffrin, 1996). The comments reinforce the humorous scene as salient to EXO-Is, saying it's typical of EXO to give spoilers.

Comment 6.2



In this comment, we are led to believe that the rebellious behavior of Example 6.3 is normal and common, even one of their key traits as a group. Rymes (2012) highlights that there is a clear contingency in recognition by peers for indexicalities and recombinant materials to have salient semiotic meanings. By recognizing its significance, the commenter also indexes their own in-group status as an EXO-I and through implied claims of knowledge of wider K-pop practices, they also display expert community knowledge.

While the humor in the video encompasses a large range of indexical subjects, I argue that idol identity sits at the center of both the videos and comments. Ultimately, these videos are

about the idols, their actions (both real and fake), and their relationships. The idol centric identity and narrative construction techniques described so far place fan edits as a modern multimodal form of fan writing. Jenkins (2006a, p. 44) describes the practice of fan writing as “the compulsion to expand speculations about characters and story events beyond textual boundaries”. Yep4andy takes the idol personas as they were performed within the original video texts and expands them to create an enhanced, yet plausible, fan text. This plausibility is solidified by her portrayal of the idols as consistent across her videos and when the portraits are authenticated (repeatedly) by commenters. Fans watching the videos echo fake subs and humorous moments from the video and ratify the humor and recognition using humor support. The multimodal artifact of the fan edit contributes to the identity construction of fans and of the content creator as an expert.

6.2 Fan edits as bottom-up Hallyu products

These videos and discursive practices sit within a globalized context. The culturally rooted indexicalities and understandings show these videos to be important engines for the global media flow of Hallyu. Section 1 placed this research partially within the study of the Korean wave; grassroots fan activities are cited as the main form of dissemination for Hallyu in the modern era (Ahn, 2011; Jin & Yoon, 2016; Jung & Shim, 2014; Shim & Noh, 2012). As seen in my analysis, many Korean cultural, linguistic, and societal indexes are taught and spread through these bottom-up fan practices. These videos exemplify the processes of ‘mediatization’ and the ‘process of (re)circulation’ as described by Bednarek (2017b, p. 118), “whereby mass media content and mass media language are circulated and recirculated among transnational communities”. Yep4andy and the audience work as promoters and prosumers, showing the changing relationships with the corporate top-down nature of K-pop. The discourses in these videos demonstrate the shift to (especially overseas) fans taking on the role of primary K-pop supporters and promoters, teaching new fans to have a distrust of entertainment companies and their abilities to care for their artists, as seen in Examples 4.9 and 4.10 and Comment 5.17.

The indexes and understandings of the fandom epitomize the globalization processes behind the explosive scale of the Korean Wave. These internet videos can now mediate the subscription of individuals to the global identity categories that exist within the relevant cultural media flows (Leppänen, 2011). I understand the international K-pop phenomena, experience, and subsequent fan practices as a pertinent example not only of globalization but, crucially, the process of localization by non-Korean individuals in understanding and recontextualizing global Korean media (see Johnson & Muhonen, 2014; Leppänen, 2011). If localization is “a discourse process by which globally available media content is modified in a (more or less salient) local manner, involving some linguistic transformation to a local code and an orientation to a specific audience” (Androutsopoulos, 2010, p. 205), for K-pop, localization efforts are spearheaded by international fans and facilitated with extreme ease by the affordances of Web 2.0. Yep4andy’s videos show how fans become “intertextual operators” (Androutsopoulos, 2010, p. 205), modifying multimodal texts to fit local environments. Fan edits, then, can be conceptualized as intertextual products that are multimodally constructed by the use of video clips, audio snippets, and fake subtitles. This process of entextualization allows Korean ‘foreign’ artifacts to be reappropriated for reception by an international audience.

Returning to the theoretical underpinnings of identity construction in relation to this recontextualization process, I re-examine the positionality principle (Bucholtz & Hall, 2010, p. 21): identities encompass (a) macro-level demographic categories; (b) local, ethnographically specific cultural positions; and (c) temporary and interactionally specific stances and participant roles.

Yep4andy uses Korean and K-pop specific indexicalities to place herself in (b). As we saw in Section 4, by using the process of entextualization, she can localize global indexical codes. Entextualization involves the process of decontextualization and recontextualization (Androuso-polous, 2010). In the case of these fan edits, the detachment (decontextualization) of discourses is not a complete process, but instead produces texts that still retain key parts of their source cultural indexical meanings. Yep4andy uses Korean and K-pop specific indexicalities to align herself in cultural positions (Bucholtz & Hall, 2010) that are key to K-pop fan identity.

Example 6.4, for instance, yep4andy uses humor in her portrayal of idols when translating Korean social norms regarding age. While many of the examples I have chosen so far have focused on D.O., the youngest member, Sehun, is similarly a key figure in yep4andy's narratives. Much like D.O., knowledge of his fan-constructed identity is reinforced through these videos, and here we see important cultural knowledge indexed. In Example 6.4, yep4andy frames Sehun in his role as the youngest member (in Korean called the *maknae* which means youngest of the group or youngest member (Yeo, 2020)).

Example 6.4

Video 3 - Sehun is expensive



A nuanced conceptualization that yep4andy has alluded to here is the social hierarchy system in South Korea. Korean society is stratified by age, so while elders must be shown respect by younger people, older people are also expected to take care of juniors. This is partly the basis of the K-pop 'maknae on top' mentality (referring to the idea that the youngest of a group has the most power) that Sehun embodies in these clips. In Example 6.4, panels 1–4 set up Sehun as adhering to the idea that he takes care of singers younger than him, making him seem generous and polite. This is then contradicted in panel 5 when Chen then says that he always has his older group members pay for him. This is justified in panel 6 where Sehun explains that he does it on purpose, adhering to his earlier statement that *elders must always pay for younger people* (panel 3). The humor comes from the idea that Sehun might reap the benefits of that mentality more than he pays for it. The edits reinforce a pampered maknae persona. This example is consistent with other scenes of Sehun, like Example 6.1 where he said in his own words that he needed someone to sleep with him because he was scared.

To add her own commentary and narrative, yep4andy extends the scene with the use of fake subs and insider knowledge in Example 6.5.

Example 6.5

Video 3 - sehun deserves it



Here, the core message appears to be that Sehun is allowed to be pampered and in fact *deserves* it. This is reinforced using the subtitles and editing, with the group seeming to reluctantly accept his privileged position (the group looking solemn in frame 8 while the audience claps in frame 12). Yep4andy also includes an insider joke, with Chanyeol saying **I spend more on sehun than on my Halloween costumes** (Chanyeol is known for having extravagant and expensive costumes). Here, yep4andy uses the idols themselves to authenticate the discourses about age within EXO and idol culture.

While other examples have indexed Korean cultural knowledge through lexical choices and K-pop activities, this example highlights more abstract concepts that underpin Korean society within which K-pop and idols are situated. Key cultural knowledge about Korea has become more globally understood and grounded within the international K-pop fandom. This mirrors the statement by Shim and Noh (2012, p. 134) that “fans produce transnational dialogues, share cultural meaning, and form affective ties with each other” through online social communication and networking. These videos exemplify how “the Internet does not simply impose images of cultural globalization on us; it also provides us with opportunities to engage with these images in different ways, and in doing so provides affordances for meaningful social action, interaction and cultural production” (Leppänen, 2011, p. 233). In the case of these fan edit videos, we can see how engagement in global and transcultural flows become central parts of identity performance and are indeed predicated upon this engagement.

7. Conclusion

The ability to “transform personal reaction into social interaction, spectatorial culture into the participatory culture, is one of the central characteristics of fandom”
(Jenkins, 2006b, p. 41)

The YouTube fandom page presents itself as a prime example of the benefits and affordances of participatory/convergent culture and the social web (Androutsopoulos, 2010; Jenkins, 2006a, 2006b). Fan edit videos are an example of “recontextualized spectacles,” involving “the appropriation and reworking of globally circulating media material into a local code for a local audience” (Androutsopoulos, 2010, p. 215), while the comments act as a cypher for that code. The resulting content of video and comments combined provides a culturally hybrid and uniquely international K-pop fan resource for identity co-construction and in-group membership.

My previous research (Fallone, 2021) argued that YouTube channels serve as affinity spaces where members of the imagined K-pop community share knowledge and define group membership. Returning to my original goals, through my current analysis I have addressed two research questions:

1. How does yep4andy use indexicalities to create humor (across modes)?
2. How is fandom co-constructed on the page?

I have analyzed how global K-pop identity is co-constructed through the interplay of multimodal fan artifacts and commenters’ reactions and responses on YouTube. Relating this to my theoretical framework, by breaking down the multimodal video data, I attempted to

understand how K-pop fan identity is a product of fan content creation which is emergent in the fan artifact itself and supported by the collaboration with video commenters. The identity that coagulates is very much “a social and cultural phenomenon”, and the fan artifacts show how the fans are “doing” identity in line with the emergence principle as set out by Bucholtz and Hall (2010, p. 19).

I applied Bucholtz and Hall’s understanding of identity as a collaborative discursive process produced in multiparty interaction. This approach was supplemented by Coupland’s (2003) concept of authenticity, to examine how multiple modes are utilized to co-construct identity. I explored how yep4andy deploys resources and references relating to internet memes, common YouTube tropes, K-pop, and the EXO fandom (EXO-Ls) which is at the heart of my research. Together these build a multilayered and overlapping picture of identity (Blommaert, 2010). From comedic fan-made videos, K-pop fans are entrenched in convergent culture, flawlessly reworking and entextualizing salient pop culture indexicalities from various prominent communities within the digital space.

As recombinant humorous videos, the videos in my dataset illustrate the participatory web and convergent culture in action (Gurney, 2011; Jenkins, 2006b). The content creator becomes a cultural bridge by successfully combining codes into new coherent artifacts. From a technical standpoint, the data illustrates the complexity of modern humor online and the multitude of cultural resources needed to understand the salient indexicalities. The content creator and commenters work together to make sense of and ratify the fandom cultural artifact, and in doing so, construct fandom identity and norms (Adetunji, 2013).

Yep4andy, my chosen content creator, utilizes a wide range of multimodal YouTube affordances to construct a humorous, culturally relevant video that is authentic within the YouTube space. As my analysis has shown, her videos are inclusive to non-K-pop fans through the use of global pop culture indexicalities and through the adoption of familiar formats, such as sketch shows and sitcoms. She cuts together small scenes with familiar characters, who the audience can get to know and co-construct with her. The types of humor she uses also foster solidarity and community relevant to Web 2.0, i.e., teasing, banter, and in-group jokes, traditional forms used between intimates (e.g., Adetunji, 2013; Haugh, 2017). Her humor allows audiences to share in community tropes and memes to learn and reinforce EXO-L fan group memberships. Yep4andy’s content not only constructs her own identity but also contributes to the identity constructed for the idols, reinforced using these intimate humor types. These moves are then authenticated and supported through audience comments, both in content (in which her expert status is endorsed) and in the strategies adopted, most notably where comments illustrate normalized YouTube humor support and memetic textual templates. Identity as a K-pop fan is constructed through showing knowledge of salient indexes and authenticated by other fans affirming that knowledge and then contributing to it themselves. To understand K-pop and K-pop fan practices and values is to understand the most modern forms of humor and simultaneously allows us to further intercultural communication engagement.

While K-Pop fan edits may be an unusual choice for linguistic analysis, fan edits are important indexical resources to the fandom. While fan studies have been traditionally dominated by Media and Culture studies (Duffet, 2018; Turk, 2018), with this research I contribute to Turk’s

(2018) call for a more interdisciplinary approach, as well as contributing to what Bednarek (2017a, p. 567) names “a linguistics of fandom”. Focusing on EXO-I and K-pop within the scope of fandom studies has also afforded access to developments associated with Hallyu.

7.1 Future research

Much like other studies of fandom have pointed out, these active audiences open a large host of possible future research possibilities. From a methodological standpoint, taking a more ethnographic approach to future research could prove insightful. My research here is only able to extrapolate inferences from these videos, but a more in-depth study might aim to interview the content creator to better understand how much of what she does is intentional, and how much of her identity construction is a subconscious product of her participation in the fandom. Self-labels of K-pop fans have been considered before, but more targeted research could be pursued.

My research extends the analysis done by Shim and Noh (2012), exploring K-pop fan comments on the official corporate entertainment YouTube page, and their suggestion of “an inquiry into modalities of fan practices in relation to the differences in terms of nationality, ethnicity, class and gender” (2012, p. 135). This paper has begun to explore how international fans practice K-pop fandom through multiple modes, but as those authors mention, more ethnographic research with a focus on nationality and gender could also produce interesting conclusions, potentially following Shaw (2012) in her research on intersectional gamer identity.

When considering new media and fandom studies, my analysis has only scratched the surface of implicit fan attitudes toward entertainment companies and the commercialization of idols. I believe these videos are fruitful sites for understanding how international fans conceptualize the power dynamics currently at play between themselves and the foreign corporate entity (in this case, SM Entertainment). Along these same lines, I echo Shim and Noh (2012) when they argue that “more empirical research is required on the processes of participation and empowerment of fandom, and its interaction and tension with the ongoing commercialization and corporatization in the online universe” (2012, p. 135). The disdain present for SM Entertainment in these videos hints at the possibility of a more in-depth investigation into how the bottom-up and top-down forces clash rather than converge. In keeping with a more ethnographic approach, interviews with the content creator and fellow fans would allow an open discussion about these topics and allow for the prevailing discourses around them to emerge.

7.2 Investigating K-pop in the context of Web 2.0

Yep4andy’s fan edit page and videos are examples of the possibilities and affordances of the modern participatory web, and products of Web 2.0 community. In no other setting could these videos find a global audience with such niche international content. How international fans negotiate this content and decipher its meanings is a reflection of present-day digital communities (Shim & Noh, 2012) and showcases the collaborative nature of online affinity spaces (Aljanahi, 2019).

Her creative use of fake and real subtitles, audio, and video editing, as well as the incorporation of memes with shared meaning, creates humor that appeals not only to her target audience but those beyond that. The use of these techniques also indicates her place within wider fan practices (Bednarek, 2017b; Jenkins, 2006a; Pérez-González, 2007; Turk, 2018). The comments left in response to her videos are a unique Web 2.0 resource that proves itself crucial to the co-construction of fandom (Shim & Noh, 2012). In the case of these fan-edit videos, they act as contextualizers and authenticators for the content creator's humor.

This research sits within the ever-growing field of fandom studies. As fandom becomes mainstream and fan culture and practices become the dominant culture and way of being on the internet, studies of fandom should no longer require lengthy justification (Bednarek, 2017a; Jenkins, 2007; Turk 2018). In thinking about the future of fandom, Jenkins (2007, p. 364) postulated rather philosophically on who fans are saying, "perhaps we are all fans or perhaps none of us is". While I understand the need to distinguish between fan and fandom, like distinguishing between an individual identity and group membership, I reject Hellekson's claim that "fans who, say, merely watch a particular TV show are not actually fans" who by their definition must be "actively engaging in fandom" (2018, p. 74). Returning to my anecdote that sparked my academic interest in fan identity and discursive practices, active engagement within K-pop encompasses a broad range of activities. You can, in fact, just be 'a listening fan' as justified by a K-pop die-hard fan. So, no matter how periphery, anyone and everyone can be considered a fan.

References

- Adetunji, A. (2013). A discursive construction of teasing in football fandom: The context of the South-Western Nigerian viewing center. *Discourse & Society*, 24(2), 147–162. <https://doi.org/10.1177/0957926512469392>
- Ahn, J. (2011). The effect of social network sites on adolescents' social and academic development: Current theories and controversies. *Journal of the American Society for Information Science and Technology*, 62(8), 1435–1445. <https://doi.org/10.1002/asi.21540>
- Alberts, J. K. (1992). An inferential/strategic explanation for the social organisation of teases. *Journal of Language and Social Psychology*, 11(3), 153–177. <https://doi.org/10.1177/0261927X92113003>
- Aljanahi, M. H. (2019). "You could say I'm a hardcore fan of Dragon Ball Z": Affinity spaces, multiliteracies, and the negotiation of identity. *Literacy Research and Instruction*, 58(1), 31–48. <https://doi.org/10.1080/19388071.2018.1520940>
- Anderson, B. (1983). *Imagined communities: Reflections on the origin and spread of nationalism*. Verso books.
- Androutsopoulos, J. (2010). Localizing the global on the participatory web. In N. Coupland (Ed), *The Handbook of Language and Globalization* (pp. 201–231). Wiley-Blackwell. <https://doi.org/10.1002/9781444324068>

- Androutsopoulos, J. (2013). Participatory culture and metalinguistic discourse: Performing and negotiating German dialects on YouTube. In D. Tannen & A. M. Trester (Eds.), *Discourse 2.0: Language and new media* (pp. 47–71). Georgetown University Press.
- Androutsopoulos, J. (2014). Moments of sharing: Entextualization and linguistic repertoires in social networking. *Journal of Pragmatics*, 73, 4–18.
<https://doi.org/10.1016/j.pragma.2014.07.013>
- Andersen, D., Ravn, S., & Thomson, R. (2020). Narrative Sense-Making and Prospective Social Action: Methodological Challenges and New Directions. *International journal of social research methodology*, 23(4), 367–375.
<https://doi.org/10.1080/13645579.2020.1723204>
- Apte, M. L. (1985). *Humor and laughter: An anthropological approach*. Cornell University Press.
- Arab, R., & Milner Davis, J. (2022). Humour and belonging: A thematic review. *The European Journal of Humour Research*, 10(2), 1–13.
<https://doi.org/10.7592/EJHR.2022.10.2.643>
- Bakhtin, M. (1981). Discourse in the novel (M. Holquist & C. Emerson, Trans.). In M. Holquist (Ed.), *The dialogic imagination* (pp. 259–422). University of Texas Press.
- Bauman, R., & Briggs, C. L. (1990). Poetics and performances as critical perspectives on language and social life. *Annual Review of Anthropology*, 19(1), 59–88.
<https://doi.org/10.1146/annurev.an.19.100190.000423>
- Baym, N. (2015). *Personal connection in the digital age* (2nd ed.). Polity.
- Bednarek, M. (2017a). Fandom. In C. Hoffman, & W. Bublitz (Eds.), *Pragmatics of social media* (pp. 545–572). De Gruyter Mouton.
- Bednarek, M. (2017b). (Re-)circulating popular television: Audience engagement and corporate practices. In J. Mortensen, N. Coupland & J. Thøgersen (Eds.), *Style, mediation and change: Sociolinguistic perspectives on talking media* (pp. 115–140). Oxford University Press.
- Benson, P. (2017). *The discourse of YouTube: Multimodal text in a global context*. Routledge.
<https://doi.org/10.4324/9781315646473>
- Berger, A. A. (1987). Humor: An introduction. *American Behavioral Scientist*, 30(3), 6–15.
<https://doi.org/10.1177/000276487030003002>
- Blommaert, J. (2005). *Discourse: A critical introduction (Key topics in sociolinguistics)*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511610295>
- Blommaert, J. (2010). *The sociolinguistics of globalization*. Cambridge University Press.
- Booth, P. (2017). *Digital fandom 2.0*. Peter Lang Verlag.

- Booth, P. (2018). Introduction. In P. Booth (Ed.), *A companion to media fandom and fan studies* (pp. 1–9). John Wiley & Sons.
- Boxer, D., & Cortés-Conde, F. (1997). From bonding to biting: Conversational joking and identity display. *Journal of Pragmatics*, 27(3), 275–294.
[https://doi.org/10.1016/S0378-2166\(96\)00031-8](https://doi.org/10.1016/S0378-2166(96)00031-8)
- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4–5), 585–614. <https://doi.org/10.1177/1461445605054407>
- Bucholtz, M., & Hall, K. (2010). Locating identity in language. In C. Llamas & D. Watt (Eds.), *Language and identities* (pp. 18–28), Edinburgh University Press.
- Burgess, J., & Green, J. (2009). *YouTube: Online video and participatory culture*. Polity.
- Cain, S. S. (2018). Teasing as audience engagement: Setting up the unexpected during television comedy monologues. In V. Tsakona & J. Chovanec (Eds.), *The dynamics of interactional humor: Creating and negotiating humor in everyday encounters* (pp. 127–152). John Benjamins Publishing Company.
- Chau, C. (2010). YouTube as a participatory culture. *New Directions for Youth Development*, 128, 65–74. <https://doi.org/10.1002/yn.376>
- Chauvin, C. (2017). Callbacks in stand-up comedy: Constructing cohesion at the macro level within a specific genre. In K. Aijmer & D. Lewis (Eds.), *Contrastive analysis of discourse-pragmatic aspects of linguistic genres: Yearbook of corpus linguistics and pragmatics* (Vol. 5., pp. 165–185). Springer.
- Choi, J. B., & Maliangkay, R. (2015). Introduction: Why fandom matters to the international rise of K-pop. In J. B. Choi & R. Maliangkay (Eds.), *K-pop – The international rise of the Korean music industry* (pp. 1–18). Routledge.
- Coates, J. (2007). Talk in a play frame: More on laughter and intimacy. *Journal of Pragmatics*, 39(1), 29–49. <https://doi.org/10.1016/j.pragma.2006.05.003>
- Coppa, F. (2006). A brief history of media fandom. In K. Hellekson & K. Busse (Eds.), *Fan fiction and fan communities in the age of the internet: New essays* (pp. 42–59). McFarland & Co.
- Coupland, N. (2003). Sociolinguistic authenticities. *Journal of Sociolinguistics*, 7(3), 417–431. <https://doi.org/10.1111/1467-9481.00233>
- Coupland, N. (2010). *The authentic speaker and the speech community*. In C. Llamas, & D. Watts, (Eds.), *Language and identities* (pp. 99–112). Edinburgh University Press. <https://doi.org/10.1515/9780748635788-013>
- Davis, B., & Mason, P. (2004). Trying on voices: Using questions to establish authority, identity, and recipient design in electronic discourse. In P. Levine & R. Scollon (Eds.),

Discourse and technology: Multimodal discourse analysis (pp. 47–58). Georgetown University Press.

- Dubovi, I., & Tabak, I. (2020). An empirical analysis of knowledge co-construction in YouTube comments. *Computers & Education*, 156, 1–16.
<https://doi.org/10.1016/j.compedu.2020.103939>
- Dynel, M. (2014). Participation framework underlying YouTube interaction. *Journal of Pragmatics*, 73, 37–52. <https://doi.org/10.1016/j.pragma.2014.04.001>
- Dynel, M. (2016). “I has seen Image Macros!”: Advice animal memes as visual-verbal jokes. *International Journal of Communication*, 10, 660–688.
- Enzweiler, C. (2018). The development of identity in Batman comics. In B. Bös, S. Kleinke, S. Mollin & N. Hernández (Eds.), *The discursive construction of identities on- and offline: Personal – Group – Collective*. John Benjamins.
<https://doi.org/10.1075/dapsac.78.04enz>
- Epstein, S. (2015). “Into the new world”: Girls’ Generation from the local to the global. In J.B. Choi, & R. Maliangkay (Eds.), *K-pop – The international rise of the Korean music industry* (pp. 35–50). Routledge.
- Fiadotava, A. (2021). “We came for the Sluts, but stayed for the Slutsk”: FK Slutsk Worldwide Facebook page between ironic and genuine football fandom. *HUMOR*, 34(2), 259–282. <https://doi.org/10.1515/humor-2021-0007>
- Fallone, C. (2021). WE ARE ONE: Korean Pop fan affinity spaces on YouTube. [Research assignment, Victoria University of Wellington].
- Foerster, A. (2010). Towards a creative approach in subtitling: A case study. In J. Díaz Cintas, A. Matamala, & J. Neves, (Eds.), *New insights into audiovisual translation and media accessibility* (pp. 81–98). BRILL. https://doi.org/10.1163/9789042031814_008
- Giora, R., & Attardo, S. (2014). Irony. In S. Attardo (Ed.), *Encyclopedia of humor studies*. (Vol. 1) (pp. 398–402). SAGE Publications.
- Gurney, D. (2011). Recombinant comedy, transmedial mobility, and viral video. *The Velvet Light Trap*, 68, 3–13. <https://doi.org/10.1353/vlt.2011.0018>
- Goffman, E. (1955). On face-work: An analysis of ritual elements in social interaction. *Psychiatry*, 18(3), 213–231.
<https://doi.org/10.1080/00332747.1955.11023008>
- Goffman E. (1969). *The presentation of self in everyday life*. Allen Lane.
- Gumperz, J. (1982). *Discourse strategies (Studies in Interactional Sociolinguistics)*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511611834>
- Gumperz, J. (1992). Contextualization revisited. In P. Auer & A. Di Luzio (Eds.), *The contextualization of language* (pp. 39–53). John Benjamins.

- Haugh, M. (2017). Teasing. In S. Attardo (Ed.), *The Routledge handbook of language and humor* (pp. 204–218). Taylor & Francis.
- Hay, J. (1995). *Gender and humour: beyond a joke*. [Master's dissertation, Victoria University of Wellington].
- Hay, J. (2001). The pragmatics of humor support. *Humor*, 14(1), 55–82.
<https://doi.org/10.1515/humr.14.1.55>
- Hayes, E., & Gee, J. P. (2009). Public pedagogy through video games: Design, resources, and affinity spaces. In J. Sandlin, B. Schultz & J. Burdick (Eds.), *Handbook of public pedagogy: Education and learning beyond schooling* (pp. 185–193). Taylor & Francis Group.
- Hellekson, K. (2018). The fan experience. In P. Booth (Ed.), *A companion to media fandom and fan studies* (pp. 65–76). John Wiley & Sons.
<https://doi.org/10.1002/9781119237211.ch4>
- Hellekson, K., & Busse, K. (2006). *Fan fiction and fan communities in the age of the internet: New essays*. McFarland & Company.
- Holmes, J. (2000). Politeness, power and provocation: How humour functions in the workplace. *Discourse studies*, 2(2), 159–185.
<https://doi.org/10.1177/1461445600002002002>
- Holmes, J. (2007). Monitoring organisational boundaries: Diverse discourse strategies used in gatekeeping. *Journal of Pragmatics*, 39(11), 1993–2016.
<https://doi.org/10.1016/j.pragma.2007.07.009>
- Holmes, J., & Marra, M. (2002). Having a laugh at work: How humour contributes to workplace culture. *Journal of Pragmatics*, 34(12), 1683–1710.
[https://doi.org/10.1016/S0378-2166\(02\)00032-2](https://doi.org/10.1016/S0378-2166(02)00032-2)
- Holmes, J., Marra, M., & Vine, B. (2011). *Leadership, discourse, and ethnicity*. Oxford University Press.
- Holmes, J., Marra, M., & King, B. W. (2013). How permeable is the formal-informal boundary at work? An ethnographic account of the role of food in workplace discourse. In C. Gerhardt, M. Frobenius & S. Ley (Eds.), *Culinary linguistics: The chef's special* (pp.191–209). John Benjamins. <https://doi.org/10.1075/clu.10.08hol>
- Hugman, N. (2021). “You’re a feral, man”: Banter as an index of footballer identity. *Te Reo: The Journal of the Linguistic Society of New Zealand*, 64(2), 37–61.
- Hwang, Y. M., & Epstein, S. J. (2016). *The Korean Wave: A sourcebook*. The Academy of Korean Studies Press.
- ItsFrida (2018, April 7) *MEME SOUND EFFECTS FOR EDITING*. YouTube.
https://www.youtube.com/watch?v=WyFy51GtCJY&ab_channel=ItsFrida

- Jenkins, H. (1992). *Textual poachers: Television fans and participatory culture*. Routledge. <https://doi.org/10.4324/9780203114339>
- Jenkins, H. (2006a). *Fans, bloggers, and gamers: Exploring participatory culture*. New York University Press. <https://doi.org/10.18574/nyu/9780814743690.001.0001>
- Jenkins, H. (2006b). *Convergent culture: Where old and new media collide*. New York University Press.
- Jenkins, H. (2007). Afterword: The future of fandom. In J. Gray, C. Lee Harrington & C. Sandvoss (Eds.), *Fandom: identities and communities in a mediated world* (pp. 357–365). New York University Press. <https://doi.org/10.2307/j.ctt1pwtbq2>
- Jin, D. Y. (2018). An analysis of Korean Wave as transnational popular culture: North America youth engage through social media as TV becomes Obsolete. *International Journal of Communication*, 12(2018), 404–422.
- Jin, D. Y., & Yoon, K. (2016). The social mediascape of transnational Korean pop culture: Hallyu 2.0 as spreadable media practice. *New Media & Society*, 18(7), 1277–1292. <https://doi.org/10.1177/14614448145548>
- Jonsson, C., & Muhonen, A. (2014). Multilingual repertoires and the relocalization of manga in digital media. *Discourse, Context, and Media*, 4–5, 87–100. <https://doi.org/10.1016/j.dcm.2014.05.002>
- Jung, S., & Shim, D. (2014). Social distribution: K-pop fan practices in Indonesia and the ‘Gangnam Style’ phenomenon. *International Journal of Culture Studies*, 17(5), 485–501. <https://doi.org/10.1177/1367877913505173>
- Tresna, K. A. A. D., Sukanto, M. E., & Tondok, M. S. (2021). Celebrity worship and body image among young girls fans of K-Pop girl groups. *Humanitas Indonesian Psychological Journal*, 18(2), 100–111. <https://doi.org/10.26555/humanitas.v18i2.19392>
- Kerry, V. J. (2019). *Stance, Same-sex marriage and space: An analysis of self-referencing on YouTube*. [Doctoral Dissertation, Massey University].
- Kirner-Ludwig, M. (2018). Great pretenders: The phenomenon of impersonating (pseudo-) historical personae in medieval blogs, or: Blogging for someone else’s fame? In B. Bös, S. Kleinke, S. Mollin & N. Hernández (Eds.), *The discursive construction of identities on- and offline: Personal – Group – Collective* (pp. 133–152). John Benjamins. <https://doi.org/10.1075/dapsac.78.02kir>
- Knobel, M., & Lankshear, C. (2007). Online memes, affinities, and cultural production. In M. Knobel & C. Lankshear (Eds.), *A new literacies sampler* (pp. 199–227). Peter Lang Publishing.
- Knobel, M., & Lankshear C. (2008). Remix: The art and craft of endless hybridization. *Journal of Adolescent & Adult Literacy*, 52(1), 22–23. <https://doi.org/10.1598/JAAL.52.1.3>

- Know Your Meme (2012, May). *Spongebob Time Cards*.
<https://knowyourmeme.com/memes/spongebob-time-cards>.
- KProfiles (2020, October). *Luhan Profile and Facts; Luhan's Ideal Type*.
<https://kprofiles.com/luhan-profile-facts-luhans-ideal-type>
- Kytölä, S. (2012). Peer normativity and sanctioning of linguistic resources-in-use—on non-standard Englishes in Finnish football forums online. In J. Blommaert, S. Leppänen, P. Pahta & T. Räisänen (Eds.), *Dangerous multilingualism: Northern perspectives on order, purity and normality*. (pp. 228–261). Palgrave Macmillan.
https://doi.org/10.1057/9781137283566_11
- Leppänen, S. (2011). Linguistic diversity and generic hybridity in web writing: The case of fan fiction. In M. Sebba, S. Mohootian & C. Jonsson (Eds.), *Language mixing and code-switching in writing: Approaches to mixed-language written discourse* (pp. 233–254). Taylor and Francis. <https://doi.org/10.4324/9780203136133>
- Leppänen, S., & Häkkinen, A. (2012). Buffalaxed superdiversity: Representations of the other on YouTube. *Diversities*, 14(2), 17–33. <https://doi.org/10.58002/x8zh-xs69>
- Leppänen, S., Kytölä, S., Jousmäki, H., Peuronen, S., & Westinen, E. E. (2013). Entextualization and resemiotization as resources for (dis)identification in social media. In P. Seargeant & C. Tagg (Eds.), *The language of social media: Identity and community on the internet* (pp. 112–136). Palgrave Macmillan.
- Lee, S. J. (2015). A decade of Hallyu Scholarship: Toward a New Direction in Hallyu 2.0. In S. J. Lee & A. M. Nornes (Eds.), *Hallyu 2.0: The Korean Wave in the age of social media* (pp. 1–27). University of Michigan Press.
- Lee, S. A. (2015). Of the Fans, by the Fans, for the Fans: The JYJ Republic. In S. J. Lee & A. M. Nornes (Eds.), *Hallyu 2.0: The Korean Wave in the age of social media* (pp. 108–129). University of Michigan Press.
- Locher, M., & Messerli, T. (2020). Translating the other: Communal TV watching of Korean TV drama. *Journal of Pragmatics*, 170, 20–36
<https://doi.org/10.1016/j.pragma.2020.07.002>
- Lockyer, S. (2015). Performance, expectation, interaction, and intimacy: On the opportunities and limitations of arena stand-up comedy for comedians and audiences. *Journal of Popular Culture*, 48(2), 586–603.
<https://doi.org/10.1111/jpcu.12285>
- Logi, L., & Zappavigna, M. (2021). A social semiotic perspective on emoji: How emoji and language interact to make meaning in digital messages. *New Media & Society*, 25(12), 3222–3246. <https://doi.org/10.1177/14614448211032965>
- Mak, B. C. N. (2017). Humour in the Workplace. In B. Vine (Ed.), *The Routledge handbook of language in the workplace* (pp. 228–241). Routledge.
<https://doi.org/10.4324/9781315690001-20>

- Maltby, J., Day, L., McCutcheon, L. E., Gillett, R., Houran, J., & Ashe, D. D. (2004). Personality and coping: A context for examining celebrity worship and mental health. *The British Journal of Psychology*, 95(4), 411–428. <https://doi.org/10.1348/0007126042369794>
- Mannheim, B., & Tedlock D. (1995). Introduction. In D. Tedlock & B. Mannheim (Eds.), *The dialogic emergence of culture* (pp. 1–32). University of Illinois Press.
- Marra, M. (2003). *Decisions in New Zealand business meetings: A sociolinguistic analysis of power at work*. [Doctoral dissertation, Victoria University of Wellington].
- Marra, M. (2022). Laughing along? Negotiating belonging as a workplace newcomer. *The European Journal of Humour Research*, 10(2), 135–151. <https://doi.org/10.7592/EJHR.2022.10.2.670>
- Marra, M., & Morrell, S. (2021, February 2–4). *A New Zealander online: Using humour to signal national belonging* [Conference session]. Australasian Humour Studies Network Colloquium, Wellington.
- Messerli, T. C., & Locher, M. A. (2021). Humor support and emotive stance in comments on Korean TV drama. *Journal of Pragmatics*, 178, 408–425. <https://doi.org/10.1016/j.pragma.2021.03.001>
- Mollin, S. (2018). The use of face-threatening acts in the construction of in- and out-group identities in British parliamentary debates. In B. Bös, S. Kleinke, S. Mollin & N. Hernández (Eds.), *The discursive construction of identities on- and offline: Personal – Group – Collective* (pp. 133–152). John Benjamins.
- Mullan, K. (2022). On the “Dark Side”: Facebook humour used for inclusion and exclusion. *The European Journal of Humour Research*, 10(2), 96–115. <https://doi.org/10.7592/EJHR2022.10.2.644>
- Newon, L. (2011). Multimodal creativity and identities of expertise in the digital ecology of a world of warcraft guild. In C. Thurlow & K. Mroczek (Eds.), *Digital discourse: language in new media* (pp. 132–153). Oxford University Press.
- Newton, G., Zappavigna, M., Drysdale, K., & Newmann, C. (2022). More than humor: Memes as bonding icons for belonging in donor-conceived people. *Social Media + Society*, 8(1), 1–13. <https://doi.org/10.1177/20563051211069055>
- Norris, S. (2019). *Systematically working with multimodal data: Research methods in multimodal discourse analysis*. John Wiley & Sons.
- Nybro Petersen, L. (2014). Sherlock fan talk: Mediatized talk on tumblr. *Northern Lights*, 12(1), 87–104.
- Nybro Petersen, L. (2022). *Mediatized fan play: Moods, modes and dark play in networked communities*. Taylor & Francis. <https://doi.org/10.4324/9781351001847>

- O'Halloran, K. L., Tan, S., & Marissa K. L. E. (2014). Multimodal pragmatics. In K. P. Schneider & A. Barron (Eds.), *Pragmatics of discourse* (pp. 239–268). De Gruyter Mouton.
- Oh, Mina (2015, October 20). *Korean Emoticons and Text Expressions*. SweetandtastyTV. <https://www.sweetandtastytv.com/blog/2015/10/20/korean-emoticons-text-expressions>
- Pérez-González, L. (2007). Fansubbing anime: Insights into the 'Butterfly Effect' of globalization on audiovisual translation. *Perspectives*, 14(4), 260–277. <https://doi.org/10.1080/09076760708669043>
- Ruth Larsen, M. (2018). Fandom and Otaku. In P. Booth (Ed.), *A companion to media fandom and fan studies* (pp. 539–551). John Wiley & Sons.
- Rymes, B. (2012). Recontextualizing YouTube: From macro-micro to mass-mediated communicative repertoires. *Anthropology & Education Quarterly*, 43(2), 214–227. <https://doi.org/10.1111/j.1548-1492.2012.01170.x>
- Sanderson, R. (2022). Breaking frames with babish: How community boundaries are managed through humour on a professional YouTube channel. *Wellington Working Papers in Linguistics*, 24, 127–144.
- Scollon, R., & Levine, P. (2004). Multimodal discourse analysis as the confluence of discourse and technology. In P. Levine & R. Scollon (Eds.), *Discourse and technology: Multimodal discourse analysis* (pp. 7–19). Georgetown University Press.
- Sherzer, J. (2014). Speech play. In S. Attardo (Ed.), *Encyclopedia of humor studies* (Vol. 2) (pp. 727–730). Sage Publications.
- Shifman, L. (2014). *Memes in digital culture*. MIT Press. <https://doi.org/10.7551/mitpress/9429.001.0001>
- Shim, D., & Noh, K. W. (2012). YouTube and Girls' Generation fandom. *The Journal of the Korea Contents Association*, 12(1), 125–137. <https://doi.org/10.5392/JKCA.2012.12.01.125>
- Shin, H. (2015). The dynamics of K-pop spectatorship: The Tablo witch-hunt and its double-edged sword of enjoyment. In J. Choi & R. Maliangkay (Eds.), *K-pop – The international rise of the Korean music industry* (pp. 133–145). Routledge. <https://doi.org/10.4324/9781315773568>
- Song, S. H. (2020). The evolution of the Korean Wave: How is the third generation different from previous ones? *Korea Observer*, 51(1), 125–150. <https://doi.org/10.29152/KOIKS.2020.51.1.125>
- Souza-Leão, A.L.M., Moura, B.M., Henrique, V.M.R., Nunes, W.K.S., & Santana, I.R.C. (2020). From play to political action: Prosumerism on fanvideo meme production. *BAR, Brazilian Administration Review*, 17(3), 1–31. <https://doi.org/10.1590/1807-7692bar2020190121>

- Spilioti, T. (2017). Media convergence and publicness: Towards a modular and iterative approach to online research ethics. *Applied Linguistics Review*, 8(2–3), 191–212. <https://doi.org/10.1515/applirev-2016-1035>
- Tanskanen, S- K. (2018). Identity and metapragmatic acts in a student forum discussion thread. In B. Bös, S. Kleinke, S. Mollin & N. Hernández (Eds.), *The discursive construction of identities on- and offline: Personal – Group – Collective* (pp. 133 – 152). John Benjamins. <https://doi.org/10.1075/dapsac.78.06tan>
- Tanskanen, S- K. (2021). Fragmented but coherent: Lexical cohesion on a YouTube channel. *Discourse, Context & Media*. 44, 1–14. <https://doi.org/10.1016/j.dcm.2021.100548>
- Turk, T. (2018). Interdisciplinarity in fan studies: The fan experience. In P. Booth (Ed.), *A companion to media fandom and fan studies* (pp. 539–551). John Wiley & Sons.
- Vásquez, C., & Aslan, E. (2020). “Cats be outside, how about meow”: Multimodal humor and creativity in an internet meme. *Journal of Pragmatics*, 171, 101–117. <https://doi.org/10.1016/j.pragma.2020.10.006>
- van Dijck, J. (2009). Users like you? Theorizing agency in user-generated content. *Media, Culture & Society*, 31(1), 41–58. <https://doi.org/10.1177/0163443708098245>
- Wang, Y., & Swann, J. (2014). Social interaction. In S. Attardo (Ed.), *Encyclopaedia of humor studies* (Vol. 2) (pp. 705–708). Sage Publications.
- Oleszczuk, A., & Waszkiewicz, A., (2020). Queerness of Hallyu 2.0: Negotiating non-normative identities in K-pop music videos. *Res Rhetorica*, 7(2), 117–131. <https://doi.org/10.29107/rr2020.2.8>
- Webb, H., Jirotko, M., Stahl, B. C., Housley, W., Edwards, A., Williams, M., Procter, R., Rana, O., & Burnap, P. (2017). The ethical challenges of publishing Twitter data for research dissemination. In *Proceedings of the 2017 ACM on Web Science Conference*, 339–348.
- Weitz, E. (2017). Online and internet humor. In S. Attardo(Ed.), *The Routledge handbook of language and humor* (pp. 504–518). Taylor & Francis.
- Wenger, E. (1998). *Communities of Practice: Learning, meaning and identity*. Cambridge University Press.
- Wood, M. M., & Baughman, L. (2012). Glee fandom and Twitter: Something new, or more of the same old thing? *Communication Studies*, 63(3), 328–344. <https://doi.org/10.1080/10510974.2012.674618>
- Yeo, A. (2020, November 29). *Bias, comeback, and aegyo: What all those K-pop words actually mean*. Mashable. <https://mashable.com/article/kpop-glossary-maknae-bts#:~:text=The%20term%20%E2%80%9Cmaknae%E2%80%9D%20isn%27,Mamamoo%20Hwasan%2C%20and%20Twice%27s%20Tzuyu>

- Yus, F. (2019). Multimodality in memes: A cyberpragmatic approach. In P. Bou-Franch & P. Garcé-Conejos Blitvich (Eds.), *Analyzing digital discourse: New insights and future directions* (pp. 105–131). Springer. <https://doi.org/10.1111/ijal.12347>
- Zappavigna, M. (2011). Ambient affiliation: A linguistic perspective on Twitter. *New Media & Society*, 13(5), 788–806. <https://doi.org/10.1177/1461444810385097>
- Zappavigna, M. (2012). *Discourse of Twitter and social media: How we use language to create affiliation on the web*. Continuum.
- Zappavigna, M (2015). Searchable talk: The linguistic functions of hashtags. *Social Semiotics*, 25(3), 274–291. <https://doi.org/10.1080/10350330.2014.996948>

“The Elderly... Just Give You So Much Time”

A Sociocultural Analysis of Time in Aotearoa New Zealand

Juliette MacIver

Societal narratives, or Discourses, of time are often suffused with unease: a sense of lack of time, of overbusyness; a feeling that time passes too quickly; and fear of ageing. While time as a broad topic has been studied extensively in linguistics (Evans, 2013), very few studies have explored the sociocultural construction of society-wide ideologies around time. In the context of Aotearoa, Pākehā society dominates the cultural landscape. Consequently, Pākehā understandings are often assumed by many (and typically Pākehā) to be ‘human norms’ (Holmes, 2018). Taking advantage of the Interactional Sociolinguistics (IS) understanding that ideologies are not only socially but *culturally* constructed, I consider perspectives from other worldviews, notably te ao Māori to bring these hidden beliefs and ideologies to the fore.

Two focus groups were recorded, with participants grouped according to their self-described ethnicity: the first identified as predominantly Pākehā, and the second exhibited a strong orientation towards Māori and Pasifika cultures. Taking an IS approach, I examine the Discourses around time by looking at the little ‘d’ discourses to access big ‘D’ Discourses (see Gee, 2015). Discourses identified across the data were grouped as ‘Discourses of Ageing’ and ‘Discourses of Time constructed as a resource’. Striking differences between the two groups emerged. Discourses of Ageing were roundly negative in the first group, and positive in the second. While both groups constructed time as a ‘resource’, the first group imputed its purpose as largely for ‘doing’ while the second constructed it as a resource for ‘giving’. These differences are discussed in terms of collectivist vs individualist societal orientation, and in the case of Pākehā ideologies, as rooted in neoliberalism, capitalism and hyper-individualism. Further research is recommended to warrant the prevalence of these Discourses and the extent to which they impact our lives. By examining the Pākehā Discourses in relief, I aim to trouble the taken-for-granted assumptions about time that dominate society.

1. Introduction

Kia whakatōmuri te haere whakamua

I walk backwards into the future with my eyes fixed on the past.

Western beliefs around time are frequently negative ones: for example, time is constructed as a commodity (e.g., Foucault, 1977; Hochschild, 1997), with accompanying Discourses of Busyness (Shir-Wise, 2019), scarcity and lack (Webster & Ballard, 2009), as seen in expressions such as ‘time-poor’, ‘to spend time’, and ‘to waste time’ (Bourdieu, 2010). There is a dominant belief in Western society that time passes too quickly, as reflected in the common expression ‘time flies’. In my own experience as a mother of teenagers, I encounter the cultural expectation to express surprise or shock at children’s ages or heights: a peculiar cultural insistence on expressing bewilderment to the point of disbelief at the passing of time. Is this simply a natural response to change: while we perceive ourselves as adults to be changing relatively little, children change rapidly, thereby acting as a yardstick for the passing of time? Or is it because we’re too busy, too harried, and not paying attention? I frequently perceive

a sense of helplessness in these Discourses, and possibly an underlying fear, perhaps of ageing, which itself is generally regarded in negative terms in Western society, and of death. But why do we construct narratives that seem to burden us? What historical origins and current hegemonic, institutional forces might be underpinning these narratives of modern life? There is a great need for a critical exploration of these underlying societal beliefs and the impact that they have on our lives.

In this dissertation, I argue that our experience of the passing of time is socially constructed and mediated through language in interaction. Further, different cultures construct different understandings, beliefs and value systems around the phenomenon of time; that is to say, our experience of time is also a culturally constructed one (Lo & Houkamau, 2012). As Bender and Wellbery (1991, p. 3) explain, “Time is not given but... fabricated, constantly being made and remade at multiple individual, social, and cultural levels.” While the Discourses mentioned in the paragraph above arguably come from the Western paradigm, other cultures construct very different understandings (Rodríguez, 2014). The capitalising of the word ‘Discourses’ is used here in line with convention to indicate broad, society-wide assumptions and beliefs that shape our understanding of reality, impacting behaviour and influencing societal structures (Gee, 2015). Small ‘d’ discourse, by contrast, is the talk produced by individuals speaking as members of various social groups (Gumperz, 2006), talk which is context-bound and requires both linguistic knowledge—i.e., syntax, lexicon, prosody—as well as social and cultural knowledge. All these forces are understood as constraining both what is said and the manner in which it *can* be said.

Social, cultural, and cognitive factors, including power relations and social structures, have all been identified as influential in shaping our Discourses (van Dijk, 2015). The impact of culture, however, is of particular interest in this study. Broadly defined, culture refers to a set of “understandings that are shared by communities at a range of levels of abstraction” (Marra et al., 2022, p. 185). These shared norms of concept, behaviour, and worldview vary significantly from group to group. For members of the dominant culture, like myself, the beliefs and value systems that influence our relationship to such phenomena as time often remain unknown to us, operating as taken-for-granted societal norms (Holmes, 2018; Gray et al., 2013). Our stories do not appear to be stories but rather hard facts or simple reality. In part, the motivation for this study lies in the power of learning about other cultural beliefs and the light these alternative worldviews can shed on the otherwise hidden aspects of one’s own culture (Holmes et al., 2011). In Aotearoa, Māori conceptualisations of time are in many ways very different from understandings exhibited in the dominant Pākehā group, which orients largely to Western understandings (Black et al., 2014; Brown et al., 2014). This dissertation begins with an opening whakataukī (proverb, or significant saying) that poses a challenge to these hidden, normative assumptions about how we understand and relate to time (Rameka, 2016). This proverb becomes an invitation to explore ways of unpacking the underlying forces that produce these ideologies, and also an opportunity to learn more about Māori understandings of time.

Additionally, it is of great importance to me as Pākehā myself (New Zealander of European origin) that I recognise my obligation to acknowledge and learn from Māori culture. I see this as part of my identity as tangata tiriti (literally, ‘people of the treaty’), through which I belong to this land on the basis of Te Tiriti o Waitangi; by the same token, I commit to honouring te

ao Māori (Māori worldview and culture) and learning to share power and privilege across all domains of public life (Delahunty, 2021; Peet, 2008). Further, on advice from the Dean of Te Wānanga Māori at Whitereia Polytechnic, Jeanette Grace, who generously advised me on cultural matters for the design of this study, I acknowledge that as Pākehā I am not qualified to commentate on Māori constructions of cultural belief (Yukich Te Kawehau Hoskins, 2011); therefore, the focus of this research will be an analysis of dominant Pākehā Discourses. Any perspectives that arise in the data from te ao Māori (the Māori worldview) will be used to highlight and challenge these views, as well as giving Pākehā an opportunity to engage with indigenous conceptualisations of time (Lo & Houkamau, 2012).

How do we access these underlying Discourses? Sociolinguistic approaches to discourse analysis play a crucial role in understanding ideologies and unique cultural perspectives (Holmes & Wilson, 2022). The indexing of wider societal Discourses, or big ‘D’ Discourses (Gee, 2015), is understood to be embedded in everyday interactive talk, or little ‘d’ discourses. Through the close analysis of linguistic and paralinguistic markers in everyday conversation, researchers are able to identify hidden layers of shared assumptions, beliefs, values and narratives. Within the framework and methodology of Interactional Sociolinguistics, a subdiscipline of Discourse Analysis, culture is intrinsic to the understanding of the social construction of ideologies (Gumperz, 2006), making this a suitable approach for my analysis. I will explain this methodology in more detail in the ‘Theoretical Frameworks’ section.

Primary data was sourced in the form of two focus groups, with participants grouped according to similarities in their cultural identification. This allowed for the collection of a rich store of both interactive talk and metadiscourse, i.e., explicit reflections around the topic of time. This data was analysed using an Interactional Sociolinguistics approach as noted above, and discussed in terms of the Discourses that shape and are shaped by our various (culturally-influenced) ideologies around time. In the discussion, I consider the history of these Discourses and the power structures that perpetuate them, with the impact of these societal narratives on our daily lives as a clear direction for future research.

In sum, I argue that our beliefs around time are culturally constructed, and the mechanism of this construction is similar to the mechanisms described in the social construction of identity: it is in the minutiae of everyday, casual interactions that we posit, reflect, reject, reproduce, and establish our beliefs around time, and thereby also our experience of it. Within the broad field of linguistics, very few studies have identified prominent societal Discourses around time; fewer still have examined the discursive features in everyday interactive talk through which the social construction of time, in its myriad instantiations, is made manifest. In the following section, I will review the literature in linguistics and other related fields as relates to time, culture, linguistic construction of both, and the complex interplay between them.

2. Literature Review

2.1 *The study of time*

Time is a fundamental component of the physical universe and bears a direct influence on all human affairs (Torres, 2023). Yet we construct widely varying understandings of time through our different languages and cultures (Lo & Houkamau, 2012), which in turn influence our

personal experience and relationship to this fundamental phenomenon. This concept of the social and cultural construction of time has been studied extensively in the fields of sociology, anthropology, organisation studies, psychology, and cultural studies. Researchers in these fields have identified a range of time-related societal ideologies, such as the Busyness Discourse (e.g., Heinrichsmeier, 2019; Sabelis et al., 2005) and the Commodification of time (e.g., Gardner, 2022; Webster & Ballard, 2009). Various social and economic forces throughout Western history have played a role in the evolution of these Discourses, for example, the Industrial Revolution, the subsequent development of capitalism, and the decline of religion. These changes have given rise to Discourses such as Time as a commodity, Productivity, Busyness, a sense of Time passing too quickly (Webster & Ballard, 2009), Efficiency (Hochschild, 1997), and Fear of ageing and death (Odell, 2023). In a wide-ranging and very recent examination of (predominantly Western) understandings of time, Jenny Odell traverses many of these topics in her bestselling book, *Saving Time: Discovering a Life Beyond the Clock* (2023). Covering a diverse array of subjects, such as histories of labour, personal ‘time management’, leisure, productivity Discourses, and the effects of the pandemic on our perceptions of time, the book ultimately describes our Western orientation to time as having its roots in European colonialism and the economy of extraction, both of natural resources and human labour.

Popular Discourses around time are also integral to Webster and Ballard’s (2009) communications study, in which the authors undertake a thematic analysis of workers’ everyday spoken interactions. Their analysis is intended as practical insight for their participants into the difficulties they experience with the time and timing of work and its role in providing meaning and meaningfulness. By ‘time’ here, the authors include such Discourses as Scarcity, or Lack of time; by ‘timing’, they mean scheduling or when work occurs. Additionally, they identify several Discourses popular in the media at the time of their study and arguably still strongly present now: these are the Work-life Discourse, which they distinguish from the Balance Discourse, and the Search for more time. Although the study focuses on difficulties and conflicts within these Discourses, the ideologies examined are presented as ambivalent constructs by the authors: for example, the role of popular media Discourses in shaping workers’ perceptions and expectations of life in an organisation are described as aiding workers throughout their careers and informing current organisational practices. The authors of this study focus on popular media as a powerful source of messages that both reflect and reinforce conceptualisations of time and work.

While academic disciplines across the social sciences have contributed extensively to the study of time as a social construct, linguistics too explores time, taking a multitude of approaches to this nebulous and elemental phenomenon.

2.2 Time within linguistics

Particularly over the last four decades, time as a broad topic has been studied extensively within the field of linguistics (Evans, 2013). Different sub-disciplines have examined how languages express and conceptualise various temporal concepts. In both cognitive linguistics and the field of syntax and semantics, for example, the expression of time has been analysed in the structure of verb tenses and temporality (e.g., cognitive: Evans, 2013; Klein, 2013; Tenbrink, 2021; and syntax and semantics: Tonhauser, 2015). Much study of cross-linguistic

variation has been undertaken in this area, with a detailed examination of the way different languages encode tense and aspect (see the seminal work of Comrie, 1985; Klein, 1994). Cognitive linguistics also examines the way in which temporal concepts are embedded in human cognitive processes, for example, through the use of conceptual metaphors such as the mapping of time onto space (Athanasopoulos et al., 2017), exemplified in expressions such as ‘the past is behind us’ (for a seminal work in this area see Lakoff & Johnson, 1980).

In sociolinguistics, time has been addressed as a fundamental concept in investigating language variation and change (Bell, 2013), utilising both apparent time and real-time studies. Temporal reference has also been analysed via Interactional Sociolinguistics (both my chosen framework and the dominant form of Discourse Analysis) through the use of temporal frames and contextual cues (e.g., Bestgen & Costermans, 1994). Other linguists have further explored the complexities of time as expressed in narrative discourse (e.g., Toolan, 2013). However, few have explored the social and cultural construction of societal ideologies around time.

Within discursive approaches to linguistics, the study of ideologies is an area of special interest (Alaghbary et al., 2015). In this domain, language is understood as the central medium through which human conceptualisations exist—and not only exist but also come into being, evolve, develop, and endure. A particular time-related focus has been ideologies of ageing and identity (see J. Coupland, 2009). As ageing arose as a significant theme in both focus groups in this study, as I report later, I summarise several key studies in this area.¹ This area of research addresses how people construct age-related identities and index their beliefs and value systems around age and ageing. Within sociolinguistics, Nikolas and Justine Coupland have contributed significantly to this area, focusing on social aspects of ageing and society-wide ageism. Their extensive research has investigated phenomena such as the everyday speech of older people, identity construction by older people and of older people by wider society, and Discourses of ageism in the medical domain (e.g., N. Coupland & J. Coupland, 1993; N. Coupland, 1997; N. Coupland & J. Coupland, 1998).

In regard to ageing and gender, very few linguistic studies have explored the intersectionality between these two identities (Koller, 2020). However, in her excellent book, *Discourses of Ageing and Gender*, Anderson (2019) applies the overarching theoretical framework of Critical Discourse Analysis (CDA) to examine and critique current societal Discourses around women and ageing. (for another insightful CDA analysis of ageing, see Spedale et al., 2014). Among several key Discourses identified by Anderson are the medicalisation of ageing and the closely related Discourse equating age with illness, and age as a decline that must be halted or mitigated through consumer products. Within the broad, and I would argue highly prevalent, Western Discourse that equates youth with good and age with bad, Anderson identifies a particular pressure on women to appear youthful. Her interviewees express an inner conflict when reflecting on these pressures in the sense that they are critical of this ideology and yet feel unable to resist these pressures. Koller (2020), however, notes that the negativity pervading these interviews and Discourses of ‘identity trouble’ should be understood in the context of the interviewees being a homogenous group of white, middle-class, heterosexual, cis-gendered women who self-selected for these interviews. This highlights the importance

¹ This initial summary presents cultural narratives around age and ageing as explored in a number of discourse analytical studies from a Western perspective. Indigenous perspectives in the linguistic literature will be presented in due course.

of considering the identity groups to which participants belong and the breadth of these (or lack thereof) when presenting research findings, a point I pay close attention to in my own analysis.

The medicalisation of ageing is similarly identified as a prevalent Discourse in a study undertaken by van den Bogaert et al. (2018), in this instance utilising a variant of DA from the field of sociology and positioning theory developed from a public relations framework (James, 2014). The authors analyse websites and press releases of Belgian sickness fund agencies, revealing two further narratives on ageing: ageing as a new stage in life and ageing as a natural life process. The study examines the ways in which these narratives are employed by the sickness agencies to “reproduce the moral framework on how to age well” (van den Bogaert et al., 2018, p. 13), which has the ironic effect of disempowering ageing persons.

Each of these studies examines Western ideologies around ageing. Few, however, have identified other prevalent societal Discourses in the social and cultural construction of time. As a specific goal of my research involves considering indigenous ideologies in relation to time, I now turn to an overview of the understanding of culture and ethnicity within the discipline of linguistics before going on to address indigeneity and time.

2.3 The study of culture

Different cultures express a diverse range of temporal perspectives (Bender & Wellbery, 1991), and increased globalisation and intercultural contact means that Discourses around time are evolving. In this dissertation to date, I have used the term ‘Western’ as a cultural term with an assumed understanding; however, in any discussion of culture and ethnicity, such a term requires some exploration. As a geographical and cultural category, ‘Western’ refers to the languages, cultures, and traditions associated with countries in Europe, North America and erstwhile European colonies (Crystal, 2011), widely discussed in recent years under the banner of ‘the global north’ (Mullany & Schnurr, 2023). Attention must be drawn to the shortcomings implicit in any broad categorisation: defining ‘Western’ as a single cultural category oversimplifies the immense diversity of cultures and languages across multiple countries, regions and linguistic communities encompassed in the term (Crystal, 2002). Further, historical and political changes over time mean that what is considered ‘Western’ today may not have been the same in the past (Campbell, 2013). With globalisation, the boundaries between cultures have become more porous, challenging traditional notions of cultural categorisation as languages and cultures incorporate elements from various sources (Pennycook, 2007). However, this study requires some kind of description to refer to this broad cultural phenomenon: appealing therefore to the concept of strategic essentialism (Bucholtz, 2003), I will use ‘Western’ with an understanding of its fluidity and lack of universally agreed-upon definition in the field of linguistics.

Similar cautions surround the use of such terms as ‘culture’ and ‘ethnicity’. For many scholars in sociolinguistics, the term ‘culture’, as Marra (2014, p. 382) puts it, “is considered slippery and ephemeral”. Although these two terms are defined and distinguished in some of the linguistic literature, in this dissertation I will use them in one very broad and interchangeable sense: by culture/ethnicity then, I refer to both the shared behaviours, beliefs, values, customs, and traditions of a particular group of people, and the dynamic and variable

construction of ethnic identity that individuals perform to index their belonging to such a group (see also Holmes et al., 2011).

Culture and ethnic identity have been studied extensively in linguistics, particularly in fields such as sociolinguistics, linguistic anthropology, and pragmatics (e.g., Capone & Mey, 2015; Gumperz & Cook-Gumperz, 2008; Marra, 2014). Many studies have explored the intricate relationship between language and culture, investigating how linguistic features reflect, shape, and are shaped by the cultures in which they are produced (Marra, 2014). Some studies focus on specific discourse functions such as narrative, unpacking how individuals and communities use narrative forms to construct their identities and convey cultural knowledge (e.g., Bamberg & Demuth, 2016). Others, such as cross-cultural pragmatics, explore the effects of culture on such linguistic features as politeness strategies and speech acts (e.g., Brown & Levinson, 1987).

Particularly pertinent to this study is research into the construction of cultural identity through linguistic features and discursive strategies. Important studies in this area include seminal work by Gumperz (1982) examining how language is used to construct social and ethnic identity and to reflect and reinforce cultural and social distinctions, and Holmes' work on the role of language in constructing ethnic identity (e.g., Holmes, 2018; Holmes & Marra, 2011; Holmes et al., 2020).

In sum, cultural understandings play a huge role in the construction of underlying, assumed ideologies, and our conceptualisations of time also fall within this broad umbrella of human constructs. It is my hope that some of our Western malaise arising from our current perceptions of time might be ameliorated by examining our underlying ideologies in the light of alternative cultural views, such as indigenous perspectives.

2.4 Indigeneity, te ao Māori, and time

In contrast to Western linear notions of time (Rodríguez, 2014), many indigenous cultures view time as cyclical (da Silva Sinha, 2019). Central to this perspective are natural rhythms, such as the seasons and celestial events, with time being understood as a continuous cycle of recurring events. This understanding is reflected in linguistic expressions of time that often revolve around these natural events (Basso, 1996). Events and experiences often feature in indigenous languages in a discursive feature known as 'event-based time', which sees time described in relation to significant events, such as 'before the harvest' (Rodríguez, 2014), where modern Western languages might utilise precise time measurements or clock time (Sinha et al., 2011). Indigenous patterns of spatial-temporal mapping also frequently contrast with predominant Western metaphors, with many indigenous languages in the Austronesian family in particular using a metaphor of 'walking backwards into the future' (e.g., Huang, 2016; Sullivan & Bui, 2016) as seen in my opening whakataukī from te ao Māori, with the past depicted as 'in front' and the unsighted future as 'behind'.

Of most relevance to my work are indigenous Māori conceptualisations of time. These, and indeed all being, knowing and doing, are embedded in the profound notion of 'whakapapa' (Murton, 2012). Often superficially translated as genealogy (Burgess & Painting, 2020), whakapapa encompasses much more than biological descent (Mikaere, 2017). Literally

meaning “to place layers, one upon another” (Murton, 2012, p. 92), whakapapa constitutes an all-encompassing knowledge framework for understanding the patterns and connections that link everything together, animate and inanimate (see also Doherty, 2014). As Curtis (2016, p. 397) explains, “Māori society believes in the spiritual connectedness between the living and the non-living and the interrelatedness between people, the land, the sea and all beings.” Whakapapa traverses both time and space (Burgess & Painting, 2020), with Māori understanding themselves as “intimately connected to innumerable past and future generations, our tūpuna and our mokopuna” (Burgess & Painting, 2020, p. 214). Tūpuna and mokopuna translate as ancestors and grandchildren but are used here in a wider sense to mean collective generations of people. In a Māori understanding of time then, and at the heart of existence, is relationship: humans are embedded in a set of relationships through which we come into being (Murton, 2012).

As a cosmological model of time, whakapapa allows Māori to trace their origins all the way back to the primal parents, Papatūānuku (Earth Mother) and Ranginui (Sky Father) (Murton, 2012; Procter & Black, 2014). The separation of these two saw the manifestation of time as past, present, and future (Murton, 2012). The ‘koru’, the ancient symbol of the double spiral, represents the interweaving of these three temporalities, with each revolution of the spiral bringing the past into the present and future, and in doing so, reconstituting both (Murton, 2012). Enmeshed also within these temporalities in the symbol of the koru is the intertwining of time and space, and spirit and matter (Murton, 2012). As concisely expressed by activist Donna Awatere (1984, p. 29, as cited in DeLoughrey, 2007, p. 165), “To the Maori, the past is the present is the future. Who I am and my relationship to everyone else depends on my Whakapapa . . . on those from whom I am descended.”

Linguist and former Māori language commissioner Patu Hohepa has proposed a Māori understanding in which time itself swirls, “like koru patterns, three-dimensional spirals” (cited in Salmond, 1997, p. 512). Interestingly, Hohepa also criticises the linearity of time intrinsic in the representation of Māori perceiving themselves as “walking backwards into the future” (Brown et al., 2014, p. 8). This, he argues, ignores the nuance of direction and position in the words ‘mua’ and ‘muri’, in the proverb ‘kia whakatōmuri te haere whakamua’, which can both mean past or present. This interpretation challenges the spatial orientation of a flat or linear view of time that would, on the surface, appear to be present in the well-known whakataukī (for an interesting description of spatio-temporal and time-movement modals identified in several world languages, see Sullivan & Bui, 2016).

Through this brief presentation of Māori perspectives we begin to see the importance of cultural and ethnic identity, and the impact it has on our conceptualisations of time. In Aotearoa, there is a hegemonic relationship between Māori and Pākehā sociocultural norms (Gibson, 2006; Gray et al., 2013; Holmes, 2018; Holmes & Marra, 2011), an underlying societal power imbalance that Holmes (2018) termed ‘the culture order’. For Pākehā, as members of the dominant group, this means that the cultural beliefs and value systems that influence our relationship to such phenomena as time remain unknown to us, operating as taken-for-granted societal norms (Holmes, 2018). The culture order will be an underlying concept for the analysis of cultural ideologies in this work.

2.5 Research Questions

I argue our culturally constructed beliefs around time are wide-reaching and, particularly for Pākehā, largely obscured from view, warranting an in-depth exploration of these ideologies and their manifestation in Aotearoa society. Further, the pervasiveness of Pākehā norms which makes it difficult for Pākehā to recognise our own ideologies and underlying beliefs needs to be challenged. Lastly, in undertaking research to bring time-related ideologies to the fore, I intend to examine how we create and recreate them, and the impact they have on our lives. My research questions are:

1. What wider societal Discourses relating to time and our understanding of time are indexed in interactive talk?
2. What evidence exists to show these Discourses are culturally-constructed?

By addressing these two questions, members of the dominant culture (like myself) can start to see how alternative cultural perspectives help us to better see the culturally constructed nature of our own understandings of time. Because of the interrelated nature of these questions, I will consider both questions jointly in each of the two analysis sections below.

2.6 Theoretical Frameworks and Analytic Approach

In order to answer these questions, a theoretical framework is required that understands wider societal Discourses as instantiated in everyday talk. This is provided by Interactional Sociolinguistics (IS), a branch of Discourse Analysis grounded in the work of John Gumperz (1982) that views speech as a dynamic and fluid process inextricably embedded in the social, political, cultural and historical context in which it is produced (Bucholtz & Hall, 2008; Shaw, 2012;). Applying this lens of interactionality allows me to explore ideologies both in terms of their macro origins and their micro instantiation in everyday talk (Bamberg et al., 2011; Horner & Bellamy, 2016). Gee's (2015) concept of big 'D' Discourses vs little 'd' discourses will be used here to analyse conceptual and metaphorical understandings of time as instantiations of wider societal narratives, or big 'D' Discourses. Little 'd' discourse refers to everyday interaction, which is regarded in IS as the primary medium through which these ideologies are posited, rejected, affirmed, refined and perpetuated (Bucholtz & Hall, 2008). Little 'd' discourse can be analysed for a wide range of linguistic mechanisms and features through which the wider Discourses can be identified (Gumperz, 2008).

In order to analyse how Discourses around time are socially constructed in this manner, an approach of IS-informed social constructionism will be employed (Bamberg et al., 2011; Holmes et al., 2011). While social constructionism may be understood as explaining the interface between material reality and the social understanding of this reality, not all social constructionists concur with this notion of a separate material reality (Pablé, 2015). For the purposes of this dissertation however, I argue that social constructionism is most useful and logical when posited in a way that acknowledges the existence of the underlying laws of material reality (e.g., Sealey, 2014). Adopting the social constructionist lens within the IS approach affords access to the role of identity, co-construction, and negotiation in the analysis I offer.

To address the second research question, my aim is to understand ethnic identity construction, as instantiated in interaction (Holmes et al., 2011). IS understands speakers primarily as members of social and cultural groups whose language use both reflects their group identity and indexes who they are (Juez, 2009), viewing identities “as *constructed* in and through discourse” (Bamberg et al., 2011, p. 117). In this context of research in Aotearoa New Zealand, a further concept of the ‘culture order’ is necessary (Holmes 2018). In many regions of the world today, multiple cultures co-exist but hierarchical structures mean that power and prestige are rarely shared equally (Holmes & Wilson, 2022). In Aotearoa New Zealand, Pākehā norms are dominant, and the hegemonic influence of these norms often goes unquestioned (Holmes et al., 2020), while Māori cultural norms and values are often disregarded. The concept of the culture order provides a framework for identifying the power imbalances in the manifestation of Pākehā vs Māori cultural norms in current New Zealand society, an aspect of society I see playing out in the data I present in the next section.

Lastly, my overall stance in relation to all processes involved in the research, from design through to data collection to analysis and discussion, will be one of researcher reflexivity (explored in more detail in the following section).

3. Data and Methods

3.1 Research design

To operationalise my research questions through the framework of Interactional Sociolinguistics, I prioritise interaction as the primary medium through which wider societal and cultural Discourses are constructed (Bailey, 2015; Gumperz, 2006). My design therefore centres on two well-established methods for obtaining multi-party interaction: focus groups (Litosseliti, 2003) and casual conversation self-recorded by participants (Holmes et al., 2011). While a collection of casual, spontaneous conversation has long been idealised in sociolinguistics as the most ‘genuine’ or ‘authentic’ form of language (Bucholtz, 2003), a huge amount of data would be required to elicit adequate references to time conceptualisation. Focus groups, on the other hand, allow ample opportunity for spontaneous interaction before the introduction of more directed questions, here diverging in particular from group interviews. Once the general area of interest is introduced, focus groups allow participants to direct the flow of conversation, dynamically co-constructing their understandings of the topic at hand by building on each other’s comments (Murata, 2014), positing views, negotiating and disagreeing through interactive talk (Myers, 1998). Following this method, I began with a few ‘starter’ questions that were designed to elicit conversation about everyday topics. Then, roughly halfway through the session, I asked a small number of questions explicitly relating to time to elicit meta-discussions around how participants understood it, allowing the discussion to evolve with few constraints imposed by the moderator (Litosseliti, 2010). Following this principle somewhat literally as the moderator, I minimised my own input. At times this felt unnatural and was perhaps unnecessary, given that the theoretical stance behind focus group methodology recognises the presence and involvement of the moderator as an inseparable part of the data (Litosseliti, 2010). On reflection, I would perhaps have done well to join in the discussion more often, in particular when I wanted to question or challenge a participant which would have given them an opportunity to elaborate on their meaning.

The selection of participants was based on a convenience sample, i.e., participants were sourced from my own social connections. One effect of this selection method is the age-range is 40s–60s. It must be acknowledged here that perspectives reported in the analysis reflect the participants' own stages of life.

For the purpose of exploring the cultural aspects of the construction of time, two broadly-defined groups were established, with participants self-describing their ethnic identities and assigned to a focus group on these grounds. The first focus group described themselves on the background questionnaires variously as 'NZ European' and 'Pākehā'; sometimes both. The second focus group were more varied in their ethnicity descriptions, but all included 'Māori' and 'Pākehā', and one participant identified as NZ European/Pākehā and Cook Island Māori, describing complex relationships of *whāngai* (adoption practices) that resulted in a degree of uncertainty in his family about their Cook Island Māori heritage. For the sake of simplicity, I will occasionally use strategic essentialism and refer to the groups as 'Pākehā' and 'Māori', but I position myself firmly in the understanding that these are gross oversimplifications, and ethnic identity is far more fluid, mutable, and nuanced than these labels imply (Bucholtz, 2003). Distinguishing groups based on ethnic identification is not without its problems. My goal of examining the impact of cultural norms means that focus groups are an appropriate methodology as this structure allows participants to discursively negotiate their ethnic identities (Murata, 2014), creating a context where, for the duration of the focus group at least, a particular cultural orientation is the norm. This may help bring group norms to the fore, in this case cultural ones, which may be indicative of ideologies indexed outside of the research context (Mountford, 2022).

3.2 Data collection

The initial study design involved a three-phase process, with recordings of café conversations in phase one, followed by focus groups in phase two, and finishing with a debrief discussion with a 'Spotlight Participant' who was to take part in all three phases. However, the abundant data provided by the focus group recordings proved so rich a source that, in the end, the café data was not needed, reducing the data collection used in the final analysis to a total of two focus group sessions, although I am currently engaged in debriefs with the participants for future analysis.

Because participants were recruited from my own social circle, information regarding shared acquaintances was expected to emerge in the data. Pseudonyms were employed to protect participants' and others' identities, at least in my reporting, and an option to sit out of the video frame was offered. A total of six participants took part in the first focus group, which lasted for an hour, and four in the second, which continued for nearly three hours. All participants were in their late 40s or early 50s, except for one 69-year-old in the Māori group. The sessions were conducted in English, at my home in Titahi Bay, Porirua. They were video recorded with an audio backup. In the first group, all participants knew each other except two, who met for the first time. In the second group there was a lesser degree of familiarity between participants, both with each other and generally with me as well (see Appendix A List of participants for reference).

3.3 Data analysis

Utilising a framework of IS-informed social constructionism, the data were analysed for both micro- and macro-level features of interactive talk for instantiations of ideologies and assumed understandings of time. The IS method involves a rigorous set of procedures (Gumperz, 2003) designed to allow a detailed and warrantable analysis of the data: initial ethnographic research informs the researcher of potential areas of interest. Following this, communicative encounters relevant to the research questions are identified and, with a few interim steps, recordings are made. The analysis of the data involves identifying blocks of meaning in terms of (a) content and (b) strategies, e.g., pronunciation, prosodic cues, and discourse markers. For example, semantic relations between ideas can be analysed through cohesive devices (Hasan & Halliday, 1976 as cited in Schiffrin, 2003); discourse markers can be analysed for form and meaning as it relates to social interaction—i.e., what does the form or meaning *do*, in terms of social relations? (Schiffrin, 2003). Interactional texts are then transcribed from the data detailing communicatively significant contextual signals, such as prosody and paralinguistic cues (Silverstein, 1992 as cited in Gumperz, 2003). These can then be studied comparatively against the text as a whole. Interpretations can be also warranted by other discourse analysts in data sessions and against existing literature (Heller et al., 2017). These are the processes I followed in my collection and analysis of the data.

3.4 Researcher reflexivity

In undertaking Discourse Analysis, researcher reflexivity is paramount (De Fina, 2011). Although as facilitator I am required to exhibit some degree of restraint, this is balanced by locating myself as firmly within the data (Heller et al., 2017), without any requirement to frame my position as objective, nor the data as generalisable (de Bres & Dawson, 2021). Aligning myself with the tenets of critical sociolinguistic research, I bring to the fore my own perspectives as a Pākehā middle-class mother in my early 50s, identifying these lived experiences as influences in my interpretation of the data.

As a Pākehā researcher working with Māori (Papen, 2019), I have taken an approach of appreciative inquiry (Hammond & Hall, 1998). Through this, I intend not to evaluate Māori perspectives but rather to consider these perspectives for (a) what I can learn from them and (b) to highlight Pākehā ideologies that might otherwise remain hidden from view. Through this stance, I also aim to avoid overstepping in terms of attempting to analyse Māori data as an outsider lacking adequate knowledge of te ao Māori (Yukich Te Kawehau Hoskins, 2011). Reciprocity is another central tenet in research involving participants (Holmes et al., 2011). Reciprocity for Māori is typically embedded in the form of ongoing dialogue during and after fieldwork (see also Heller et al., 2017; Smith, 1999) and the development of ‘lasting trust’ (Holmes et al., 2011), whereas for Pākehā a more immediate exchange of some sort is perhaps more the norm (see Marra, 2010 for discussion). I felt a degree of uncertainty around how to enact this in relation to my participants, and also in relation to Jeanette Grace, head of the Māori studies department at Whitireia Polytech, to whom I am indebted for her crucial guidance on the design of this study. As mentioned above, in regard to participants, I intend to continue ongoing debrief conversations with Jeanette which I hope will inform me of ways in which I might reciprocate.

Finally, in selecting extracts from these conversations, presenting them in a certain order and interpreting their meanings, I acknowledge that I am myself creating a narrative, using discourse to create my own meta-Discourse. I argue that any thematic analysis and attention to discourse, by definition, involves constructing an argument through analysis of the data rather than ‘uncovering truths’ hidden within it; acknowledgement of this construction means the argument presented is a possible interpretation, lessening the likelihood of essentialist, overgeneralised or dogmatic conclusions.

All aspects of the methodology for this research were approved by the Te Herenga Waka Human Ethics Committee.

4. Analysis 1: Ageing

Of particular interest in this study are the contrasting attitudes towards ageing that arose in the two different focus groups. The first group, dominated by those who identify as Pākehā, constructed overwhelmingly negative Discourses around ageing, while the second group, who had more diversity in their identities with a particular orientation to Māori and Pasifika ways of thinking, were, at least for this researcher, heart-warmingly positive.

4.1 First focus group

Much of the discussion in the Pākehā group around old² people focused on physical deterioration, indexing the highly prevalent Western Discourse of “inevitable and irreversible decline” (Andrew, 2007, p. 54). There was an emphasis on maintaining physical health and its relationship to cognitive ability, with little to no consideration of emotional or relational health. The initial question that I posed to garner views on ageing, ‘how do you feel about time passing and how do you feel about your age?’, was met with laughter, which I understood to represent a constraint of agency: it was a wry acknowledgement that what we *can* feel about our present age is most likely to be negative. David responds to the question as follows:

Example 1

FG1 44:00³

- | | | |
|---|--------|--------------------------------------|
| 1 | David: | and yeah so that is a bit depressing |
| 2 | | one’s physical decrepitude |
| 3 | All: | [laughter] |
| 4 | David: | well I’ve got a bad knee... |

² Because of longstanding pejorative associations with the word ‘old’ in English (Andrew, 2007), there has been a switch in recent decades to referring to people as ‘older’ rather than ‘old’ (Minichiello et al., 2000). Although I respect this as an attempt to avoid derogatory usages, it is a form of softening, and if a word needs to be softened, it is because it carries a negative meaning. ‘Older’ implies ‘not *old*, exactly—what a horror!—but simply *older*...’ (than what? The ‘ideal’?) In attempting to soften its impact by making it a comparative, we are acknowledging its essential negativity, and thereby reinforcing that negativity. For these reasons, I will simply use the term ‘old’, in an attempt to reclaim it as neutral at worst, and at best imbued with positive associations like wisdom, knowledge, and longevity.

³ FG1 refers to the first focus group; FG2 to the second, followed by a time stamp as to when in the conversation each extract took place.

- 5 I look at my dad who is 90
 6 he lives here in Titahi Bay
 7 and he was very physically active um
 8 a really keen gar – gardener
 9 but in the last particularly in the last five years
 10 maybe even maybe ten but
 11 um he's just he shuffles around now whereas you know
 12 previously he was really active and capable
 13 and so that's I'm thinking if I
 14 Ned: [laughs]
 15 David: if I'm starting to hit my
 16 if I'm accelerating on the downhill slope at 50
 17 what am I gonna be like at 90 or 80

David immediately interprets my prompt 'how do you feel about your age?' in terms of pains and the *decrepitude* that he associates with ageing, a forcefully negative term that makes everyone laugh, seemingly at the absurdity of it. David's use is at least part tongue-in-cheek self-deprecation, seen in the extreme nature of the term. He then presents as genuinely wondering about his future, constructing his physical 'decline' as *accelerating on the downhill slope at 50* (line 16). This is an interesting spatial metaphor (see Lakoff & Johnson, 1980) entailing frightening increases in speed towards what could only be an unfortunate end. The assumption is that we are all heading 'downhill' after a certain age, with the direction of downwards representative of bad, or loss, where upwards generally represents good or gain (Geiger & Rudzka-Ostyn, 1993). David describes his fear of *accelerating* on this *slope*—an amusing but alarming depiction of ageing, and again one that centres on physical well-being as the primary indicator, it seems, of a good quality of life.

In considering his own impending *decrepitude*, David indexes Discourses that privilege fitness and mobility in old age by comparing himself to his 90-year-old father (line 5), who he describes as *very physically active* a few years ago. This is then contrasted against how his father is now (lines 11–12): *um he's just he shuffles around now whereas you know previously he was really active and capable*. A derogatory stance on his father's action of walking is implied in *shuffles around*, with the use of *just* implying a lack of adequacy (Kiesling, 2015). The negativity of *shuffles around* is further evidenced by being contrasted against *previously he was really active and capable* in the following line.

Further Discourses equating 'old' with 'bad' are exemplified in the following example. Brenda is building on Ned's observations of children growing up:

Example 2

FG1 50:59

- 1 Brenda: yeah gosh and yeah we've had one leave home so that's //a sort of\
 2 Larissa: /ooh\\ you're old [laughs]
 3 Brenda: that's a sort of um [smiles]
 yeah quite a- an interesting process too

Brenda's comment that they have had one child leave home is framed as an event of some significance, a marker of a stage of life. Larissa's response is *ooh you're old*. The word 'old' is used in a pejorative sense, in this context as a slight. Larissa mitigates this comment with laughter to signal the frame as 'play' (Tannen, 1993), while the underlying Discourse equating 'old' with 'bad' remains clear. Brenda responds to the interjection with a smile but no verbal engagement, possibly because she is still engaged in making her comment on her oldest leaving home and/or because she is not particularly bothered by this slight.

The same Discourse, 'old' equals 'bad', is seen again when Anna is talking about her physio:

Example 3

FG1 53:35

- | | | |
|---|-------|--|
| 1 | Anna: | when I go see him I |
| 2 | | that's when I feel oldest |
| 3 | | when I go oh I broke myself again |
| 4 | | and I get I'm like oh my is it age is this an age thing |
| 5 | | and he always jokes to me that I'm a lot younger than I think I am |
| 6 | | well after he's mocked me |
| 7 | All: | [laughter] |

There is an assumption that 'feeling old' is deeply undesirable: Anna equates feeling old with 'breaking' herself, a term she uses as a form of exaggeration, her actual meaning being 'injured'. There is also an interesting self-deprecation in the expression *I broke myself*, as if she is constructing herself as a toy, or her body as an object that she, as its owner, has been careless with, an interesting construct of agency (see Bamberg et al., 2011). She asks her physio if 'breaking' herself is *an age thing*. It must be acknowledged that, with increasing age, there is some physical decline and some injuries are more likely (Rantakokko et al., 2013). But in the context of the negative representations of ageing arising in this group, this is another example of the foregrounding of ageing-as-physical-decline, as opposed to acknowledging this while also framing ageing in other more positive lights.

The reported remark from the physio, *I'm a lot younger than I think I am* (line 5), is intended to compliment Anna: to be seen as younger than your biological years is highly complimentary; the reverse is highly insulting (Anderson, 2019). I would argue that the humility maxim in Pākehā society (see Lazzaro-Salazar et al., 2017) means that Anna feels the need to mitigate the self-complimenting action of reporting this utterance to the group, even though she has made it clear that *he jokes*. Accordingly, she adds: *well after he's mocked me*. The intention of this line seems to be to dim the compliment by highlighting the context of prior jocular mockery (Haugh, 2010). This adds to the Discourse of being, feeling, acting, or appearing 'young' as highly desirable, and 'old' as highly undesirable.

In the following example, Discourses of Ageing intersect with Discourses of Busyness, an ideology that will be explored in more detail below. 'Keeping busy' is constructed as imperative for good health in old age. Physical health in the form of fitness and mobility, and its bearing on cognitive acuity, is enshrined as a shared ideal, possibly above other forms of health in old age (inferred by the absence of any mention of such). Larissa is relaying a

conversation she had recently with her mother. To contextualise this sequence, I offer some ethnographic information: Larissa's mother has recently had a stroke. Curiously, and I would argue significantly, this does not come up in Larissa's account of her mother's current state of health⁴.

Example 4

FG1 55:47

- | | | |
|---|----------|--|
| 1 | Larissa: | mum called me the other night |
| 2 | | and said oh your dad's so grumpy |
| 3 | | he's far too busy he's doing far too much |
| 4 | | but she's not doing as much and she's really slowed down |
| 5 | Anna: | //yeah\ |
| 6 | Larissa: | /she's almost\\ dithery |

Larissa dismisses her mother's concerns that her father is *grumpy* because he's *doing far too much* and instead normalises her father's level of activity and constructs her mother as 'doing too little' by comparison. Larissa's reproachful stance on her mother's 'slowing down' (line 4) is evidenced in her elaboration in line 6 in the use of *dithery*, a pejorative description of slower mental processing or loss of cognitive abilities. This perceived loss of cognitive acuity is constructed as a consequence of 'slowing down', thereby placing on her mother a moral imperative to keep 'doing' in order to 'age well'. As explained by van den Bogaert et al. (2018, p. 2), this moral framework "consists of an evaluation of people's life course in which ageing and disability are perceived as personal failures." In other words, this is a Discourse that ostensibly confers agency onto the old person but does not, in fact, consider the factors that constrain that agency.

In Example 5, Larissa goes on to contrast her mother with her father, whom she positions as embodying the ideal of a busy, active old person. She disregards her mother's perception of the negative effects on his emotional state as a result of all this activity, instead constructing her father's high levels of busyness as a positive force:

Example 5

FG1 55:59

- | | | |
|----|----------|---|
| 1 | Larissa: | whereas my dad who's older who's doing twice as much... |
| 2 | | he's like every day he's got some volunteer thing that he's doing |
| 3 | | he's still sharp as a tack |
| 4 | | and he's still //so onto it\ |
| 5 | Anna: | /have to keep going\\ [nodding] |
| 6 | Larissa: | whereas mum who's doing less and less everyday |
| 7 | | is just getting more |
| 8 | Pete: | winding down |
| 9 | Larissa: | more <u>old</u> |
| 10 | | so we have to keep busy |

⁴ It is certainly possible, however, that she assumed most people in the group knew this already.

- 11 Anna: yeah yeah yeah absolutely
 12 Ned: really ++ otherwise we're doomed
 13 All: [laughter]
 14 Larissa: otherwise we're doomed [smiling]
 15 keep involved in in your projects Anna
 16 Anna: yeah well I won't put them away quite yet

In using *sharp as a tack* and *so onto it* (lines 3–4), Larissa appeals to the importance of physical activity in old age as a beneficial force in maintaining cognitive function. While there is some scientific evidence to support this as a general tendency (e.g. Carvalho et al., 2014), the focus here is his multi-commitment schedule utilised to highlight the perceived lack of activity in the mother's daily life. Her lower level of busyness is presented with disapproval. This is seen in Larissa's utterances in lines 6–9: *whereas mum who's doing less and less everyday is just getting more... more old*. The underlined *old* here indicates sentence stress. Coupled with a high-low intonation and a facial expression of frowning, this gives the clear impression that 'old' is again used in a derogatory sense: 'old' denotes an unnamed, assumed list of negative qualities. Larissa concludes in line 10: *so we have to keep busy*, a coda to her narrative (see Labov & Waletzky, 1967) that urges everyone to embrace busyness, which is constructed as both beneficial and virtuous. The use of the modal *have to* adds a sense of urgency and obligation. To this comment, Anna strongly concurs with *yeah yeah yeah absolutely*. A few lines earlier Anna also voiced her agreement, nodding and overlapping Larissa's *so onto it* (line 4) with the affirming *have to keep going*. The implication here is we must either keep up a routine of excessive activity (at least in this narrative) or 'stop', which perhaps equates to death, thereby foisting a moral duty on old people to remain active and healthy (Cardona, 2008).

Interestingly, the posited ideology in Larissa's summation *so we have to keep busy* is rejected by Ned. His initial response is a question, *really* (line 12), with an almost sarcastic dropping intonation (mid to low), rather than an outright disagreement, although it strongly *implies* disagreement (Evans et al., 2019). Then to emphasise his point, he makes an ironic comment using a humorous frame to soften the rejection of the ideology (Tannen, 1993) (line 12): *otherwise we're doomed*. Everyone laughs; Larissa acknowledges the humour by repeating his line (Hay, 2002), but then ignores the rejection, continuing in her line of reasoning in her next comment encouraging Anna to stay engaged in her many projects. Anna agrees. Larissa's narratives in these examples index the salience of the old person's moral duty of physical activity and consequent well-being (Rudman, 2006), as prescribed by the stereotype of an individualist culture (Andrews, 2007), with strong disapproval reserved for failure to meet the standard.

4.2 Second Focus Group

In stark contrast to the Discourses above, ageing and the elderly are constructed almost entirely positively in this group, and most often in relational terms, such as describing current or imagined future grandparenthood. As one participant was nearing 70, there are also constructions of self as an old(ish) person. Significantly, no one indexes physical or cognitive decline in any constructions of ageing in well over an hour's worth of conversation.

In Example 6, the elderly are constructed as ‘giving’ their time⁵.

Example 6

FG2 1:06:38

- | | | |
|----|-----------|--|
| 1 | Wesley: | whenever I sit with the elderly |
| 2 | | I find they just give you so much time |
| 3 | Rochelle: | mm |
| 4 | Wesley: | like they’re not in a rush... |
| 5 | | I’m just attracted to to like elderly people |
| 6 | | and I could sit there and just talk to them |
| 7 | | for hours and hours and hours and |
| 8 | | I think it’s that thing |
| 9 | | the passing of the information and the knowledge |
| 10 | | and then here I am turning around that way |
| 11 | | giving it to the youth sort of thing it’s |
| 12 | | but I never had the time |
| 13 | | that time with my grandparents sort of thing |
| 14 | | to receive that sort of |
| 15 | | I don’t know what you call it |
| 16 | | information sort of thing |
| 17 | | like who you are and all that sort of stuff |
| 18 | | so I get it off everyone else |

The elderly are constructed here as ‘giving’ in line 2: *they just give you so much time*, with *just* adding emphasis to this ‘giving’, and also as unhurried, in line 4: *they’re not in a rush*. Indeed, the focus of this narrative from the outset is on doing things in an unrushed manner. Wesley begins with *whenever I sit with the elderly*. To sit with someone implies spending time with them in an unhurried fashion. Wesley expands on this sense of unhurriedness in line 7: *for hours and hours and hours*. Time for him is primarily about being with people, especially old people, in part because he *never had ... that time with my grandparents* (lines 12–13) and he seems to feel that absence. His construction of old people as grandparents is imbued with a great sense of the importance of grandparents and old people as a source of identity, describing *the passing of the information and the knowledge* (line 9), and constructing the elderly as people from whom you can *receive... information* (lines 14–16), *like who you are* (line 17). Fundamentally, time is constructed in relational terms, and old people are highly valued. These are both strong themes throughout the data in this group.

In this next narrative piece about a ‘nanny’ (a positive term in this context), Sasha indexes an assumed ideology that old people should be, or perhaps deserve to be, unhurried and at ease. She describes swinging out in her ‘big truck’, momentarily crossing the centre line when there was no one coming:

⁵ This Discourse of time as a resource that can be ‘given’ to someone else comes through very strongly in this data and will be discussed in more detail in Analysis 2.

Example 7

FG2 1:43:40

- 1 Sasha: but a nanny had come up and turned right and seen
 2 I still had heaps of time but she had seen
 3 I was on that side trying to angle in
 4 and she lost herself
 5 and I stopped and I was like
 6 I have never seen a nanny lose themselves down in Porirua
 7 you know we're talking easy 65
 8 and I thought to myself
 9 our nannies and papas were never stressed or
 10 or even elderly around Porirua you know
 11 not unless you did something you know
 12 someone's getting murdered
 13 and a nanny's telling someone off
 14 and I just thought our poor elderly
 15 they're just under so much pressure
 16 yeah

A *nanny* here denotes an old woman, as explained by Aria Graham: “The tradition of calling older women in the whānau ‘aunty’ or ‘nanny’, who could otherwise be cousins or friends, is a common practice in te ao Māori” (Graham, 2018, p.vi). This practice foregrounds the connectedness of all of us to each other, with Sasha extending this kinship term to an old woman she doesn’t personally know. Sasha goes on to say, in line 4, that on seeing her momentarily on the wrong side of the road, the nanny *lost herself*. The prosody marking this utterance, a lowered pitch and decreased pace of speech, imbues it with a feeling of central significance in the story—this is the ‘complicating action’ in the Labovian sequence of narrative components (Labov & Waletzky, 1967). Here, the expression means something along the lines of ‘she got wildly angry’. Line 5, *and I stopped and I was like*, serves to build up the tension, signalling the importance of Sasha’s upcoming take on this event in line 6: *I have never seen a nanny lose themselves down in Porirua*. With *never*, Sasha emphasises the rarity of this occurrence, but as a Pākehā listener, I still had no idea what her evaluation of this event was going to be.

In line 7, she makes an estimate of the woman’s age, using *easy* to mean ‘at least’: *we’re talking easy 65*. The intent here, I believe, is to emphasise the woman as an old person, a *nanny*. Sasha then goes on to elaborate on her past experiences of old people in Porirua, describing them as *never stressed* (line 9), the first clue to her interpretation of the angry outburst from the old woman: Sasha compassionately assumes that to react in such a manner to a minor road infraction (as constructed in line 2: *I still had heaps of time*) must be due to high levels of stress. She contrasts this against incidents from the past where such outbursts of anger from a nanny would only be seen in extreme and deserving circumstances, like if *you did something you know someone’s getting murdered* (lines 11–12). The use of *murdered* here is not literal, as evidenced in the hypothetical nanny’s response of *telling someone off* (line 13), which would be far too mild a response to an actual murder in progress. Rather the word *murdered* indicates the extreme nature of the behaviour that would warrant such an outburst

of anger in the past. The nanny is constructed as an authority figure whose role includes the setting of boundaries, a Māori construction of elderly people that encompasses respect, standing in the community, and a valued social role (Graham, 2018). Sasha concludes her narrative with the final evaluation (lines 14–15): *and I just thought our poor elderly they're just under so much pressure*. Here, Sasha excuses the behaviour of the nanny in the real event and positions her, with *poor*, as deserving of sympathy.

To this Pākehā researcher, her narrative felt exceptionally compassionate. Sasha's immediate response to the anger directed at her was one of mitigating concern for someone she perceived as *under so much pressure*.⁶ Old people are constructed here as deserving by right of age to be free of 'pressure'. This positions society as a whole as at least partly responsible for the overall mental state of old people, a collective ideology that contrasts starkly with the Discourses seen in the Pākehā group of individual responsibility for mental well-being in old age, itself mostly measured in terms of cognitive acuity, with emotional and social aspects largely left out.

The next example focuses on the constructions of old people as grandparents. Wesley is talking about his partner's parents, who he initially describes as *great* grandparents (meaning 'really good') immediately before the extract, but then he goes on to qualify:

Example 8

FG2 1:40:28

- | | | |
|---|---------|--|
| 1 | Wesley: | but they're not the greatest grandparents that they could be |
| 2 | | sort of thing |
| 3 | | but then again they're trying to spend their time |
| 4 | | doing all the things that |
| 5 | | and that's my own perspective on it sort of thing... |
| 6 | | and she's you know like with what you're doing with the |
| 7 | | she's at the 80 metre mark |
| 8 | | sort of trying to pile everything in there and |
| 9 | | and kind of forgotten about the kids sort of thing |

Wesley uses multiple strategies to express a certain dissatisfaction with his partner's parents as grandparents while avoiding being overcritical. He does this by using a negative superlative construction (line 1), *they're not the greatest grandparents*, prosodically expressing a slight exasperation by using a breathy voice, followed by the second conditional *that they could be*. Where *they're not the greatest grandparents* would on its own normally equate to an unequivocal 'they are not good grandparents', adding the second conditional *that they could be* allows Wesley to acknowledge them as 'great' (or perhaps adequate) but simultaneously express a wish that they were 'better'. He further tempers this gentle criticism in line 5 *that's my own perspective on it sort of thing*, drawing attention to his position that his viewpoint is not the only valid one. Further, his criticism is expressed not on his own behalf but on behalf

⁶ Interestingly, Sasha positions herself in this narrative as having done nothing that could have been perceived as a traffic offence, thereby absolving herself and allowing her to focus on the nanny.

of his children, a distancing strategy that allows him to make an otherwise potentially difficult criticism (Brown & Levinson, 1987).

Wesley also makes allowances for his parents-in-law, further softening his criticism (lines 3–4): *but then again they're trying to spend their time doing all the things*. The expression *then again* prefaces an opposite possibility: here, Wesley uses it to offer a mitigating explanation that *they're trying to spend their time doing all the things*. This is explained in lines 6–7 with reference to an earlier description from Ahi in which Ahi likens life to *a 100-yard race* and himself as *up to about 80 yards*. Ahi describes how he is not *speeding up* but *piling on doing more you know in that shorter length of time* [1:38:42]. Wesley builds on this idea of 'doing more', conceding that his mother-in-law is *sort of trying to pile everything in there* (line 8), echoing Ahi's earlier use of *pile*. Notably, however, Wesley brings this concept of 'doing more in later years' back to a relational ideology: he finishes this narrative with *[she's] kind of forgotten about the kids sort of thing* (line 9), indexing a construction of old people wherein principal importance lies not in *doing* but spending time with grandchildren.

In the final example, Ahi talks about himself as an older person:

Example 9

FG2 1:41:41

- | | | |
|---|------|--|
| 1 | Ahi: | you get older you got more wisdom and less energy |
| 2 | | and man it's draining |
| 3 | | much as I love my little mokopunas ['grandchildren'] |
| 4 | | they're draining... |
| 5 | | you know we're just getting to the stage where |
| 6 | | look we can't take them for more than a day or so |
| 7 | | we just get too tired |

This example from Ahi is in the context of looking after his seven mokopuna. The first comment he makes after *you get older* (line 1) is positive, ageing framed as an acquisition of quality: *you got more wisdom*. It is worth noting here that in the entire hour of conversation, at no point did Ahi mention physical decline in constructions of himself as an older person, except perhaps here, where physical fitness is mentioned in terms of having *less energy*. However, Ahi constructs the small person as requiring much energy and care, rather than constructing the old person as having inadequate physical strength: *they* in line 4, *they're draining*, refers to the mokopuna. Similarly, he says earlier: *the smaller they are the more time they need* [1:39:15]. In lines 5–7, he does say *you know we're just getting to the stage where look, we can't take them for more than a day or so, we just get too tired*. Ageing is implied in *getting to the stage*. This is arguably a negative view of physical ability as it relates to ageing. However, I would argue this example highlights a difficult tension between *acknowledging* a reduction in abilities that accompanies ageing, as Ahi does here, and the dominant Western ideology that frames this reduction as abhorrent or sometimes even scorn-worthy.

4.3 Summary

Discourses of Ageing in the first group centre around physical decline and loss, and general constructions of ‘youth equals good’ and ‘old equals bad’ (Anderson, 2019). In noticeable contrast, the second group imbues Discourses of Ageing with extraordinary warmth and positivity, with constructions of the elderly as deserving of respect and entailing a sense of role and value. Talk of the future prospect of becoming old is dominated in this group with happy anticipation.

5. Analysis 2: Time as a Resource

In considering the many other Discourses about time that arose in the two groups, I identified several of interest that could be grouped under one banner: time constructed as a ‘resource’. In itself an economic metaphor that perhaps hints at the prevalence in Western society of understanding natural phenomena in financial terms, this umbrella term covers a range of Discourses in which time is framed as a commodity.

5.1 First Focus Group

In collating the following selection of examples under the metaphorical umbrella of ‘time as a resource’, I include Discourses of Busyness, time ‘running out’ and constructions of ‘free time’ (see also Shir-Wise, 2019; Webster & Ballard, 2009). In both groups, time is extensively constructed as a valuable and limited resource. There are two senses in which it is ‘limited’: having ‘too little’ on a daily basis, and ‘running out’ on a lifetime scale. Discourses of Busyness are strongly present in the first group, with two almost conflicting constructions of this ideology, both of which are prevalent in Western society: busyness as a burden, and busyness as a virtue (Hills, 1971). This example, which illustrates the idea of time as a resource, begins with my first explicit question on the topic of time:

Example 10

FG1 31:58

- | | | |
|----|-----------|---|
| 1 | Juliette: | um does your life feel busy or - or too busy |
| 2 | Pete: | absolutely |
| 3 | Anna: | yeah [looks at Pete, closed-lip laugh] |
| 4 | Juliette: | in what way |
| 5 | Pete: | oh I just I never feel like I have enough time |
| 6 | Anna: | mm [nodding] |
| 7 | Pete: | like yeah I mean I get up at six o'clock every morning... |
| 8 | | I enjoy what I do as a builder |
| 9 | | but um having to do that plus also being involved in other things |
| 10 | | outside of my life as a builder |
| 11 | | um and trying to have a life with my wife |
| 12 | | and my kids and my whānau |
| 13 | | you know is it's just it's like everything is just sped up |
| 14 | | over the last ten years |
| 15 | | it's just nuts |

My query as to whether life feels ‘too busy’ (perhaps a prime for busyness as a burden), was met with strong agreement from Pete and Anna. In line 5, *I never feel like I have enough time*, Pete indexes the prevalent Western Discourse of lack (Webster & Ballard, 2009). The ‘resource of time’ here is constructed as primarily for doing things, but interestingly also for relationships. In line 8, Pete frames his work as enjoyable: *I enjoy what I do as a builder*. Then in line 9, *but um having to do that plus also being involved in other things*, he constructs his work as an obligation on top of which he does other things, with the sense of obligation almost carrying over to this other ‘involvement’. This is followed by *trying to have a life with my wife and my kids and my whānau* (lines 11–12), with *trying to* adding a sense of the struggle this involves. This list of obligations constitutes an arguably prevalent construction of priorities for Westerners, where work, other ‘involvements’ and family are all constructed as pressing obligations *competing* for our limited time.

Discourses of ‘lack of time’ also arose on a lifetime scale in this group, with a sense of ‘time running out’.

Example 11

FG1 52:35

- | | | |
|---|----------|---|
| 1 | Anna: | but are you looking at your things or projects going |
| 2 | | oh I don’t know if I’ve got enough lifetime left for that one you know [laughs] |
| 3 | | might have to put that one away yeah |
| 4 | Larissa: | I’m not thinking that way yet |
| 5 | All: | //[laughter]\ |
| 6 | Anna: | /I’ve got\ a lot of projects [laughs]... |
| 7 | | I don’t even have time for TV |
| 8 | | and I’m like always - even if I’m sitting there watching TV |
| 9 | | I’m always doing something [hand gestures] |

Time is again constructed principally as a resource for ‘doing’, with *projects* entailing activities that one enjoys. Time, therefore, is conceptualised as primarily for the purpose of self-fulfilment via projects, hobbies or other activities. Anna begins this sequence by inviting the group to align with her by asking a question (line 1): *but are you looking at your... projects*. She then considers the rest of her life in light of the projects she wants to undertake and the limits of the ‘resource of time’ allowing their completion (line 2): *I don’t know if I’ve got enough lifetime left for that one*. Larissa rejects this construction, disaligning herself with Anna (line 4): *I’m not thinking that way yet*. This rejection of the proposed perspective poses a minor positive face threat to Anna (Brown & Levinson, 1987), who responds with a face mitigating move (line 6): *I’ve got a lot of projects [laughs]*. Here, she identifies herself as a person of many projects, with the laugh possibly serving the Pākehā humility maxim (Lazzaro-Salazar et al., 2017) by mitigating any boast inherent in her utterance.

Perhaps to expound on this point and further assert her identity as a many-project person, Anna goes on to present herself as so busy as to have to do two things at once. She begins with *I don’t even have time for TV* (line 7), indexing a shared understanding that *time for TV* represents a normalised amount of leisure time. This is followed by an admission that she does watch TV, but framed as further evidence of how busy she is with her projects (lines 8–

9): *I'm like always - even if I'm sitting there watching TV I'm always doing something*. In contrast to Pete's earlier Discourse of Busyness as a burden, I would argue that this example indexes Discourses of Busyness as a virtue, with strong indexing of prevalent Western ideologies of self-fulfilment (Naish, 2008).

Time as a resource can also be seen in constructions of the ideology of 'free time' (Shir-Wise, 2019). In this next example, Larissa utilises accent and gesture to construct 'free time' as a preserve of the higher social classes.

Example 12

FG1 36:13

- | | | |
|---|----------|--|
| 1 | Pete: | but yeah I really do feel like things have got busier |
| 2 | | so but whether that's just me [laughs] |
| 3 | Larissa: | I'm enjoying some free time at the moment [expansive two-hand gesture] |

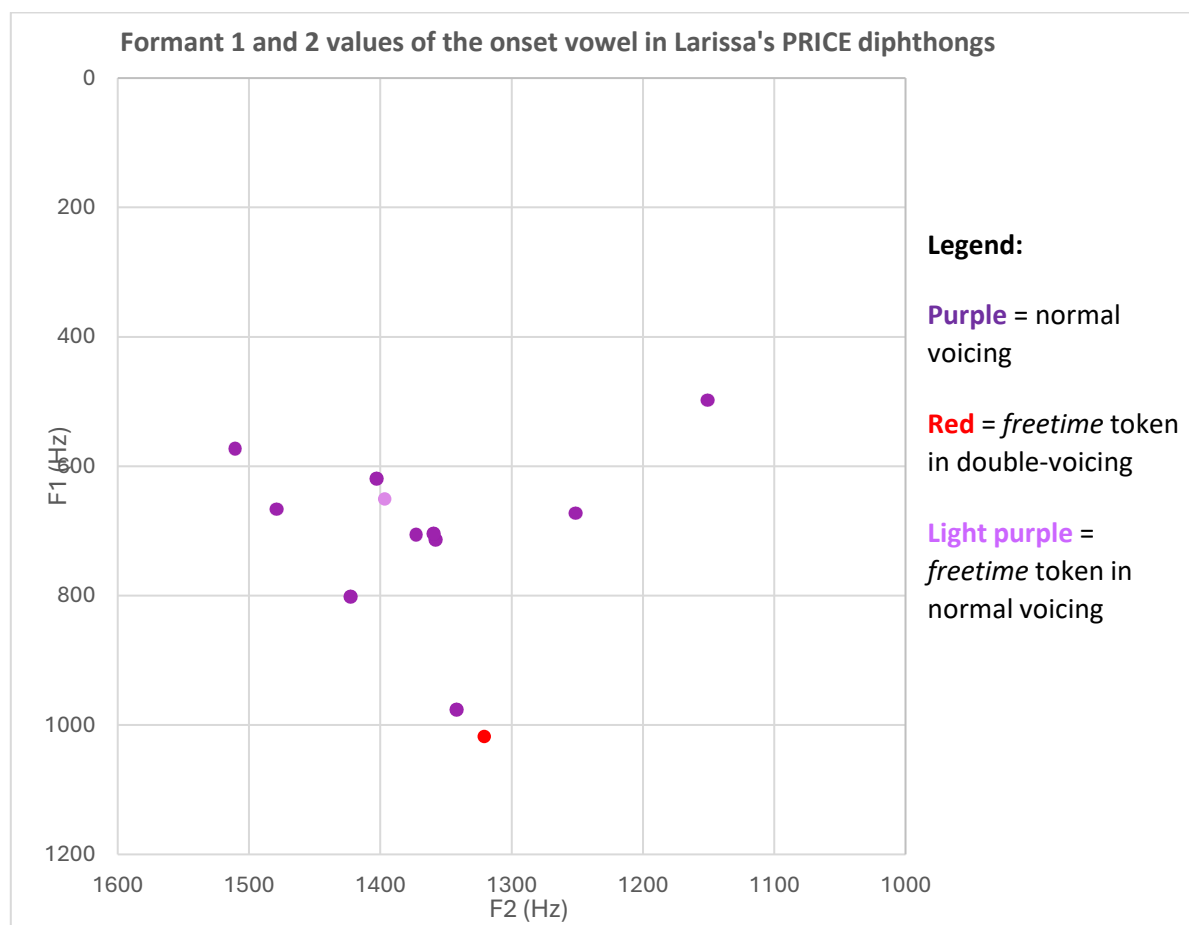
In the context of Pete's preceding narrative piece in which he heavily indexes burden and for which line 1 is his coda, *I really do feel like things have got busier*, there are constraints on Larissa as to how she can express her next utterance, *I'm enjoying some free time at the moment* (line 3). This could easily be seen as insensitive, coming as it does after a presentation of a pressured, over-busy life. Larissa affects an accent that arguably indexes 'higher social class' to position the idea of 'free time' as a special privilege of this class. This is further indexed by her expansive and queenly hand gestures, tracing two big circles with her palms in an imitation of grandiosity. The gesture and the accent (described further below) combine to produce a deliberately affected index of a class. She simultaneously delineates herself as a member of a 'lower class' but in a superior way, I would argue, with the imagined 'higher class' being faintly ridiculed by the affected accent. This double-voicing (see Bakhtin, 2010) occurs in the word *time* in line 3. My assessment of Larissa's speech by ear suggested that the double-voiced PRICE diphthong in the utterance in question would exhibit a significantly lower onset vowel (i.e., higher F1 value) than her typical realisation of PRICE⁷. Out of interest, I tested my audio perception by undertaking an acoustic analysis⁸ of Larissa's tokens of the word *time*, which totalled 12 productions, including one of the phrase *free time* uttered in her normal voice. While by no means guaranteed, my perception was borne out, as shown in Figure 1. The red dot represents the double-voicing utterance.

⁷ So-called higher social class accents in New Zealand English (NZE) are perceived to be distinguished in several vowels (Gordon & MacLagan, 2008), notably in the diphthongs PRICE and MOUTH (from Wells' 1982 lexical set nomenclature). In higher social classes, the onset vowel in PRICE is lower (i.e., higher F1 value). It becomes higher for middle- and lower-class realizations of the vowel. In other words, a speaker from a higher social class, particularly among female professionals in a study by Chartres (2020), might have a PRICE onset vowel close to their usual realization of /e:/ (START) whereas a 'lower class' accent will have an onset closer to /ɒ/ (CLOTH).

⁸ An acoustic analysis of the F1 and F2 formants was undertaken on the PRICE vowels in each of Larissa's 12 productions of the word *time*, using the phonetics freeware programme, Praat. Only the onset vowel of each PRICE diphthong was analysed, at a point estimated by eye to be 25% into the duration of the diphthong, as isolated on a spectrogram. Given that the second target of the diphthong centres to /e/ in both broad and cultivated NZE (Gordon & MacLagan, 2008), this aspect of the vowel was not included in the analysis. The results were graphed using Microsoft Excel. Not only did the results show that the onset of the double-voiced diphthong is lower than her usual realisation of this vowel, but a boxplot of the spread of F1 values demonstrates that this double-voiced token is a mathematical outlier in this set (see Appendix C).

Figure 1

Formant 1 and 2 values of the onset vowel Larissa's PRICE diphthongs in all tokens produced containing the word 'time'.



This analysis provides clear phonetic evidence for Larissa's use of double-voicing, evidence that aligned with my own understanding of the salience as a participant. As a discourse strategy, this allowed her to make a comment about having free time in the context where perhaps an outright claim of having free time would be unacceptable. This could be in part due to the timing, with Larissa speaking directly after Pete has described an acute feeling of a lack of time (there is notably no pause), but also due to an ideology wherein 'having free time' is constructed as indulgent or overprivileged, indexing Discourses of Busyness as a virtue. Larissa's double-voicing both reflects and reproduces these assumed underlying ideologies.

Finally, in this group there was discussion of 'time speeding up', with some reflections on why we might feel this. Ned offers a plausible explanation:

Example 13

FG1 52:04

1 Ned: yeah yeah I mean I've a theory behind that is like

- 2 you- we're always planning stuff always thinking about ahead of things
 3 and what's happening so
 4 and when you're young you're not thinking you're just living in the moment or
 5 or as you get older you're always thinking oh
 6 what are we going to do this this Christmas and things like that
 7 so you're always (feel like) you're always keeping ahead of yourself
 8 you're never living for where you're at all the time
 9 cos we we have to
 10 cos otherwise we'd never do anything
 11 but it definitely makes things speed up as well

Central to Ned's explanation is mental overactivity, as seen in lines 2 and 5–6: *we're always planning stuff always thinking about ahead of things... as you get older you're always thinking oh what are we going to do this this Christmas*. He constructs this state of performing logistics as 'constant' by three uses of *always* and one of *all the time*. This adult state of mind he then contrasts with memories of being young (line 4): *when you're young you're not thinking you're just living in the moment* whereas as adults, *you're always keeping ahead of yourself, you're never living for where you're at* (lines 7–8). This construction of being distracted by planning suggests that we're constantly imagining ourselves in that future moment and thereby missing the present, leading, he argues, to a sense of time passing more quickly. In *you're always keeping ahead of yourself*, he supplies an interesting spatial metaphor (see Lakoff & Johnson, 1980) that contains an element of fractiousness within it, of not being wholly in one 'place', i.e., 'the present'. These two lines (7–8) combine to construct a strong sense of 'the present' being valued. Interestingly, a sense of 'time speeding up' was also very briefly mentioned in the second group, along with very different constructions of time as a resource.

5.2 Second Focus Group

While the Discourse of Time as a resource was dominant in both groups, in the second group this resource was repeatedly constructed in terms of 'giving' to others rather than using it for one's own purposes. In this respect, time, like everything else, is understood primarily in terms of whakapapa, or relational terms (Burgess & Painting, 2020), i.e., a sense of who you are connected to and your roles and responsibilities around 'giving time'. The first mention of 'giving time' is made by Sasha in response to my initial prompt, 'how [do] you think about time passing?'.

Example 14

FG2 57:21

- 1 Sasha: I'm tight with my time now
 2 Juliette: are you
 3 Sasha: yep
 4 I don't just give out time
 5 Juliette: yeah
 6 Sasha: yeah
 7 Juliette: mmhmm
 8 //how come\

- 9 Sasha: /I used to\\ be quite free and help like you know...
 10 and then I picked up that I was giving too m-
 11 using too much time on other people...
 12 so now I'm just like
 13 time is my everything

Sasha describes her use of time as *tight*. With synonyms being perhaps 'cautious' or 'sparing', this construction could be understood as neutral in connotation. However, there is usually a degree of negativity in the word *tight*. Often used in reference to money, *tight* reflects the many lexical borrowings from the world of finance we use to construct Western Discourses of time, e.g. 'spending time', 'saving time', 'wasting time' (Bourdieu, 2010). Importantly, however, Sasha's self-reflection here shows that time, like money, can be constructed as a resource for 'giving'. As she elaborates (line 4): *I don't just give out time*. Time is framed not only as a resource to be given but as a precious one, as seen in her coda (line 13): *time is my everything*.

Her self-assessment of how she 'gives her time' is a theme echoed by the other participants throughout the rest of the conversation. In the next example, Wesley applies the word *selfish* to describe his use of time, a word that implies a lack of giving, thereby further building on the discussion of time as principally something to be given:

Example 15

FG2 59:49

- 1 Wesley: I wasted my time when I was a teenager
 2 growing up and stuff like that
 3 um + I suppose I was selfish with my time
 4 because of the way I was brought up
 5 everything was about what I wanted
 6 and what I needed sort of thing and
 7 I didn't care about spending time with the people that I loved
 8 and stuff like that...
 9 it was all about me
 10 but now I find myself giving my time
 11 back to the youth coaching rugby and stuff like that
 12 like heaps of time...
 13 just giving time and now I think
 14 man I'm running out of time
 15 I wished I had more time to give back more stuff you know
 16 I- I don't understand it time
 17 I didn't I'm I suppose that
 18 cos I wasted so much of it when I was a teenager...
 19 so I'm in a stage now where I'm giving back time
 20 to try and make up for the lost time
 21 Juliette: mm
 22 Wesley: like but I'm running out of time
 23 I'm fifty

Wesley begins with the negative self-assessment: *I wasted my time when I was a teenager*. If time is a resource, then like any other resource, it can be ‘wasted’, or in other words used badly or wrongly. Wesley elaborates in line 3, building on the ‘selfishness’ Discourse: *I suppose I was selfish with my time*. In line 4, *because of the way I was brought up*, he explains this selfishness as a result of his upbringing, but this is not used as a justification, as seen in the following lines (5–9) where he speaks in the first person, centralising his own actions in the narrative and, arguably, implicitly taking responsibility for them. In line 10, *but now I find myself giving my time*, the construct *I find myself* arguably acts as to *de-centralise* his agency, implying he is giving almost as if by accident. At least in part, this construct serves as a humbling device, a quality valued in both Māori and Pākehā culture but arising from very different underlying ideologies (Holmes, 2018).

In this reflective narrative, Wesley twice expresses a viewpoint that he is *running out of time* (lines 14 and 22), creating a sense of urgency with time constructed as a resource that is finite, the termination being our own death. He constructs his youthful acts of *selfish[ness]* and *wasting time* by not *spending time with the people that [he] loved* in the past as something for which he can atone now by *giving time... back to the youth*, suggesting a non-linear construction of time with a strong underlying orientation towards collective identity. The goods of time are weighed on Wesley’s scales of justice for primarily relational purposes: the debt is framed in terms of *spending time with people*, as is the reparation.

Ahi also takes up this theme of ‘selfishness’, beginning a narrative with *I’ve been throughout my life very very selfish with my time and my space* [1:49:01]. He describes how he *spent forty years chasing people away* from his writing room, and now *nobody comes up to my room, just me there with this bloody stupid pen and a lonely piece of paper*, poetically constructing himself in this imaginary tableau as engaged in a sort of futile and lonely activity. He ends this narrative with an evaluation: *the results of being selfish with your time and space*. Here, it could be argued his story is framed by this evaluation as a subtle teaching to us all as younger people, himself as the teacher, sharing his wisdom as an older person.

Ultimately, time is co-constructed by the group as the most important thing that we can give. In this example, Wesley constructs spending time with people as an expression of love:

Example 16

FG2 1:52:01

- | | | |
|---|---------|---|
| 1 | Wesley: | would that be the greatest thing |
| 2 | | most important thing that we can give people |
| 3 | | is your time |
| 4 | Sasha: | yep |
| 5 | Wesley: | because you can love people from a distance |
| 6 | | but they don’t know that |
| 7 | | unless you spend time with them and tell them and stuff |
| 8 | Ahi: | it’s like love isn’t it really |
| 9 | Wesley: | yeah |

It would be remiss if I did not emphasise how much talk in this group revolved around time as understood in a greater cosmological sense, with time quintessentially seen in relation to ancestors and *te kore* (the great “nothingness” at the start of the world), *atua* (gods), the interaction between past, present and future, and Ahi’s assertions that time doesn’t really exist at all. So many narratives described experiences of knowing when someone had just died or was about to die, hauntings at the site of an erstwhile Māori psychiatric unit, and other paranormal experiences. However, space constraints mean I can only include one example to try to represent the poetic depth and profundity of these many Discourses. It need hardly be said that it was very hard to select just one⁹.

Example 17

FG2 58:38

- 1 Ahi: our bodies come and go
- 2 but beyond that there’s no such thing as time for me
- 3 Sasha: mm
- 4 Ahi: which is hard to explain really
- 5 Sasha: //no I get it\
- 6 Ahi: /but it makes me\\ understand the great te kore [‘cosmic nothingness’]
- 7 Sasha: mm //I get it\
- 8 Ahi: /and things\\ like that
- 9 Sasha: mm
- 10 Ahi: yeah
- 11 and I think that it’s in keeping with trying to understand the atua [‘gods’]
- 12 you know
- 13 since that there’s a great atua
- 14 then time means bugger all to that atua
- 15 so if you want to understand the atua
- 16 learn to look at time that way [laughs]
- 17 that’s my thought

There is strong agreement from Sasha in this extract with unusually high levels of overlapping for this group (cf. Lazzaro-Salazar, 2009). Both Ahi and Sasha construct a strong Māori ethnic identity and worldview here, seen for example in the orientation towards *the great te kore* and *the atua*. Ahi issues an instructional last line (16), or perhaps a suggestion, using an imperative: *learn to look at time that way*. He follows this with a laugh and *that’s my thought*,

⁹ Reference to a greater cosmological perspective came up in many forms in this group. Oblique reference is also made to Discourses of Busyness through descriptions of what might be called ‘taking time out from time’. Wesley describes being in the surf and looking back at *people just living* while he feels *time is just... sort of like in a freeze frame* [1:48:01]. Sasha picks up this thread later on, saying to Wesley *I get the time stops though, I get the surf Wesley* [1:50:05], aligning herself with his experience. Wesley responds, *I think you have to make it stop*, the modal *have to* suggesting a sense of the necessity of ‘stopping time’ to perhaps counteract a general feeling of ‘busyness’. Rochelle describes a similar experience in practising yoga; Ahi relays several poetic stories of a similar nature, for example: *if I’m on a marae, I mean the sun comes and goes but me myself I slip into a different time* [1:46:26]. These Discourses of deliberately ‘taking time out from the world’ suggest that participants perhaps also experience the sense that time is ‘speeding up’ as we age and feel a need to address it by deliberately ‘slowing time down’.

both of which act as softeners to the use of the imperative. In line 2, Ahi says *there's no such thing as time for me*, a viewpoint he references throughout the hour-long discussion. This belief is always contextualised with *for me* or a similar construction, by which he takes care not to present his understanding as an uncontested truth but rather as a personal perspective. As an aside, I note a fascinating resemblance between this Māori conceptualisation of time (Awatere, 1984) and Albert Einstein's special theory of relativity, regarding which he wrote in 1905, "the distinction between past, present and future is only a stubbornly persistent illusion" (Brown et al., 2014, p. 4).

In the first focus group, time is largely constructed as a resource for 'doing', with Discourses of Busyness, both as a burden and as a virtue, lack, and 'time speeding up' emerging. In the second group, Discourses of 'selfishness' arise where time is constructed principally as a resource for 'giving'. Considered together with the Discourses of Ageing discussed in Analysis 1, these divergent ideologies point towards compelling evidence for our beliefs as being culturally as well as socially constructed, as will be discussed in more detail in the next section.

6. Discussion

In undertaking this research, my aim was to identify and analyse underlying ideologies in our construction of time within my own Pākehā culture, and in turn to trouble these. For me, the primary candidates that arise in the data are forceful and pernicious negativity towards ageing and the aged, and relentless, exhausting narratives around busyness and time as a limited resource. In considering alternative ideologies, namely those from te ao Māori and the Pacific, I seek to contrast and throw into relief Pākehā beliefs that are taken-for-granted 'truths'. In considering other cultural norms, we begin to see our own beliefs as *culturally constructed* rather than universal human norms (Holmes, 2018).

In the analysis, I separated the extracts into two broad themes: Discourses pertaining to Ageing, and those representing Time as a resource. This separation is somewhat artificial: the two Discourses were regularly intermeshed. In the first focus group, for example, predominant Discourses relating to ageing often centred around 'doing', with time constructed as a resource primarily for the purpose of *keeping busy*. This was presented as imperative for both physical and cognitive health in old age, indexing a Discourse of 'ageing well'. This Discourse is imposed on old people as a moral burden (Cardona, 2008, as cited in Bogaert et al, 2018), with those deemed to be 'ageing well' the admired recipients of societal endorsement (e.g., in Example 5, Larissa describes her very active father as *sharp as a tack and so onto it*). But for those who are perceived as not 'ageing well', the Discourses centre around personal responsibility and failure, as seen in Larissa's description of her mother in Example 4: *she's really slowed down and she's almost dithery*.

In a closely connected Discourse, ageing was constructed as physical and cognitive decline in the first group, with emotional and social well-being virtually absent from the discussion. This sub-Discourse, ageing as decline, and the one mentioned above, 'ageing well' as a moral burden, both arguably stem from changes in Western ideologies of ageing (to which I argue Pākehā ideologies largely orientate): from a natural, unproblematic stage of life (van den Bogaert et al., 2018) to a pliable and even avoidable process (Jones & Higgs, 2010). What were once constructed as 'normal changes' associated with ageing are now cast as medical

problems (Kaufman et al., 2004), creating a focus on dependency and decline (Jones & Higgs, 2010). Van den Bogaert et al. (2018, p. 3) argue that a shift in biomedicine towards growing old without ageing “has resulted in a culture of fitness, which is constructed as the norm on how one ‘ought’ to age,” an ideology strongly present in the first group’s discussion. In what conceivably began as a defiance of Discourses of “decline, decrepitude and dependency” (Katz, 2001, p. 27), ‘positive ageing’ Discourses (Katz, 2001) construct the old person as autonomous and active. Yet this ideology removes the ageing process itself as a leading cause of physical and mental problems normally associated with ageing and replaces it with ‘lifestyle choices’, allowing full responsibility for health in old age to be imposed on the individual and creating a moral burden to “age well” (Rudman, 2006, p. 197).

This Discourse of individual responsibility is strongly linked to neoliberalism (Rudman, 2015). Neoliberalism focuses on cost reduction and as a means to achieve this, shifts health responsibility from the public sphere to families and the individual. This in turn constructs old-age difficulties as a consequence of individual lifestyle choices (Stephens, 2017), as seen in Examples 4 and 5, where Larissa’s mother is constructed as *almost dithery* as a consequence of ‘not doing enough’ compared with her husband, *who’s doing twice as much*. This condemnation of the individual fails to take into account their access to financial, educational and intrinsic physical health in order to ‘age well’ (van den Bogaert et al., 2018): in the extracts above, for example, no leniency is extended to Larissa’s mother on account of her recent stroke. In other words, the ‘individual responsibility’ Discourse seemingly imputes agency to the old person but disregards any constraints on that agency.

It is interesting to note the almost oppositional nature of these two ideologies of ageing well as a moral burden and ageing as decline. Their co-existence creates a “cultural tension between ‘successful’ ageing based on continuing productivity and the expectation of decrepitude” (Anderson, 2019, p. 138). This tension is seen in Example 1 where David talks about his own impending *physical decrepitude*, indexing the physical decline associated with ageing. He then goes on to compare himself to his father who was *previously... really active and capable* but now *just.. shuffles around*, displaying lexical choices that arguably index the ‘individual responsibility’ (or moral burden) Discourse.

A second Discourse of ageing that arose with dispiriting regularity in the Pākehā-dominated group is one that categorically equates youth with ‘good’ and old with ‘bad’ (Anderson, 2019). Larissa twice uses the word *old* itself as a pejorative. In Example 2, when Brenda says their eldest child has left home, she responds with *ooh you’re old*. In Example 5, where she constructs her mother as *doing less and less everyday*, and as a consequence, *just getting more... old*, *old* here is emphasised and clearly meant pejoratively. Along with being old, appearing or feeling old were likewise constructed in negative terms, as seen in Example 3 when Anna is talking about seeing her physio: *that’s when I feel oldest, when I go oh I broke myself again*. In the same example, youth is equated with ‘good’ when Anna reports her physio’s compliment *I’m a lot younger than I think I am*. It is important to note that not all participants concurred with the assumed-to-be-shared ideologies presented, with some staying silent upon hearing a view, and others rejecting the Discourses posited: in Example 5, Larissa’s coda *so we have to keep busy*, indexing the moral burden to ‘age well’, is rejected through the use of humour by Ned, with *really? otherwise we’re doomed*. Overall, however, the “cultural dichotomisation of age,” as Anderson (2019, p. 23) puts it, is prevalent

throughout the data and arguably ubiquitous throughout wider society, in both discursive and visual representations of the embodiment of ageing. This dichotomisation is perpetuated primarily by the overwhelming forces of consumer culture and the media. As Woodward stated some 30 years ago (1991, p. 7), “youth, represented by the youthful body, is good; old age, represented by the aging body, is bad.” Very little appears to have changed in Discourses of fear of ageing with wider Discourses “continu[ing] to polarise youth and age, glorifying the former, pathologising the latter” (Anderson, 2019, p. 137).

It is important to note here that multiple and sometimes conflicting Discourses are often at play in our constructions. Andrew (2007) points out the curiously insidious effects that even positive stereotypes of ageing can have through simplistic generalisations. Ideologies that depict old people as warm and nurturing grandparents or uncommonly wise become interwoven with other more malignant ideologies to create complex, often conflicting Discourses which we navigate in constructing our ideas of the old and of ageing. Further complicating the task of critique, Discourses such as ‘personal responsibility for health and well-being’ often contain an element of truth, and useful truth at that, which must be acknowledged in a critique that intends to reveal the underlying inequalities, such as Larissa’s mother’s stroke and the effects on her physical health, and resulting insidious and unobserved effects of these widespread narratives, such as the disapproval old people face in addition to facing health difficulties.

A notable peculiarity in these pernicious Western attitudes towards ageing and the elderly is that such Discourses are ultimately self-defeating. Prejudice is arguably about delineating oneself as part of a superior group while positioning the other in an inferior group. But prejudice against the elderly is strangely paradoxical: inevitably, we will one day join the very group we so dismiss. Why, then, do these Discourses persist? Aside from the evident forces of political and economic factors, some explanation may also lie in the power of the ideology itself, in the appeal of the youth/strength/beauty Discourse, coupled with the lack of appealing and plausible alternative ideologies. This brings me to the Māori and Pasifika representations of ageing.

Attitudes to ageing and the elderly in the second focus group were in stark contrast to those discussed above. Embedded within the far-reaching and complex ideology of *whakapapa*, a “web of intimate relationships, forming the basis of Māori ways of being, knowing, and doing” (Burgess & Painting, 2020, p. 208), Māori constructs of the old and ageing exist within a belief system that honours and centres on *tūpuna* (previous generations) and *whanaungatanga* (relationships). Integral to the ideology of *whakapapa* is an orientation to the collective, which nurtures these attitudes of connection and respect. As Burgess and Painting (2022, p. 214) write, “Our existence as Māori is intergenerational, each of us is intimately connected to...our *tūpuna* and our *mokopuna* [grandchildren, or next generation in a wider, collective sense]. We are reflections of each other”. In this understanding, there is no separation between the old and the young, and therefore no setting of the one against the other.

The following example exemplifies attitudes of warm positivity towards a future imagined older self. Continuing on directly from Example 8 in the Analysis section, Wesley constructs an ideology of grandparents as highly valued and important in people in a child’s life. Here,

he expresses happy anticipation of becoming a grandparent himself one day. This is met with teasing endorsement from the group.

Example 18

FG2 1:41:00

- 1 Rochelle: your moko are gonna have you wrapped round their //little finger\
- 2 Sasha: /yeah yeah yeah\\
- 3 Rochelle: [laughs]
- 4 Wesley: oh yeah then- then it's my oldest boy
- 5 building himself a house
- 6 and I said oh three bedroom house
- 7 Rochelle: moko then [laughs]
- 8 Juliette: //[laughs]\
- 9 Sasha: /oh stop it\\
- 10 Wesley: don't you start dad mum's already //on my case\
- 11 Juliette: //[laughs]\
- 12 Wesley: oh it's just you got a three bedroom house I'm just saying [laughs]

In line 1, Rochelle picks up on Wesley's profound valuing of grandparents and teases him about his own future grandchildren: *your moko* ['grandchildren'] *are gonna have you wrapped round their little finger*. Sasha enthusiastically agrees in line 2, *yeah yeah yeah*, with rising intonation across the repetitions of *yeah*. Wesley takes up the teasing motif and goes on to narrate his own teasing of his oldest son about the possibility of moko (line 6): *I said oh three bedroom house*. This is understood as indexing 'big enough for a family', and Rochelle comes in straight away with a higher-pitch teasing voice: *moko then?* Sasha follows with *oh stop it*, an affectionate expression of mock exasperation (see Haugh, 2010). Wesley responds by representing his son's retort, *don't you start mum's already on my case*, indicating his son rejects the suggestion, which has already been made by his mother. Wesley points out the three bedrooms again with their clear indexical meaning, finishing with *I'm just saying*. This phrase serves to abdicate the speaker from responsibility for implying something by attempting to place the emphasis back on the *saying*, and by *saying* the literal meaning is indexed (*you got a three bedroom house*), ostensibly—but not actually—removing the implied meaning ('you're about to have children'). This discourse strategy seems to add to the light-hearted or teasing tone evident in this example.

Importantly, Wesley's attitude of looking forward to this next stage of life as a grandparent and the group's endorsement contrasts markedly with the first group. Brenda's comment in Example 2 from that group, *we've had one leave home*, is similarly constructed as a landmark transition, a point of moving into a new phase of life and getting older. However, in that conversation, the expression of an actual transition (as opposed to the future imagined one of grandparenthood in the conversation above) is met by Larissa with the derisive *ooh you're old*. While she follows this with laughter to shift to a humorous and perhaps similarly teasing frame (Tannen, 1993), it also serves to construct 'getting older' as distinctly undesirable.

Not only do examples like this demonstrate the multiplicity of ideologies being indexed in a short stretch of talk, but they also display the co-constructed nature of those ideologies

(Bucholtz & Hall, 2008), i.e., the content, ideology, and attitudes expressed by one speaker necessarily influence the thinking and the framing of those thoughts by other speakers in the group. In this group, and in the first group too, there are clear themes that are linguistically and co-operatively constructed, with Discourses negotiated by the group: variously posited, taken up, or rejected. The following example demonstrates how participants use discourse strategies to effect this, in this example, by agreeing/disagreeing and softening a proposed counter-Discourse by the use of humour.

Brenda builds on a Discourse introduced by Anna previously, wherein she was talking about her projects and whether she *has enough lifetime left* for some of them:

Example 19

FG1 53:05

- | | | |
|----|---------|--|
| 1 | Brenda: | I love tramping but I'm like |
| 2 | | okay if I want to do more tramping |
| 3 | | there is a window of time that's closing to do it for sure |
| 4 | Anna: | yes exactly |
| 5 | Brenda: | oh well just that awareness that you can't assume |
| 6 | | that you're gonna have good physical power yeah |
| 7 | Anna: | mm |
| 8 | Brenda: | yeah so I think well //I'd better do it\ before 60 |
| 9 | Anna: | /although I met this\ amazing 80 year old |
| 10 | | doing Tongariro circuit and she does that every year |
| 11 | | by herself as well you know |
| 12 | Brenda: | yeah |
| 13 | Anna: | amazing |
| 14 | Brenda: | so it's possible |
| 15 | Ned: | so actually you've got more time than you think [laughs] |

In the first three lines, time is constructed as a resource for doing things we enjoy, and one that is 'running out'. The metaphor of *the window of time that's closing* creates a feeling of impending termination, with the use of the continuous tense, *closing*, giving the phrase more urgency. Ageing is constructed in terms of possible physical decline in lines 5–6: *you can't assume that you're gonna have good physical power*. In a stereotypical form of disagreement for majority group New Zealanders (Marra, 2012), Anna avoids explicit disagreement by fully, and I believe genuinely, agreeing at first, then presenting a counter-Discourse of unusual physical prowess at an advanced age (lines 9–10): *although I met this this amazing 80-year-old doing Tongariro circuit and she does that every year*. While this is offered as inspiration, the choice of *amazing* positions the 80-year-old in the story as exceptional, thereby reinforcing the unusualness and perhaps unlikelihood of such physical strength at an advanced age. Ned concurs with Anna's counter-Discourse against the 'time is running out' ideology with a remark framed humorously (line 15): *so actually you've got more time than you think*. In this, he rejects Brenda's proposal that *a window of time is closing*, or at least he rejects the imminent closing, using a humour frame to soften the contradiction.

While both groups constructed time as a ‘resource’, ideological assumptions about the primary use of this resource differed greatly. Time was primarily seen in the first group, at least outside of work and family commitments, as something to use for ‘doing’, and usually, I would argue, in pursuit of self-fulfilment via projects or activities, as seen in Example 11, where Anna talks about her many projects. In the second group, time was discussed principally in terms of ‘giving’: in Example 15, Wesley talks about ‘wasting time’ when he was a teenager and making up for it now *by giving... back to the youth*, and in Example 16, he asks the group if time is the *most important thing that we can give people*. Unlike physical resources, ‘giving time’ clearly does not increase the quantity of time possessed by the recipient; ‘giving time’ means spending time with someone or doing something for someone primarily for their sake, rather than for your own gain. This orientation to the collective over the individual was deeply embedded in the ideologies enacted by the second group, with a selfless ‘giving of time’ featuring in many conversations and implicitly placing great emphasis on the relational. In the quest for balance, it could also be argued that a lot, if not all, of Larissa’s reports of her father’s ‘doing’ in Example 5 are also giving to the community: *every day he’s got some volunteer thing that he’s doing*. However, the emphasis in Larissa’s construction lies not on the giving of time (which he clearly performs) but rather on the benefits of *keeping busy* for the purpose of his own healthy ageing. In the second group by contrast, *giving* is constructed as the underlying central purpose for which time exists.

The orientation to time for personal gain reflects the influence of underlying society-wide neoliberal beliefs noted above. These beliefs centre around economic deregulation, free markets, privatisation, and individualism (Lavrence & Lozanski, 2014), and their prevalence is largely due to a shift towards neoliberal forms of government in the Western world (Butler, 2013 as cited in Lavrence & Lozanski, 2014). Neoliberalism depicts the individual as responsible for enacting an (assumed) freedom to reach their potential, regardless of social background—an ideology that patently disregards systemic inequalities (Sung-Yul Park & Lo, 2012). Discourses of self-fulfilment proliferate in this political and economic environment, where personal responsibility for fulfilment (and good health) is underscored, as seen in Example 19 above in Brenda’s talk of tramping as a primary focus for her upcoming years.

Further prevalent Western ideologies of time-as-a-resource were indexed in the first focus group in response to my prompt, *does your life feel busy?* Participants indexed Discourses of lack (Webster & Ballard, 2009): i.e., ‘having inadequate time’, both on a daily basis and on a projected lifetime scale. In Example 10, Pete spoke about multiple obligations in his daily life, indexing the ‘work-life balance’ Discourse. In this Discourse, work-related activities and family relationships are almost pitted against each other as competitors in a construction of time where there is never enough for either. Prevalent in this Discourse of ‘time scarcity’ is a sense of burden, an imposition of endless activities for which there are inadequate hours in the day. This modern Discourse arguably has its roots in capitalist divisions of time and the notion of ‘buying someone’s time’, an intrinsic Discourse in the commodification of labour (Odell, 2023).

In a curious paradox, as much as busyness is constructed as a burden in Western society, so too is it constructed as a virtue, contradictions that appeared in the data. In Example 11, Anna

identifies herself as a person who has *a lot of projects*, and is too busy to *even have time for TV*, with time-for-TV indexing ‘a normal level of leisure time’, that is to say, she is someone who is so gainfully employed in work or self-fulfilling tasks as to have little ‘free time’, an identity tacitly endorsed by modern Western society as a modern status signal (Shir-Wise, 2019). In Example 12, Larissa uses double-voicing to construct ‘free time’ as a preserve of something akin to the ‘idle rich’, thus maintaining her identity as a normally extremely busy and therefore virtuous person with accordingly minimal leisure time, positioning this current spell of ‘free time’ as a rare occasion.

Both the burden and virtue Discourses of Busyness are indexed in Pete’s identity constructions in Example 1, where he speaks about managing work, family and other ‘involvements’. While there is more to explore in uncovering the forces at play in Discourses of Busyness, the data shows that Busyness Discourses are arguably founded on underlying Discourses of productivity and achievement (Odell, 2023), themselves further embedded within and shaped by wider sociopolitical ideologies: ‘productivity’ within capitalism, and ‘achievement’ within neoliberalism.

Discourses of Busyness were similarly indexed in the second focus group. Interestingly, this construct of busyness diverges from the dominant Pākehā one in that it is framed in relation to *the other realm*, as Rochelle puts it, in other words, considered in the big picture of life and death. Why some people experience this while others do not is attributed to excess busyness, albeit tentatively (Wesley uses *maybe* three times to hedge his argument in Example 20). The focus is on connecting to this great cosmic realm, a perspective exhibited by many indigenous cultures (Basso, 1996), with busyness proposed as an inhibiting factor because we pay less attention to our surroundings (seen in Wesley and Rochelle’s comments in lines 21–23):

Example 20

FG2 1:36:01

- | | | |
|----|-----------|---|
| 1 | Wesley: | maybe it’s just all around us |
| 2 | | and maybe some people |
| 3 | | are just more in tune to it than others and |
| 4 | | maybe we’re too wrapped up |
| 5 | | in the time we’re in now |
| 6 | | we don’t see |
| 7 | Ahi: | that’s what I think |
| 8 | Juliette: | yeah yeah... |
| 9 | Ahi: | but the more time saving devices we’ve got |
| 10 | | the more we’re rushing around faster and faster [laughs] |
| 11 | Rochelle: | totally totally |
| 12 | Ahi: | eh [laughs] |
| 13 | Sasha: | //true true\ |
| 14 | Ahi: | /dishwashers\ |
| 15 | | washing machines cars [makes a noise: “rr rr rr,” laughs] |
| 16 | Rochelle: | yeah and the less attention you pay right |
| | | because our ancestors were looking always for those <i>tohu</i> |
| 17 | | [‘signs’] |

- 18 to //guide\ them
 19 Sasha: /yeah\\
 20 Rochelle: the season planting navigating all of those things
 21 we're just so distracted now mm
 22 Wesley: yeah
 23 not paying enough attention

Cultural constructions of collective identity emerge in this extract. Wesley, who has had a significant number of paranormal experiences and unexplained 'knowing', uses the inclusive *we* in his reflections, generously including himself as *too wrapped up in the time we're in now*, i.e., too busy, so much so that *we don't see*. Subsequent reflections from the group use the same collective construct. Ahi agrees in line 7: *that's what I think*, going on to describe the frenetic feel of modern life with our *time-saving devices* constructed as part of the reason why *we're rushing around faster and faster* (lines 9–10). There is a lot of vocalised mutual agreement in this section, with this co-constructed depiction of the busyness of daily life clearly resonating with everyone.

Unpacking the societal Discourses can contribute significantly to the discussion of time and its sociocultural construction through analysis of macro-level Discourses and the multiple ways through which these Discourses shape and are shaped by everyday interactive talk. In identifying the differences in cultural ideologies, a non-essentialist understanding of the complexities involved in presenting, performing, and negotiating ethnic identity has allowed me to undertake a more nuanced investigation into the cultural aspect of Discourses around time.

The data analysed in this dissertation shows that wider societal Discourses around time differed markedly between a predominantly Pākehā group and one with more of an orientation to Māori and Pasifika ways of thinking. In the former, Discourses of Ageing centred around physical and cognitive decline and the imposing of a moral burden on old people to take individual responsibility to 'age well'. Being, looking, or feeling old were categorically constructed as negative states, and youth was idealised. In the second group, ageing and the elderly were constructed in almost entirely positive terms, with respect and valued roles emerging strongly throughout the data. Both groups constructed time as a resource, but in the first group this resource was seen as principally for 'doing', generating Discourses of Busyness, lack, and 'time speeding up'. In the second group, time was constructed within a fundamentally relational framework where it was seen primarily as a resource for 'giving'.

7. Conclusion

For human beings, time is not simply an independent physical reality that operates upon us but a complex interplay between a material phenomenon and our ideological constructions of it. These constructs are specific to culture (Lo & Houkamau, 2012) and frequently go unobserved, at least by the dominant culture. In Aotearoa, Pākehā constructions of time are taken for granted by majority group members as simple realities, or at least human norms (e.g., Gray et al., 2013; Holmes, 2018). In highlighting alternative cultural constructions, notably those from te ao Māori and Pasifika ways of seeing, dominant Pākehā beliefs can be thrown into relief and examined in terms of the underlying forces that perpetuate them.

In the linguistic literature, time has been addressed in myriad ways, but very few linguistic studies have examined it as a sociocultural construct. This research has made use of the affordances of Interactive Sociolinguistics (IS) to identify wider societal narratives relating to time, or big 'D' Discourses (Gee, 2015). Within IS, these Discourses are understood as both socially and culturally constructed and identifiable in interaction, or little 'd' discourses, through close analysis of linguistic and paralinguistic markers (Gumperz, 2008).

To access interactive talk, I made use of two focus groups where the first predominantly identified as Pākehā, and the second was more diverse. This resulted in a rich data set of both spontaneous talk and meta-discourse, i.e., explicit reflections and talk about time. I delineated Discourses of primary interest that arose in both groups as 'Discourses of Ageing' and 'Discourses of time constructed as a resource'. This methodology enabled me to identify and examine the sociocultural construction of some key ideologies around time in Aotearoa. Striking differences were exhibited between the two groups. Ageing and the elderly were constructed in roundly negative terms in the first group, while in the second group constructs were almost entirely positive. Time was constructed as a 'resource' in both groups, but primarily for 'doing' in the first one, and in the second one, for 'giving'. This distinction arguably reflects notions of collectivist vs individualist societal orientation. In discussing these constructs, the use of a social constructionist analytical framework enabled me to offer a less essentialist and more nuanced understanding of ethnic identities, social identities, and wider societal Discourses at play, along with the complex interface between them. Western ideological underpinnings of neoliberalism, capitalism and hyper-individualism were identified as deeply influential. These were discussed principally in terms of the responsibility/blame Discourse imposed on older people for their state of health, and the construction of time as a resource for the purpose of self-fulfilment.

The extent to which the ideologies identified in this research are prevalent in wider society across Aotearoa is a topic for future (and likely interdisciplinary) research. But perhaps even more importantly, the degree to which these ideologies are beneficial or detrimental in our lives and in the lives of specific groups, such as the elderly, is a complex consideration that needs attention. Further investigation into the underlying political ideologies that generate these dominant narratives is needed if we are to understand the deeper forces that perpetuate them. Lastly, more attention is due to te ao Māori ways of seeing, for its own sake, as well as to inform and challenge the dominant Pākehā group.

Societally, I argue that a huge cultural shift towards valuing the old and the elderly is badly needed in Pākehā society. In Ahi's *you got more wisdom*, we see a construct of old age as an accumulation of experiences that was once prevalent in Western society but is now eroded (Andrew, 2007). Both capitalist industrialisation and the idealisation of youth have led to a great depreciation in the value of accumulated life experience, with ageing now largely defined as decline and loss. In Wesley's *they're not in a rush* (Example 6), we see a way of valuing both time and the elderly: a view that honours a slower pace of life. Western derision of slower mental processing or speed of walking, seen in expressions like *dithery* and *shuffl[ing] around*, I would argue arises in part from fear, principally the fear of loss. But this is surely an invented 'loss', a culturally constructed ideology that frames the whole process of ageing as one of losing: looks, mobility, strength, mental acuity, dignity. With these, also culturally constructed, comes loss of status, respect, and role in society. These

overwhelmingly negative cultural constructions of old people induce dread at the thought of ageing ourselves. I contend that this is a kind of cultural sickness, and one that is ultimately self-defeating: after all, we have a choice of early death or becoming old ourselves.

What can the dominant culture learn then, from alternative views and in particular from the collective ideologies embedded in te ao Māori and Pasifika that I aimed to highlight? Can we alter our Pākehā ideologies of ageing, our constructs of lack of time for our own use, of the Busyness Discourse? In this research, I suggest we might find inspiration in the way te ao Māori and other indigenous societies construct a deeper cosmology of time, the way relationships are centralised and the old honoured. Instantiated in this short utterance from Wesley is a deep valuing of the elderly and of their ‘unhurried’ stage of life, with time constructed principally as a resource for ‘giving’: *The elderly... just give you so much time.*

References

- Alaghbary, G. S., Alazzany, M., & Al-Nakeeb, O. (2015). Linguistic approaches to ideology: Review of work between 1979 and 2010. *International Journal of Applied Linguistics and English Literature*, 4(5), 1–10. <https://doi.org/10.7575/aiac.ijalel.v4n.5p.1>
- Anderson, C. (2019). *Discourses of ageing and gender: The impact of public and private voices on the identity of ageing women*. Springer. <https://doi.org/10.1007/978-3-319-96740-0>
- Andrew, P. (2007). The social construction of age: A look at the discourses. *Ometeca*, 11, 50–75.
- Athanasopoulos, P., Samuel, S. H., & Bylund, E. (2017). *The psychological reality of spatio-temporal metaphors*. John Benjamins. <https://www.repository.cam.ac.uk/handle/1810/267115>
- Bailey, B. (2015). *Interactional Sociolinguistics*. John Wiley & Sons, Inc.
- Bakhtin, M. M. (2010). *Speech genres and other late essays*. University of Texas Press.
- Bamberg, M., De Fina, A., & Schiffrin, D. (2011). Discourse and identity construction. In S. J. Schwartz, K. Luyckx & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 177–199). Springer. https://doi.org/10.1007/978-1-4419-7988-9_8
- Bamberg, M., & Demuth, C. (2016). Narrative inquiry: An interview with Michael Bamberg. *Europe's Journal of Psychology*, 12(1), 14–28. <https://doi.org/10.5964/ejop.v12i1.1128>
- Basso, K. H. (1996). *Wisdom sits in places: Landscape and language among the Western Apache*. UNM Press.
- Bell, A. (2013). *The guidebook to sociolinguistics*. John Wiley & Sons. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=1322330>

- Bender, J. B., & Wellbery, D. E. (1991). *Chronotypes: The construction of time*. Stanford University Press. <https://philpapers.org/rec/BENCTC>
- Bestgen, Y., & Costermans, J. (1994). Time, space, and action: Exploring the narrative structure and its linguistic marking. *Discourse Processes*, 17(3), 421–446. <https://doi.org/10.1080/01638539409544877>
- Black, T., Murphy, H., Buchanan, C., Nuku, W., Ngaia, B., & New Zealand Qualifications Authority. (2014). *Enhancing mātauranga Māori and global indigenous knowledge*. NZQA.
- Bourdieu, P. (2010). The forms of capital (1986). In I. Szeman & T. Kaposy (Eds.), *Cultural theory: An anthology* (pp. 81–93). John Wiley & Sons.
- Brown, D., Ellis, N., & Mane-Wheoki, J. (2014). *Does Māori Art History Matter?* Te Herenga Waka—Victoria University of Wellington.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. Cambridge University Press.
- Bucholtz, M. (2003). Sociolinguistic nostalgia and the authentication of identity. *Journal of Sociolinguistics*, 7(3).
- Bucholtz, M., & Hall, K. (2008). *Finding identity: Theory and data*. 27(1–2), 151–163. <https://doi.org/10.1515/MULTI.2008.008>
- Burgess, H., & Painting, T. K. (2020). Onamata, anamata—A whakapapa perspective of Māori futurisms. In A.-M. Murtola & S. Walsh (Eds.), *Whose futures?* (pp. 207–233). Economic and Social Research Aotearoa.
- Campbell, L. (2013). *Historical linguistics*. Edinburgh University Press.
- Capone, A., & Mey, J. L. (2015). *Interdisciplinary studies in pragmatics, culture and society*. Springer.
- Cardona, B. (2008). ‘Healthy Ageing’ policies and anti-ageing ideologies and practices: On the exercise of responsibility. *Medicine, Health Care and Philosophy*, 11(4), 475–483. <https://doi.org/10.1007/s11019-008-9129-z>
- Carvalho, A., Rea, I. M., Parimon, T., & Cusack, B. J. (2014). Physical activity and cognitive function in individuals over 60 years of age: A systematic review. *Clinical Interventions in Aging*, 2014(9), 661–682. <https://doi.org/10.2147/CIA.S55520>
- Chartres, L. (2020). Changing values: An analysis of the PRICE phoneme for eight speakers of NZE. *New Zealand English Journal*, 22, 9–23. <https://doi.org/10.3316/informit.418422984188160>
- Comrie, B. (1985). *Tense*. Cambridge University Press.

- Coupland, J. (2009). Discourse, identity and change in mid-to-late life: Interdisciplinary perspectives on language and ageing. *Ageing & Society*, 29(6), 849–861. <https://doi.org/10.1017/S0144686X09008800>
- Coupland, N. (1997). Language, ageing and ageism: A project for applied linguistics? *International Journal of Applied Linguistics*, 7(1), 26–48. <https://doi.org/10.1111/j.1473-4192.1997.tb00102.x>
- Coupland, N., & Coupland, J. (1993). Discourses of ageism and anti-ageism. *Journal of Aging Studies*, 7(3), 279–301. [https://doi.org/10.1016/0890-4065\(93\)90016-D](https://doi.org/10.1016/0890-4065(93)90016-D)
- Coupland, N., & Coupland, J. (1998). Ageing, ageism and anti-ageism: Moral stance in geriatric medical discourse. In H. Ehrenberger Hamilton (Ed.), *Language and Communication in Old Age* (pp. 177–208). Routledge.
- Crystal, D. (2002). *Language death*. Cambridge University Press. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=217952>
- Crystal, D. (2011). *A dictionary of linguistics and phonetics*. John Wiley & Sons.
- Curtis, E. (2016). Indigenous positioning in health research: The importance of Kaupapa Māori theory-informed practice. *AlterNative: An International Journal of Indigenous Peoples*, 12(4), 396–410. <https://doi.org/10.20507/AlterNative.2016.12.4.5>
- de Bres, J., & Dawson, S. (2021). Saint Ashley: Gendered discourses in the commodification of New Zealand’s director general of health during Covid-19. *Gender and Language*, 15(2), 129–157. <https://doi.org/10.1558/genl.18687>
- De Fina, A. (2011). Researcher and informant roles in narrative interactions: Constructions of belonging and foreign-ness. *Language in Society*, 40(1), 27–38. <https://doi.org/10.1017/S0047404510000862>
- Delahunty, C. (2021, February 20). Tripping over Te Tiriti. *E-Tangata*. <https://e-tangata.co.nz/reflections/tripping-over-te-tiriti/>
- DeLoughrey, E. M. (2007). *Routes and roots: Navigating Caribbean and Pacific island literatures*. University of Hawai’i Press.
- Doherty, W. (2014). Mātauranga ā-lwi as it applies to Tūhoe Te Mātauranga o Tūhoe. In H. Murphy (Ed.), *Enhancing mātauranga Māori and global indigenous knowledge* (pp. 29–46). NZQA.
- Evans, M., Jeffries, L., & O’Driscoll, J. (2019). *The Routledge handbook of language in conflict*. Routledge.
- Evans, V. (2013). *Language and time: A cognitive linguistics approach*. Cambridge University Press.
- Foucault, M. (1977). *Discipline and punish: The birth of the prison* (A. Sheridan, Trans.). Vintage Books, a Division of Random House Inc.

- Gardner, S. K. (2022). In the seventh year you will not rest: Faculty members' sensemaking of productivity during the sabbatical. *The Journal of Higher Education*, 93(6), 847–872. <https://doi.org/10.1080/00221546.2022.2036033>
- Gee, J. P. (2015). Discourse, small-d, Big D. *International encyclopaedia of language and social interaction*. John Wiley & Sons, Inc.
- Geiger, R. A., & Rudzka-Ostyn, B. (1993). *Conceptualizations and mental processing in language*. De Gruyter.
- Gibson, H. M. (2006). *The invisible whiteness of being*. University of Canterbury.
- Gordon, E., & MacIver, M., (2008). Regional and social differences in New Zealand: Phonology. In K. Burridge & B. Kortmann (Eds.), *The Pacific and Australasia* (pp. 64–76). De Gruyter. <https://doi.org/10.1515/9783110208412.1.64>
- Graham, A. W. (2018). *Tika Tonu: Young Māori mothers' experiences of wellbeing surrounding the birth of their first tamaiti*. [Doctoral dissertation, Victoria University of Wellington].
- Gray, C., Jaber, N., & Anglem, J. (2013). Pakeha identity and whiteness: What does it mean to be White? *Sites: A Journal of Social Anthropology and Cultural Studies*, 10(2), 82–106. <https://doi.org/10.11157/sites-vol10iss2id223>
- Gumperz, J. J. (1982). *Discourse strategies*. Cambridge University Press.
- Gumperz, J. J. (2003). Interactional Sociolinguistics: A personal perspective. In D. Schiffrin (Ed.), *The handbook of discourse analysis* (pp. 215–228). John Wiley & Sons. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=7103358>
- Gumperz, J. J. (2006). Interactional Sociolinguistics. In K. Brown (Ed.), *Encyclopedia of language & linguistics* (2nd ed.) (pp. 724–729). Elsevier. <https://doi.org/10.1016/B0-08-044854-2/01284-0>
- Gumperz, J. J. (2008). On interactional sociolinguistic method. In S. Sarangi & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings*. De Gruyter.
- Gumperz, J. J., & Cook-Gumperz, J. (2008). Studying language, culture, and society: Sociolinguistics or linguistic anthropology? *Journal of Sociolinguistics*, 12(4), 532–545.
- Hammond, S., & Hall, J. (1998). What is appreciative inquiry? *Inner edge newsletter*, 1–10.
- Haugh, M. (2010). Jocular mockery, (dis)affiliation, and face. *Journal of Pragmatics*, 42(8), 2106–2119. <https://doi.org/10.1016/j.pragma.2009.12.018>
- Hay, J. (2002). Male cheerleaders and wanton women: Humour among New Zealand friends. *Te Reo*, 45, 3–36.

- Heinrichsmeier, R. (2019). Ageism and interactional (mis)alignment using micro-discourse analysis in the interpretation of everyday talk in a hair-salon. *Linguistics Vanguard*, 5(s2), 20180031. <https://doi.org/10.1515/lingvan-2018-0031>
- Heller, M., Pietikäinen, S., & Pujolar, J. (2017). *Critical Sociolinguistic Research Methods: Studying Language Issues That Matter*. Routledge.
- Hills, L. R. (1971). The righteousness of Busyness: Or, last reflections on the first McCarthy campaign. *The Antioch Review*, 31(4), 495–515. <https://doi.org/10.2307/4637489>
- Hochschild, A. R. (1997). *The time bind: When work becomes home and home becomes work*. Metropolitan Books.
- Holmes, J. (2018). Negotiating the culture order in New Zealand workplaces. *Language in Society*, 47(1), 33–56. <http://dx.doi.org/helicon.vuw.ac.nz/10.1017/S0047404517000732>
- Holmes, J., & Marra, M. (2011). Leadership discourse in a Maori workplace: Negotiating gender, ethnicity and leadership at work. *Gender and Language*, 5(2), 317–342. <https://doi.org/10.1558/genl.v5i2.317>
- Holmes, J., Marra, M., & Vine, B. (2011). *Leadership, discourse, and ethnicity*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199730759.001.0001>
- Holmes, J., Vine, B., & Marra, M. (2020). Contesting the Culture Order: Contrastive pragmatics in action. *Contrastive Pragmatics*, 1(1), 1–27. <https://doi.org/10.1163/26660393-12340002>
- Holmes, J., & Wilson, N. (2022). *An introduction to sociolinguistics*. Taylor & Francis Group.
- Horner, K., & Bellamy, J. (2016). Beyond the micro-macro interface in language and identity research. In S. Preece (Ed.), *The Routledge handbook of language and identity* (pp. 320–334). Routledge.
- Huang, S. (2016). Time as space metaphor in Isbukun Bunun: A semantic analysis. *Oceanic Linguistics*, 55(1), 1–24.
- James, M. (2014). *Positioning theory and strategic communication: A new approach to public relations research and practice*. Routledge.
- Jones, I. R., & Higgs, P. F. (2010). The natural, the normal and the normative: Contested terrains in ageing and old age. *Social Science & Medicine*, 71(8), 1513–1519. <https://doi.org/10.1016/j.socscimed.2010.07.022>
- Juez, L. A. (2009). *Perspectives on discourse analysis: Theory and practice*. Cambridge Scholars Publishing.
- Katz, S. (2001). Growing older without aging? Positive aging, anti-ageism, and anti-aging. *Generations: Journal of the American Society on Aging*, 25(4), 27–32.

- Kaufman, S. R., Shim, J. K., & Russ, A. J. (2004). Revisiting the biomedicalization of aging: Clinical trends and ethical challenges. *The Gerontologist*, 44(6), 731–738. <https://doi.org/10.1093/geront/44.6.731>
- Kiesling, S. (2015). *Stance in context: Affect, alignment, and investment in the analysis of stancetaking*. University of Pittsburgh.
- Klein, W. (1994). *Time in Language*. Routledge.
- Klein, W. (2013). *Time in Language*. Routledge. <https://doi.org/10.4324/9781315003801>
- Koller, V. (2020). Book Review: Clare Anderson, discourses of ageing and gender: The Impact of Public and Private Voices on the Identity of Ageing Women. *Discourse & Communication*, 14(1), 104–106. <https://doi.org/10.1177/1750481319885225>
- Labov, W., & Waletzky, J. (1967). *Narrative analysis: Oral versions of personal experience*. University of Washington Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press.
- Lavrence, C., & Lozanski, K. (2014). “This is not your practice life”: Lululemon and the neoliberal governance of self. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, 51(1), 76–94. <https://doi.org/10.1111/cars.12034>
- Lazzaro-Salazar, M. (2009). *The role of /overlaps\ in intercultural workplace interaction*. [Master’s dissertation, Victoria University of Wellington] <http://researcharchive.vuw.ac.nz/handle/10063/1168>
- Lazzaro-Salazar, M., Holmes, J., & Marra, M. (2017). Negotiating the tall poppy syndrome in New Zealand workplaces: Women leaders managing the challenge. *Gender and Language*, 11(1), 1–29. <http://www.repositorio.ucm.cl/handle/ucm/repositorio.ucm.cl/handle/ucm/285>
- Litosseliti, L. (2003). *Using focus groups in research*. Bloomsbury. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=742924>
- Litosseliti, L. (2010). *Research methods in linguistics*. Bloomsbury.
- Lo, K. D., & Houkamau, C. (2012). Exploring the cultural origins of differences in time orientation between European New Zealanders and Māori. *The New Zealand Journal of Human Resources Management*, 12(3), 105–123.
- Marra, M. (2010). Recording and analyzing talk across cultures. In H. Spencer-Oatey (Ed.), *Culturally speaking: Culture, communication and politeness theory* (2nd ed., pp. 304–321). Continuum. https://www.academia.edu/43402841/Helen_Spencer_Oatey_Culturally_Speaking_Culture_Communication_and_Politeness_Theory_2nd_Edition

- Marra, M. (2012). Disagreeing without being disagreeable: Negotiating workplace communities as an outsider. *Journal of Pragmatics*, 44(12), 1580–1590. <https://doi.org/10.1016/j.pragma.2012.06.009>
- Marra, M. (2014). Language and culture in sociolinguistics. In F. Sharifian (Ed.), *The Routledge handbook of language and culture* (pp. 373–385). Routledge.
- Marra, M., Holmes, J., & Vine, B. (2022). What we share: The impact of norms on successful interaction. In J. Mortensen & K. Kraft (Eds.), *Norms and the study of language in social life* (pp. 185–209). De Gruyter.
- Mikaere, A. (2017). *Like moths to the flame?: A history of Ngāti Raukawa resistance and recovery*. Te Tākapu, Te Wānanga o Raukawa.
- Minichiello, V., Browne, J., & Kendig, H. (2000). Perceptions and consequences of ageism: Views of older people. *Ageing and Society*, 20(3), 253–278.
- Mountford, B. (2022). *Missing in action: The muted discourse of desire and sexual agency in sexuality education*. [Master's dissertation, Te Herenga Waka—Victoria University of Wellington.]
- Mullany, L., & Schnurr, S. (Eds.). (2023). *Globalisation, geopolitics, and gender in professional communication*. Taylor & Francis. <https://doi.org/10.4324/9781003159674>
- Murata, K. (2014). An empirical cross-cultural study of humour in business meetings in New Zealand and Japan. *Journal of Pragmatics*, 60, 251–265.
- Murton, B. (2012). Being in the place world: Toward a Māori “geographical self”. *Journal of Cultural Geography*, 29(1), 87–104. <https://doi.org/10.1080/08873631.2012.655032>
- Myers, G. (1998). Displaying opinions: Topics and disagreement in focus groups. *Language in Society*, 27(1), 85–111. <https://doi.org/10.1017/S0047404500019734>
- Naish, J. (2008). Enough happiness. In *Enough*. Hodder & Stoughton.
- Odell, J. (2023). *Saving time: Discovering a life beyond the clock*. Random House.
- Pablé, A. (2015). Putting it integratively. *Language & Dialogue*, 5(3), 449–470. <https://doi.org/10.1075/ld.5.3.05pab>
- Papen, U. (2019). Participant observation and field notes. In K. Tusting (Ed.), *The Routledge handbook of linguistic ethnography* (pp. 141–153). Routledge.
- Peet, K. (2008). *Becoming Tangata Tiriti—One Person's Story*. Paper Presentation, Network Waitangi Ōtautahi, Kaiapoi. <https://nwo.org.nz/wp-content/uploads/2018/08/BecomingTangataTiriti.pdf>
- Pennycook, A. (2007). Language, localization, and the real: Hip-Hop and the global spread of authenticity. *Journal of Language, Identity & Education*, 6(2), 101–115. <https://doi.org/10.1080/15348450701341246>

- Procter, J., & Black, H. (2014). Mātauranga ā-lwi He Haerenga Mōrearea Exploring the indigenous knowledge behind New Zealand's active and hazardous volcanic landscapes. In H. Murphy, C. Buchanan, W. Nuku, & B. Ngaia (Eds.), *Enhancing Mātauranga Māori and global indigenous knowledge* (p. 91). NZQA.
- Rameka, L. (2016). Kia whakatōmuri te haere whakamua: 'I walk backwards into the future with my eyes fixed on my past'. *Contemporary Issues in Early Childhood*, 17(4), 387–398.
- Rantakokko, M., Mänty, M., & Rantanen, T. (2013). Mobility decline in old age. *Exercise and Sport Sciences Reviews*, 41(1), 19–25.
<https://doi.org/10.1097/JES.0b013e3182556f1e>
- Rodríguez, L. (2014). *Time in language, gesture and thought: A case study in Chol Mayan* [Doctoral dissertation, University of Virginia].
- Rudman, D. L. (2006). Shaping the active, autonomous and responsible modern retiree: An analysis of discursive technologies and their links with neo-liberal political rationality. *Ageing & Society*, 26(2), 181–201. <https://doi.org/10.1017/S0144686X05004253>
- Rudman, D. L. (2015). Embodying positive aging and neoliberal rationality: Talking about the aging body within narratives of retirement. *Journal of Aging Studies*, 34, 10–20.
<https://doi.org/10.1016/j.jaging.2015.03.005>
- Sabelis, I., Keenoy, T., Oswick, C., & Ybema, S. (2005). Introduction to time and discourse: Time, text and tuning. *Time & Society*, 14(2–3), 261–263.
- Salmond, A. (1997). *Between worlds: Early exchanges between Māori and Europeans, 1773–1815*. University of Hawai'i Press. <https://cir.nii.ac.jp/crid/1130000794469815424>
- Schiffrin, D. (2003). Discourse markers: Language, meaning, and context. In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), *The handbook of discourse analysis* (pp. 54–75). John Wiley & Sons.
<http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=7103358>
- Sealey, A. (2014). Cats and categories—Reply to Teubert. *Language and Dialogue*, 4(2), 299–321. <https://doi.org/10.1075/ld.4.2.07sea>
- Shaw, A. (2012). Do you identify as a gamer? Gender, race, sexuality, and gamer identity. *New Media & Society*, 14(1), 28–44. <https://doi.org/10.1177/1461444811410394>
- Shir-Wise, M. (2019). Disciplined freedom: The productive self and conspicuous busyness in “free” time. *Time & Society*, 28(4), 1668–1694.
<https://doi.org/10.1177/0961463X18769786>
- da Silva Sinha, V. (2019). Event-based time in three indigenous Amazonian and Xinguan cultures and languages. *Frontiers in Psychology*, 10.
<https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00454>

- Sinha, C., da Silva Sinha, V., Zinken, J., & Sampaio, W. (2011). When time is not space: The social and linguistic construction of time intervals and temporal event relations in an Amazonian culture. *Language and Cognition*, 3(1), 137–169. <https://doi.org/10.1515/langcog.2011.006>
- Smith, P. L. (1999). *Decolonizing methodologies: Research and indigenous peoples*. Zed Books. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=6605401>
- Spedale, S., Coupland, C., & Tempest, S. (2014). Gendered ageism and organizational routines at work: The case of day-parting in television broadcasting. *Organization Studies*, 35(11), 1585–1604. <https://doi.org/10.1177/0170840614550733>
- Stephens, C. (2017). From success to capability for healthy ageing: Shifting the lens to include all older people. *Critical Public Health*, 27(4), 490–498. <https://doi.org/10.1080/09581596.2016.1192583>
- Sullivan, K., & Bui, L. T. (2016). With the future coming up behind them: Evidence that Time approaches from behind in Vietnamese. *Cognitive Linguistics*, 27(2), 205–233. <https://doi.org/10.1515/cog-2015-0066>
- Sung-Yul Park, J., & Lo, A. (2012). Transnational South Korea as a site for a sociolinguistics of globalization: Markets, timescales, neoliberalism. *Journal of Sociolinguistics*, 16(2), 147–164. <https://doi.org/10.1111/j.1467-9841.2011.00524.x>
- Tannen, D. (1993). *Framing in discourse*. Oxford University Press.
- Tenbrink, T. (2021). Spatiotemporal reference frames: Location and orientation. In T.F Li, (Ed.), *Handbook of cognitive semantics* (pp. 3–23). Brill. [https://research.bangor.ac.uk/portal/en/researchoutputs/spatiotemporal-reference-frames-location-and-orientation\(0fe11136-7f0c-49b8-a292-51c01939598a\).html](https://research.bangor.ac.uk/portal/en/researchoutputs/spatiotemporal-reference-frames-location-and-orientation(0fe11136-7f0c-49b8-a292-51c01939598a).html)
- Tonhauser, J. (2015). Cross-linguistic temporal reference. *Annual Review of Linguistics*, 1(1), 129–154.
- Toolan, M. J. (2013). *Narrative: A critical linguistic introduction* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315011271>
- Torres, F. (2023). KronoScope, Journal for the Study of Time. https://brill.com/view/journals/kron/kron-overview.xml?tab_body=container-135910-item-135916&contents=ArtSub
- van den Bogaert, S., Ceuterick, M., & Bracke, P. (2018). The silver lining of greying: Ageing discourses and positioning of ageing persons in the field of social health insurance. *Health*, 24(2), 169–186. <https://doi.org/10.1177/1363459318800171>
- van Dijk, T. A. (2015). Critical discourse analysis. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The handbook of discourse analysis* (pp. 466–485). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118584194.ch22>

- Webster, S., & Ballard, D. (2009). Time and time again: The search for meaning/fulness through popular discourse on the time and timing of work. *KronoScope*, 8(2), 131–145. <https://doi.org/10.1163/156771508X444585>
- Wells, J. C. (1982). *Accents of English: Beyond the British Isles* (Vol. 3). Cambridge University Press. <https://doi.org/10.1017/CBO9780511611766>
- Yukich Te Kawehau Hoskins, R. (2011). Responsibility and the other: Cross-cultural engagement in the narratives of three New Zealand school leaders. *Journal of Systemic Therapies*, 30(3), 57–72. <https://guilfordjournals.com/doi/10.1521/jsyt.2011.30.3.57>

Appendix A: List of participants

All names are pseudonyms. In the first focus group, Ned is my brother and Brenda and David are a married couple. ‘Ethnicity’ is transcribed exactly as written on the background questionnaire; likewise ‘Iwi (tribe) affiliations’ and ‘Year of birth’. Age, as described by birth year, is very much an essentialist or fixed category in Western thinking, and certainly not a universal human understanding. In giving birthdates here, I realise I am reinforcing our essentialist concepts of age: rather than a fixed numerical identifier with all its concomitant cultural associations, what I intend with these numbers is an approximate indication of life stage.

First Focus Group

Larissa	Ethnicity: Pākehā	Year of birth: 1970
Pete	Ethnicity: Pakeha or NZ European	Year of birth: 1971
Ned	Ethnicity: New Zealander	Year of birth: 1970
Anna	Ethnicity: Pakeha	Year of birth: 1975
Brenda	Ethnicity: NZ European	Year of birth: 1971
David	Ethnicity: Pākehā	Year of birth: 1970

Second Focus Group

Wesley	Ethnicity: NZ Pakeha or Irish descendent, Cook Island Māori Year of Birth: 1973
Ahi	Ethnicity: I am of Maori and Pakeha descent. I am proud of both but my heart and wairua is Maori Iwi affiliations: Ngāti Porou, Te Whanau-a-Apanui, Ngati Ruanui Year of Birth: 1955
Sasha	Ethnicity: NZ Māori. My father is from Irish decent (sic); my mother was Māori Iwi affiliations: Ngāti Porou, Rongomawahine, Ngati Kahungunu Year of Birth: 1971
Rochelle	Ethnicity: Māori, Pākehā Iwi affiliations: Ngati Raukawa ki te Tonga, Rangitaane, Muaūpoko Year of Birth: 1973

Appendix B: Transcript conventions

Here I largely follow the conventions of Holmes et al (2011). All names used in extracts are pseudonyms. Minimal feedback and overlaps that are not deemed relevant to the point have sometimes been edited out for ease of reading. Line divisions typically represent boundaries of sense units and are intended to aid comprehension. The main conventions used are as follows:

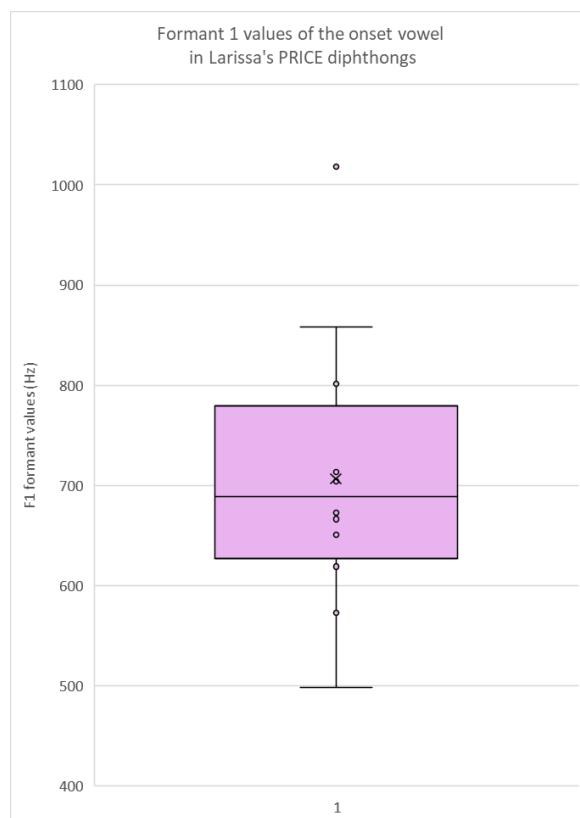
['signs']	Translations for Māori words are provided in square brackets
[laughs]	Paralinguistic features and editorial information in square brackets
+	Pause of up to one second
...//.....\ ...	Simultaneous speech
.../.....\\ ...	
()	Unclear utterance
(hello)	Transcriber's best guess at an unclear utterance
-	Utterance cut off
...	Section of transcript omitted

Appendix C: Sociophonetic analysis

The boxplot in Figure 1 demonstrates that all Larissa's tokens of *time* produced with normal voicing exist within the upper and lower quartile range, with the double-voiced token a mathematical outlier in this set.

Figure 1

Boxplot of the spread of formant 1 values of the onset vowel in Larissa's PRICE diphthongs, taken from 12 tokens of the word time. The topmost point represents the double-voiced token.



Acknowledgements

Enormous thanks to Meredith, for your expert guidance, perfect editorial input, and steadfast encouragement.

To the participants, for so generously sharing your thoughts, insights and perspectives with me. I hope this thesis does some small degree of justice to the rich and varied stories you shared in the focus group.

To the Discourse Analysis Group: thank you for your generous and thoughtful comments on the data.

To Jeanette Grace, thank you for your invaluable input into the design stage of this study. Speaking with you was pivotal in helping me see how to adapt my approach to ensure I honoured the Māori data.

And lastly, my darling husband and children: heartfelt thanks for listening to me talk about this thesis over the last year, for your interest, enthusiasm, and all your astounding insights, and for juggling soccer balls with me every day in my study breaks.

Chick Lit, What Fits?: Revealing the Neoliberal Boundaries of a Genre

Sofia Morrell

Chick Lit is both highly critiqued and praised for its portrayal of women. While the genre garnered feminist support for creating a space that uplifts a 'by women, for women' narrative, it has also received feminist criticism for the reification of gendered stereotypes. Within these critiques, the overpowering impact of neoliberal ideals is often overlooked. My study takes a Feminist Critical Discourse Studies approach to examine the influence of neoliberalism within Chick Lit. The research explores the perpetuation of gendered neoliberal hegemonies in reviews of Chick Lit books. My dataset comprises a total of 62 reviews reporting on 20 Chick Lit New Releases (as tagged by social media site Good Reads) published in newspapers and e-magazines in 2020–2021. Due to the powerful role reviewers play in shaping and controlling a genre, analysing reviews allows us to examine the way in which society talks about Chick Lit and, in turn, how this talk exposes neoliberal ideologies. I make use of the affordances of metadiscourse, an emerging trend for discourse analysis, to access the underlying doxa that reviewers reveal through their evaluations of books. Findings indicate that reviewers (re)produce a formulaic Chick Lit genre through the use of tropes, archetypes, and identity categories. Reviewers construct a genre that appeals to the neoliberal feminist ideals of individual choice and the prioritising of an appropriate work/life balance. My analysis indicates that despite attempts to subvert this hegemony (with two books in particular challenging the mould), reviewers continue to construct a genre that is exclusionary and upholds a norm of the apolitical white Anglo-American cishet middle-class woman. In the hidden, neoliberal power of Chick Lit remains alarmingly stable.

1. Introduction

I would love it if my book was considered chick-lit or a beach read. That would be great.
People would buy my book.

– Emily Gould, American Author, 2014

Chick Lit is an often-controversial category of fiction, eliciting both criticism and praise since it emerged as a recognisable genre in the 1990s. Chick Lit refers to books 'by women, for women' that centre on the experiences and challenges of women (Spencer, 2019). As a genre, it has garnered praise for its women-centred stories, while also gaining criticism for these same stories about women who excessively shop, drink alcohol, and experience 'trivial' anxieties about their appearance (Spencer, 2019). In an interview between two authors, Emily Gould's exclamation of support for the genre (cited above) was met with surprise—"Oh, I was preparing for you to be offended" ("Webs they weave", 2014). This exchange highlights the complexity of a genre that has been hard to define yet receives large support from consumers (Missler, 2017). One thing is certain: complex and multiple hegemonies are at work within the genre. The dominance of these hegemonies is ripe for exploration and exposure. With this, I turn to the perpetuation of gendered neoliberal ideals in Chick Lit.

In terms of critique and praise, the Chick Lit genre experiences these from a feminist standpoint (see Gill & Herdieckerhoff, 2006; Harzewski, 2011). Most feminist critiques of Chick Lit are based on the argument that Chick Lit is a model of postfeminism, in that it presents a world in which feminist issues no longer need to be prioritised (Harzewski, 2011). In contrast, others argue that this reading of Chick Lit fails to fully address many of the underlying hegemonies within the genre, including and especially for the purpose of my investigation, neoliberalism (Butler & Desai, 2008; Newns, 2018; Spencer, 2019). With its focus on individual choice, sociocultural success, and its exclusionary potential, neoliberalism persists in the genre. While neoliberalism may not be the first thing that springs to mind when you hear 'Chick Lit', the link between the two runs deep; the neoliberal ideals of the work/life balance permeate Chick Lit protagonists.

In order to subvert the neoliberal stance of the postfeminist view, this paper uses a Critical Discourse Studies (CDS) approach. Taking this stance, the analysis examines how gendered neoliberal hegemonic norms are challenged and/or upheld in discourses surrounding Chick Lit. I argue that Chick Lit reflects a neoliberal society, and I aim to "fracture neoliberalism's assumed coherence" through a feminist framework (Butler & Desai, 2008, p. 9).

I begin by setting out the theoretical framework. I indicate how my investigation employs a feminist approach to Critical Discourse Studies (CDS) in order to examine the gendered neoliberal ideologies that are present in Chick Lit. I then survey the current literature on Chick Lit, revealing the neoliberal link to the genre before turning to the methods and analytical approach I apply. My methods make use of the tools and insights afforded by Interactional Sociolinguistics, in particular the goal of linking macro-societal concerns to micro-linguistic details (Gordon, 2011). A specific focus for analysis is the metadiscourse available in the valuable resource provided by reviews of Chick Lit books. The examination of reviews I undertake provides access to the doxa (Bourdieu, 1977), ideologies, and boundaries within the genre that are reinforced by reviewers.

My analysis is divided into two sections each of which focuses on the (re)production of boundaries within the Chick Lit genre. First, I investigate how reviewers orient to recognisable tropes and archetypes that ultimately comply with the underlying hegemony of the apolitical white, middle-class, cis het woman and the successful neoliberal work/life balance. Books that attempt to subvert these hegemonies, my second analytic focus, are seen to be recognised as deviating from the norm yet are talked about by reviewers through the neoliberal feminist lens that constrains the Chick Lit genre. I discuss how the use of these ideologies reinforces neoliberal norms, including examples where the genre is being 'troubled'. In conclusion, I argue that challenges to the norm solidify the often-overlooked impact of neoliberalism, and still fail to make progress in the subversion of neoliberalism in 2021.

2. Theoretical Framework

CDS¹ is based on the understanding that discourse and society are symbiotically interlinked, with discourse both echoing and constructing the world around us (Paltridge, 2012). As an

¹ I choose to refer to CDS as an overarching critical lens that has traditionally been referred to as CDA (Critical Discourse Analysis) in the literature (van Dijk, 2013). The distinction is that CDS emphasises that critical

inherently political approach, CDS posits that society, and thus discourse, is built on discriminatory hegemonies (Blommaert, 2005). Analysts aim to ‘denaturalise’ the misuse and abuse of power and hegemonies that are enacted through discourse (van Dijk, 1996). CDS examines how these hegemonies are discursively constructed with the goal of subverting and challenging powers in discourse “that stay largely unchallenged” (Wodak & Meyer, 2009, p. 8). Analysis through a CDS lens focuses on the discursive framing of ideologies and identities, paying close attention to both whose voice is represented and how voices are represented (Paltridge, 2012). By focusing on deconstructing many of the underlying assumptions present in discourse, CDS works to trace and expose hegemonic worldviews and beliefs.

As a theoretical stance, CDS first emerged in the 1970s as a tool to investigate the relationship between institutional discourse, society and power, formalising a critical and “emancipatory agenda for linguistic analysis” (Blommaert, 2005, p. 22). Since its inception, CDS scholars have examined a broad spectrum of social and political issues and inequalities such as racism (Billig, 2001; van Dijk, 1996), capitalism (Fairclough, 2013), and sexism (Caldas-Coulthard, 1995; Talbot, 2007). The latter has underpinned a distinct body of work within CDS with an emphasis on gender and power, namely, Feminist Critical Discourse Studies (FCDS).

As part of her seminal research, Lazar (2007) pioneered FCDS as a lens to deconstruct damaging and limiting discourses against women. Maintaining an emancipatory stance, FCDS expands on the efforts of CDS scholars to unearth the way power and language are mutually reinforcing, and forefronting gender inequality activism. FCDS thus builds on the principles of CDS, while crucially incorporating critical feminist theory (Lazar, 2017). In this sense, FCDS establishes a tradition of critical studies of gender which does not singularly draw on CDS and feminist theory, but rather combines these aims through the explicit label of FCDS (Lazar, 2007).²

When examining concerns of feminism and gender, it is important to acknowledge that gendered identity categories (such as “women”) are “diverse, changing, and plural” (Lazar, 2017, p. 373). FCDS attempts to acknowledge this plurality, while often employing a strategic essentialist discussion of gender by use of binary terms to explain hegemonies. In this sense, FCDS recognises that social categories are not binary, yet the hegemonies in which they are examined constrain richer explanations of the gendered world. Aligning with this, I will make use of the social category of ‘women’ in this report, while recognising the complexities and assumptions that this category/label holds.

A more recent site of analysis for FCDS is that of the relationship between neoliberalism and (post)feminism (see Kauppinen, 2013a, 2013b; Lazar, 2006, 2009). Neoliberalism, in its original conceptualisation, broadly denotes the economic practices and processes that rose to prominence in the 1970s and 1980s (Phelan & Dawes, 2018). On a macro level, this involved the rise of privatisation, reduced barriers to investment and trade, and the shift from ‘state’ to ‘individual’ in areas such as social welfare (Butler & Desai, 2008). Most track this rise

approaches to discourse analysis do not share a method of analysis, but rather this is an overarching term or ‘toolkit’ for all theories, methods, analyses, and applications used in the critical discourse approach.

² It is important to also acknowledge Baxter (2015) for her work in Feminist Poststructural Discourse Analysis (FPDA). FPDA similarly aims to investigate discourse through a feminist lens yet differs in that it focuses on ‘transformation’ rather than the ‘emancipatory agenda’ of CDA.

alongside the pivotal United States (US) presidency of Ronald Reagan (1981–1989) and the United Kingdom (UK) prime ministerial term of Margaret Thatcher (1979–1990). The offices of these two leaders pushed privatisation and individualistic policies that are now recognised as pillars of neoliberalism. Broadly, neoliberalism is often seen as synonymous and interlinked with 21st Century capitalism and has come to symbolise neoliberal ideals, particularly the retreat of the state from individuals, as pervasive in all contexts.

Neoliberal ideals of rationality and individualism that began in the political and economic context have pervaded “all institutions and social action” (Sørensen, 2017, p. 298). Originally rooted in economic theory, neoliberalism has evolved into a hegemonic “sociopolitical ideology” that has a keen focus on individualised choice and success (Bettache & Chiu, 2019, p. 1). As such, these individualised neoliberal discourses and ideologies perpetuate in society, and in particular, Western society (Fairclough, 2013). Neoliberalism has been increasingly critiqued as a hegemony in discourse and society due to its pervasive economic and societal impacts (e.g. Chun, 2017; Fairclough, 2013). However, Gill and Scharff (2011) argue the connection between neoliberalism and gender is under-investigated, thus requiring a feminist reading of neoliberalism.

While the gendered discourses and constraints that neoliberal hegemonies place on women remain to be fully explored through FCDS, many feminist scholars note the tense relationship between neoliberal ideals and feminism (Adamson, 2017; Fraser, 2013; Grewal, 2005; McRobbie, 2015; Prügl, 2015; Rottenberg, 2018; Sørensen, 2017). The relationship becomes particularly complex when intersectional pressures are not acknowledged by the individualised and ‘rational’ norms of neoliberalism. Neoliberalism’s assumptions and goals often disregard the many real constraints on individual choice and success.

The link between neoliberalism and feminism is revealed through a focus on choice. Like neoliberal ideologies, feminism is often imbued with ideas of choice, particularly around affording women access to the same choices as men (Sørensen, 2017). As Rottenberg (2018) argues, ‘neoliberal feminism’ values the ability of women to balance their work and career with personal relationships and family. However, this vision of gendered success is still positioned within women’s comparative ability in a patriarchal society. She posits that the so-called balance that neoliberal feminism demands is linked to the gendered ‘care economy’. That is, while women may successfully choose to pursue careers, they must also crucially balance their lives and, often, maternal duties.

The revered and highly sought-after work/life balance assumes that personal success is not impacted upon or influenced by highly complex factors. For example, the work/life balance uplifts the economic success of women, yet ignores the intersection of race, class, ethnicity, sexual, and gender orientation that impacts the ability to attain this work/life balance. This creates a feminism that is exclusionary and tends to reaffirm “class and white privilege” (Rottenberg, 2018, p. 20).

To examine how the themes of individual success and work/life balance are present in Chick Lit, I thus apply the lens of FCDS. This prioritises an exploration of the presence of neoliberal ideals in Chick Lit. While Chick Lit has not been a focus of FCDS before, it has been the focus of other research. I now turn to a description of the existing literature in this area.

3. Literature Review

Chick Lit—much like its film counterpart, the Chick Flick—is a concept not clearly articulated in the literature. What exactly is it? How is it defined? What makes it unique from and a necessary addition to simply (women’s) ‘Lit(erature)’? The very existence of Chick Lit is something that is debated by literary feminists (for an overview of debates see: Ferriss & Young, 2013). This section outlines the current understandings of, and literature surrounding, Chick Lit and its relationship with neoliberalism.

3.1 Defining a genre: Chick Lit

The first appearance of the label ‘Chick Lit’ remains a contested subject (Harzewski, 2011; Mazza, 2013). The use of it in the title of an anthology of stories, *Chick Lit: Postfeminist Fiction*, marked a key moment in its naming (Harzewski, 2011; Missler, 2017). The editors of this anthology, Mazza and DeShell (1995), argue that their use of ‘Chick Lit’ in this context was to highlight that women’s literature is assigned second-class status within patriarchal norms and they attempt to expose the irony that “men write what’s important, and women write about what’s important to women” (Mazza, 2013, p. 28). Reviews and essays since the publication of this anthology have regularly referenced ‘Chick Lit’ as a new movement in literature. Mazza herself (2013) notes that the coinage was co-opted and reframed as the genre it is more commonly known as today.

The term ‘Chick Lit’ rose to prominence in the US and UK in the late 1990s to describe a genre of books “by women, for women” (Ferriss & Young, 2013, p. 12). The release of Helen Fielding’s *Bridget Jones’s Diary*, in particular, popularised and established the genre in the media (Mazza, 2013). As I noted, the genre is commonly understood as encapsulating books that centre the experiences and challenges of women, albeit conforming to the identity categories of white, Anglo-American, middle-class cishet women (Spencer, 2019). The female protagonists embody archetypes of women who balance careers with romantic and personal relationships, anxieties about personal appearance, consumption of alcohol and excessive shopping, both portraying and reifying common tropes about women (Spencer, 2019). As Wells (2013) observes, the protagonists almost always have a job. Ultimately, these women typically reach the common trope of ‘happy ever after’ with respect to their careers and also personal relationships and love (Gill & Herdieckerhoff, 2006; Missler, 2017). The protagonists tend to strive for success in their respective jobs as they have been conditioned in an environment that requires university and career success (Cooke, 2006). Chick Lit is expected to contain archetypes of the career woman, or as Harzewski (2011, p. 126) describes them, “working girl[s] and female shopper[s]”. Chick Lit thereby differs from other women’s romance genres, such as *Harlequin/Mills and Boon*, which write romantic relationships as the central, and often sole, component (Gill & Herdieckerhoff, 2006; Missler, 2017).

As a storytelling strategy, Chick Lit often uses adaptations of famous and historical books, reworking renowned and recognisable storylines to fit the modern protagonists (Smith, 2007). In her critique of the genre, Journalist Anna Weinberg challenges that Chick Lit simply “imitates other, better books” (as cited in Skurnick, 2003). For example, adaptations of the storylines of Jane Austen or Brontë sister books appear in contemporary Chick Lit books (Smith, 2007). Even the prototypical Chick Lit itself, *Bridget Jones’s Diary*, is a self-proclaimed

adaptation of Jane Austen's *Pride and Prejudice*. The genre draws on these literary devices to create stories that are recognisable. As Helen Fielding claims, she knew *Bridget Jones's Diary* would be a success because *Pride and Prejudice* was "well market researched over a number of centuries" (as cited in Smith, 2007, p. 7).

The book covers of Chick Lit are another key marker of the genre. A number of scholars argue that there tends to be a pattern to Chick Lit book covers (Missler, 2017; Montoro, 2012; Newns, 2018; Yen Li, 2019). Montoro (2012) is an important and detailed source regarding 'the packaging' of Chick Lit covers. Most cannot pinpoint the exact characteristics that mark the genre but rather identify that marketing is key in the genre's distinction. Newns (2018) contends that Chick Lit's readability is strongly based on the consumer's likelihood of reaching, presumably women, for the book. Chick Lit books have a notably gendered style, utilising feminised visual and textual representations to market the books to their audience. Most observations of Chick Lit covers include descriptions of soft, feminine imagery and colour with feminine indexed objects (read: high heels, lipstick, flowers, handbags). Often, the lettering is cursive/curving, and Montoro argues that this is used as a tool to appear more personal to readers (Montoro, 2012). When compared with the style of other romance genre book covers, it is clear that Chick Lit covers utilise a recognisable formula (Montoro, 2012). Chick Lit covers differ from other women's fiction, such as Mills and Boon romance covers, with their trademark couple, often in an embrace (Montoro, 2012). These types of book covers, while distinctly marked themselves, do not index Chick Lit, but rather romance or erotica.

These arbitrary distinctions, in both story content and cover, between the Romance and Chick Lit genres highlight the permeability of the boundaries of a genre. Chick Lit books are in the broader umbrella term of women's fiction that encompasses books that are marketed to women (Womens Fiction, 2021). Some even claim that Chick Lit is merely a label people have created for women's fiction itself (Kay, 2016). This suggests that Chick Lit is a new label for something that has existed for a long time (Harzewski, 2011). For example, what characteristics of Jane Austen novels differ so drastically, bar historical context, that they do not conform to the current expected genre of Chick Lit? In this lies the acknowledgement that Chick Lit has evolved to become a highly globalised, marketed and recognisable modern genre. Some argue that the label is merely a new marketing tactic and rather Chick Lit has been produced for centuries simply without a unifying title that speaks to the genre's emergence in a particular time and place (Baratz-Logsted, 2005; Harzewski, 2011).

The marketing, imagery, and literary reviews of Chick Lit are highly recognisable among those familiar with women's fiction. This salience is exploited in reviews that offer an opportunity to comment on, evaluate and critique books. In exposing taken for granted assumptions about Chick Lit and neoliberalism, we can look at reviewers as the gatekeepers of the genre. In her analysis of Chick Lit reviews from 1998 to 2008, Mathisen (2010) found that the Chick Lit genre was often explicitly named. This occurred in conjunction with critiques of the reviewed book and the genre itself (for example, "Chick Lit sinks to a new low." (Mathisen, 2010, p. 30)). She explains that some authors and reviewers began to reject the genre name due to its negative connotations. This is not to say some female authors, including those within the genre, have not come forward in defence of Chick Lit. For example, one writer of

Chick Lit, who was once apprehensive about being confined to the label, now proudly says “Yes, I write Chick Lit” (Manral, 2017).

Chick Lit is seen as frivolous and feminine, and thus unnecessary. Baratz-Logsted (2005) describes that a common experience for Chick Lit authors is facing criticism for the ways in which women are portrayed in their stories. Numerous famed and ‘distinguished’ female authors have publicised their opposition to the genre, such as Booker Prize nominee Beryl Bainbridge and Nobel Prize in Literature recipient Doris Lessing (Missler, 2017; Smith, 2007; *The Guardian*, 2001). Bainbridge called the genre ‘froth’ and claimed she did not see the point of writing such books. It seems that much of the critique of Chick Lit is that it is apolitical in the face of feminist issues, resulting in characters that prioritise consumeristic ideas.

3.2 Chick Lit and neoliberalism

As Gill and Herdieckerhoff (2006, p. 496) claim, women in Chick Lit only achieve true success in their career if they also do this alongside finding love and “the support of and endorsement of a loving man”. This represents the neoliberal ideal of the work/life balance that is reflected in the archetypes of the career woman and the trope of reaching success in love and career. Chick Lit is written within this frame of individualism that positions ‘having choices’ as unconstrained feminine agency (Butler & Desai, 2008). This reflects neoliberal understandings of the world, yet simultaneously fails to acknowledge the inherent neoliberal hegemonies within individual choice that are perpetuated in Chick Lit.

The genre has become controlled by homogeneity and gatekeeping as, once again, reviews and reviewers are monitoring and patrolling the boundaries of Chick Lit. Countless Chick Lit books that embrace an intersection of race, class, and nationality have been assigned as ‘other’ and placed in sub-genres of Chick Lit such as ‘Muslim Lit’ and ‘Asian Lit’, thereby reducing or even erasing the experiences of non-white Anglo-American and non-middle-class women (Butler & Desai, 2008; Newns, 2018). This collapsing of diverse women into the ‘other’ categories fails to acknowledge the work these books do to subvert the neoliberal hegemonies of the world by showing intersections of class, race, globalism, and nationality. These often exclusionary and neoliberalised practices of Chick Lit require examination.

3.3 Research question

Here I apply the lens of FCDS to address the pervasiveness of neoliberal ideals in the Chick Lit genre. Adopting a qualitative approach through the techniques of Interactional Sociolinguistics, I expose the role reviews have in the (re)production of gendered discourses of neoliberalism. I focus in particular on the strategies reviewers use to (re)produce these discourses.

4. Methods and Analytical Approach

4.1 Data collection

While FCDS is established as a stance, the methods used for analysis vary, with scholars opting for a more “eclectic” approach (Koller, 2017, p. 30; Stubbe et al., 2003, p. 368). I employ the

method of Interactional Sociolinguistics with its quest to examine language within its local and societal context (Gordon, 2011; Gumperz, 2008). This allows me to expose how the social hegemonies of neoliberalism are reflected in discourse.

I use Chick Lit reviews to focus on gendered neoliberal discourses. As a genre, book reviews involve both representations of the author and the reviewer (Wetherick, 2019). This provides insight into the way hegemonies, namely neoliberalism, are constructed, then reproduced and at times (albeit rarely) challenged by authors and reviewers. The media is a prime location to examine the ways in which hegemonic ideologies are (re)constructed. Given that neoliberalism is a salient hegemony in society, the media offers insight into this. As Phelan (2014) argues, neoliberalism, as a hegemonic ideology in society, is heavily pervasive in the media. For example, Ouellette and Hay (2008) use reality TV media as a data source for investigating neoliberalism, arguing that it is a site with subjects constrained to neoliberal ideals. In the case of Chick Lit, book reviews in newspapers and magazines (as a media source) offer a rich source for analysis of hegemonies.

While literature, review and publishing websites, and social media still often orient to the genre, the usage of the term Chick Lit has declined since its peak in 2008 (Google Books Ngram Viewer, n.d.). Previous research into Chick Lit has consulted these sites that are “devoted to the genre” in order to establish a dataset (Mathisen, 2010, p. 17). Good Reads, with more than 90 million users worldwide (as of July 2019; Statista, 2021), offers rankings of books and includes a specific category of Chick Lit. Good Reads is a tool that the audience uses to rank, review, discuss Chick Lit, and tag books to the Chick Lit label, creating popularity lists such as ‘Most Read this Week’, and ‘New Releases’. These lists arguably represent Chick Lit in 2021. This presence of Chick Lit on websites and social media sites indicates the power that they have to identify and maintain a genre, and I turn to these sites to identify the books and reviews that are part of my dataset.

To construct my dataset of Chick Lit titles, I used the Good Reads ‘New Releases’ list, confirmed by my in-group knowledge as a Chick Lit consumer. As noted above, the book cover is arguably one identifier of the genre, and this was a tool I employed in finding my dataset. From the ‘New Releases’ list, the first 30 books with marked Chick Lit covers (recognisable colour palette, font, and imagery) were selected.

Within the literature, Mathisen’s (2010) study of Chick Lit is the closest to my aims, and her methodological process is valuable to my research. I aimed to replicate Mathisen’s (2010) method in my study. Mathisen (2010) compared the reviews of Chick Lit books and critically acclaimed books between 1998–2008. In her analysis she utilised the Novellist database to find reviews. Predominantly used by librarians, Novellist compiles book reviews from prominent media outlets such as publisher journals, e-magazines, and newspapers. This allows access to reviews from a wide range of publications, including those that are specialised in the review genre, such as *Publisher’s Weekly*, *Library Journal*, *Kirkus*, and *Booklist*.

While Mathisen used Novellist, for this study, I found that the indexing of these reviews was accessible through the EBSCO database. Through that database, I was able to search for book reviews of the 30 selected titles. After an initial search, it was clear that not all books in my

list had published reviews, and there was variation in the number of reviews each book garnered, particularly given that many of the books were only recently published. My rationale for refining my dataset revolved around the following criteria:

1. Books with more than one available review.³
2. Reviews that were in print form only. For example, some reviews were from TV or radio segments about that particular book or author.
3. Strictly review content was included. Some search results were book advertisements or focus pieces about the book's author.

Applying these criteria, I generated a sample size of 62 reviews across 20 books. Each book has been given a consecutive number based on the number of reviews, and then the corresponding reviews for each book have been assigned an uppercase letter.

4.2 Process of analysis

Reviews are a useful tool for describing and assessing a subject. The label 'review' covers a vast range of content and expertise, from topics such as product reviews, experience/activity reviews, online reviews, and literary or book reviews (for analyses and discussions of reviews see Birhan, 2021; Chevalier & Mayzlin, 2006; Vásquez, 2015; Vermeulen & Seegers, 2009). Reviews provide important information and assessments for their audiences (read consumers), but we also need to recognise the role that reviewers play in shaping their audiences' views. For example, book reviews summarise storylines as well as offer personal opinions about the "quality" of the book (Mathisen, 2010, p. 18). Mathisen (2010, p. 22) found that when compared with "critically acclaimed" book reviews, Chick Lit reviews followed a similar structure and purpose but faced more criticism or less favourable evaluations.

The choice of reviews as my focus also affords access to the metadiscourse of the genre. There is an emerging trend to utilise meta-level analysis in discourse analysis (Marra & Dawson, 2021), encouraging a focus on "explicit talk about language" (Woolard, 1998, p. 9). Meta-level analysis has been operationalised and theorised at the levels of metalanguage, metadiscourse and metapragmatics (Bacon & Kim, 2018; Jaworski et al., 2012). For discourse analysts, the two latter levels are typically of most interest, with the first signalling relevant discourse devices and metapragmatic clues being acknowledged for their role in providing access to how participants signal sociocultural meaning in interaction (Silverstein, 1976). These clues at both the pragmatic and discourse level contribute to a broader contextualised understanding of what is being said both directly and indirectly.

As analytic tools, the focus at the meta-level allows access to doxa (King, 2019). Doxa is the underlying and unquestioned ideologies that "[go] without saying because [they come] without saying" (Bourdieu, 1977, p. 167). This recognition of ideologies, in particular that of neoliberalism and feminism, which are my focus, supports the choice I make to explore the role of metadiscourse. Reviews as a site of metadiscourse are increasingly acknowledged within the literature (Birhan, 2021; Vásquez, 2015). For example, Vásquez (2015) examines

³ Accessing Good Reads in August 2021 to select the dataset meant that several of the books did not necessarily have published reviews yet.

the metadiscursive practices of online consumers in reviews. Birhan (2021) notes that in their analysis of academic book reviews, reviewers utilise metadiscourse to construct their views and evaluations of a book. The perpetuation of neoliberal ideologies accessed through metadiscourse has been investigated in language education (Bacon & Kim, 2018); I follow these trends and extend them further into the context of Chick Lit and their reviews.

In applying metadiscourse as an analytical tool, I will be examining the ways in which reviewers (co)construct the genre and evaluate key tropes and archetypes. To expose these strategies, I first undertook a thematic analysis of all reviews. The thematic analysis provided an initial sorting of the data. I identified recurring tropes, archetypes and categorisations of the genre in each review. For example, I sorted for formulaic themes of the career woman archetype, tropes of choosing between family and career, and evaluation of the type of career. By identifying these themes, I was able to make a comparison across all reviews. After analysing each review in this way, themes were collated into a table of all reviews. This is exemplified in Table 1. The result was a systematic organisation of themes that exposed the strategies reviewers use to (re)create the genre.

Table 1

Thematic analysis table

Title & Author	Review	Themes			
		Genre labelling	Archetypes	Tropes	Other Evaluations/ Meta-discourse
The Rules of Arrangement - Anisha Bhatia	17A	“lighthearted jaunt with humour and a romance that will sneak up on them”	Career woman vs Family woman: “Choosing between getting married or having a career are her bigger concerns” Protagonist is “managing a fantastic marketing career”	Aspiration and real dreams: “pleasing her family or following her dreams.” Successful ending or HEA “a romance will sneak up on them”	Evaluation of what readers will enjoy: “Readers looking for...”

From this initial sorting of the data, I saw that the common tropes and archetypes were career woman vs family/relationships, happily ever after (HEA), and ‘real dreams’ (aspirational dreams of career success/love). The results of this thematic analysis will be described in the

next section. It allowed me to understand the most macro features, such as genre labelling, and micro features, such as tropes and archetypes, of Chick Lit reviews.

After providing this explanation of my processing, I now move on to the presentation of my analysis. This is made up of two sections. The first section constitutes the features of reviews that show how reviewers contribute to defining the genre. I focus on the reviewers' use of the recurring themes the thematic analysis produced. The second section then examines how clearly defined boundaries are working to homogenise the genre and create an exclusionary barrier that is not easily subverted or challenged. Working through these analyses leads to a discussion of the role of neoliberalism in Chick Lit.

5. Analysis One: Chick Lit, what fits? Chick Lit, is it?

As noted earlier, one of the critiques of Chick Lit as a genre is that it is formulaic, in the storylines, covers, and protagonists (Missler, 2017; Montoro, 2012). I argue that this formula constitutes neoliberal ideals. My thematic analysis suggests that tropes and archetypes are used to establish the limits of the genre. Table 2 shows the top three recurring features across the 20 books and their 62 reviews that the thematic analysis exposed. Each review displayed explicit use of one or multiple of these themes. These results from the thematic analysis reflect expectations described across the literature reviewed. From these results, I turn to a qualitative analysis of these themes as they are constructed in the reviews. Through metadiscourse the genre emerges, brought into being by the reviewers who have the power to control the genre. In my analysis, I noted the use of genre labels in the reviews. Secondly, I commented on the titles authors used to position their books as Chick Lit in my dataset. Thirdly, I explored the use of tropes and archetypes that construct Chick Lit as a neoliberal site.

Table 2

Results from thematic analysis

Themes	Number of instances
Use of 'Career/University Woman' archetypes	50
Use of explicit genre labels	43
Use of 'Successful Ending' tropes	33

In the reviews I analysed, reviewers regularly opt for other broader women's and romance genre categorisations (rather than Chick Lit itself). While this aligns with the drop in the use of the term Chick Lit (Google Books Ngram Viewer, n.d.), the existing boundaries of Chick Lit remain central to these books. For example, reviewers tend to assign genres that align with contemporary romance or women's fiction.⁴

⁴ Only two books do not have any reviews that use these explicit labels to define the genre—*Yoga Pant Nation: A Novel*, and *The Startup Wife*. This will be explored in the next section.

Example set 1

- 2A: Fans of Christina Lauren and Meg Cabot will savor this charming **relationship comedy**.
- 3C: satisfying and uplifting **romance**
- 7C: feel-good **romance** between opposites.
- 8B: A perceptive and textured **romance**
- 10B: Layne's (*Passion on Park Avenue*) newest **contemporary romance**
- 14A: Newton's debut **rom-com**
- 16B: fans of Marsh's witty dialogue and penchant for puns will race through the excellent **beach read**.
- 18A: An additional comic effect comes from the ironic distance between readers' expectations of the proprieties in **historical romance**
- 19B: It's sure to please fans of **romantic comedies**, whether of the in-print or on-screen variety
- 20B: With plenty of smile-worthy misadventures along the way, this light, **down-to-earth romance** is sure to charm.

These ten examples illustrate how reviewers explicitly label genres in their reviews. The use of the different derivations of *romance/rom-com/relationship comedy/contemporary romance* in the reviews endorses the role romantic relationships play in these books (Spencer, 2019). This emphasis on relationships begins to highlight the genre's expectations. Writers and reviewers continue to construct a genre that clearly aligns with Chick Lit and its neoliberal assumptions even if the label itself is avoided. Interestingly, they never explicitly use the label 'Chick Lit', yet implicitly we understand these books to fit the parameters of the genre. How do we recognise these books as Chick Lit, without explicit reference, and what is it that has led to these books being identified as Chick Lit in the online reading community Good Reads?

As was discussed earlier, one of the recurring features of Chick Lit is the prevalence of adaptations (Smith, 2007). In my dataset, adaptations are signalled both explicitly in the titles and through reviews. For example, from the outset, some of the titles in my dataset signal their position as a Chick Lit adaptation—*Incense and Sensibility* (*Sense and Sensibility*), *Anne of Manhattan* (*Anne of Green Gables*), and *The Bennet Women* (*Pride and Prejudice*). These titles are then familiar to readers, and reviewers reflect this recognisability through comparisons and critiques. For example, these often-evaluative comments on the expectations of a book are based on the original.

Example set 2

- 3C: **pays homage to Austen and Sense and Sensibility**
- 4A: A fine but mostly forgettable addition to the large library of **Austen-inspired novels**.
- 4B: **unique retelling of Austen's Pride and Prejudice**
- 4C: **Austenites will likely take issue** with both Will's characterization and the clumsy updates on famous lines and themes from the original.
- 5A: **Anne of Green Gables gets a reboot**.
- 5B: **Fans of Anne of Green Gables will enjoy this retelling**, though listeners don't have to be familiar with the original novel to love this charmingly funny, slightly sizzling contemporary romance.

- 5C: Adaptations of beloved children's books are difficult to pull off, but Starler's debut—a romantic, **modern-day riff on Anne of Green Gables-brings impressive heart and sensuality to a classic**
- 10A: Layne (Marriage on Madison Avenue, 2020) **updates the Nora Ephron 1998 rom-com, *You've Got Mail***, for digital-age
- 10C: **A gleefully shameless homage to *Little Shop Around the Corner* and *You've Got Mail***

As Example set 2 illustrates, adaptations are regularly mentioned, whether it is adaptations of Anne of Green Gables or Jane Austen novels. These comments position Chick Lit against their original literary inspirations. Even for the books that are not as explicitly titled, such as 10: To Sir, With Love, comparisons are still made—a *gleefully shameless homage to Little Shop Around the Corner and You've Got Mail*. This evaluative comment that the book's adaptation is *gleefully shameless* perhaps confirms that the retelling of stories is expected. These reviewer comparisons reproduce an expectation of the book under review and of the genre as a whole.

Interestingly, because my dataset is comprised of multiple reviews of the same 20 books, this allows insight into the way books are being talked about not just by a single reviewer, but by multiple reviewers. Genre-defining formulae are recurrently referred to within one review and referred to in turn by multiple reviewers. This (re)production establishes Chick Lit as a recognisable genre, reinforcing the hegemonic understanding of what can and cannot be included in these books.

Assumptions are part of this familiarity with Chick Lit. One of the assumptions beyond the retelling appears to be the presence of tropes that reviewers use to construct their reviews. Chick Lit books employ tropes that signal happy endings (Missler, 2017). For example, three dominant tropes present in my dataset are *enemies-to-lovers*, *opposites attract*, and the crucially overarching *happily ever after*. The following examples epitomise the ways in which reviewers comment on and construct these reviews with the understanding that there will be a successful ending.

Example set 3

- 5B: **readers are rewarded with a satisfying HEA... VERDICT...**
- 9B: **patience will the yield a happy ending they expect. VERDICT...**

In review 5B of *Anne of Manhattan*, the writer notes that *readers are rewarded with a satisfying HEA*. Firstly, acting as what I would classify as meta-evaluation, this comment implies that these readers know what an HEA is, and that it is anticipated in this genre. In review 9B of *The Layover*, the writer explicitly notes that readers of Chick Lit 'expect' a happy ending—*will yield the happy ending they expect*. The construction of a successful ending is valued as a key component in the reviews and has often been viewed as a feature of Chick Lit (Gill & Herdieckerhoff, 2006). Finishing these reviews, the explicit use of *verdict* in these examples also shows the presence of meta-evaluations in these reviews.

Example set 4

- 7C: *Schitt's Creek* fans who just wanted to see Alexis get her **happy ending** will flock to this title.
- 16A: There are far-fetched actions by both leads that make it hard to imagine their **happy-ever-after**
- 17A: romance will sneak up on them

These HEA expectations are not simply explicitly indexed, as seen in Example set 3 and review 16A in Example set 4, but also implicitly indexed (Silverstein, 1976). An implicit indexing of an HEA expectation is seen in review 17A—*romance will sneak up on them*, indicating that an HEA, in this case a romantic HEA, is an expectation. HEAs also do not have to be positively evaluated. In review 16A of *The Man Ban*, even though the *happy-ever-after* is argued to be unbelievable, it is commented on as a key feature of the genre.

As I mentioned earlier, I argue that this idea that the happy ending is perpetuated in most other constructed tropes in the genre: enemies-to-lovers, opposites attract and the recurring idea that the protagonist's 'real dreams' will successfully win out. For example, in the following reviews, *enemies-to-lovers* and *opposites attract* signal to the readers, not only the storyline but also the successful ending.

Example set 5

- 4C: broadly drawn **enemies-to-lovers** romance
- 5C: can these **enemies-turned-lovers** make it?
- 7B: How can they be together when they seem so different?
- 7C: feel-good **romance between opposites**.
- 9A: They initially trade barbs, but their hostility turns into something very different
- 9C: Waldon debuts with a breezy **enemies-to-lovers** romp
- 10B: features a classic **enemies-to-lovers** plot
- 11A: Given what she knows about him, the last person on earth mezzo-soprano opera star Olivia Shore wants to be stuck with for four weeks is the Chicago Stars quarterback, Thaddeus Owens.
- 14A: **Opposites attract** in Newton's debut rom-com

These examples illustrate the common expectation of successful love and relationships between characters (Missler, 2017). Reviewers comment on tropes explicitly, as seen in 4C, 5C, 9C, 10B, and 14A, but also implicitly. For example, in 7B, 9A, and 11A, reviewers comment on the differences between two love interests, implicitly indexing the tropes of opposites attract and enemies-to-lovers that ultimately result in a successful ending.

Throughout the dataset, there is an undercurrent of aspirations and dreams being achieved, both dreams of love and career. This mirrors other previously noted tropes and highlights the expectation within the genre that protagonists will ultimately balance their neoliberal work and life goals (Gill & Herdieckerhoff, 2006). In the following reviews, the protagonists have ambitious dreams that they are striving for—*pleasing her family or following her dreams, pursuing her real dreams*.

Example set 6

- 2B: with her job as a senior visuals editor at GQ and his job as a lawyer at his family's firm, they're **living the dream**
- 3A: **dreamt of becoming** a premier yoga therapist and reiki healer
- 6C: Brinkley hopes to use the fantastic pay to one day afford **her dream of** opening an art gallery
- 10A: Gracie Cooper **gave up dreams** of becoming an artist to run her family's champagne shop.... But **she could never shake her dream** of fairy-tale romance
- 17A: pleasing her family or **following her dreams**

These dreams are constructed as individualistic and necessary in the neoliberal norms. Interestingly, these *dreams* can become an obstacle for other dreams or goals and are ultimately positioned as resolvable with the work/life balance. For example, in 17A, the protagonist reaches her successful ending once both her career dream is achieved and she finds love. This aligns with Gill and Herdieckerhoff's (2006) argument that the HEA occurs when both career and romantic relationship occur. Furthermore, the trope of the protagonists' real dreams exposes the key archetypes in the genre that are reflected in my dataset (Spencer, 2019). That is, the career woman such as in 2B, 3A, 6C, and the singleton in search of a relationship such as 10A.

Example set 7

- 4A: At the **prestigious** Longbourn College in Massachusetts
- 5C: last year of her master's in education at fictional Redmond College in Manhattan
- 11B: a **world-renowned** soprano with the Chicago Municipal Opera
- 12C: land a **prestige** role she has her heart set on
- 16A: But when an unexpected hitch threatens Harper's big career break
- 17A: managing a **fantastic** marketing career
- 17B: She already has an **accomplished** career in advertising.
- 18A: her induction into the **highest ranks** of the Wisteria Society.
- 19A: writes listicles and pop-culture puff pieces for a Chicago-based website... Determined to prove she's an integral part of the team

The quotations in Example set 7 illustrate the neoliberal influence of the work/life balance on the career woman archetype. The protagonists in my dataset either have a dream career, strive to progress in their job or are pursuing further education at university. These reviews often evaluatively position these careers or jobs as successful—*highest ranks, accomplished, world-renowned, prestigious, a prestige role, fantastic*. This constructs the idea that, as prescribed in neoliberal ideologies, financial and career success is the goal.

In sum, this analysis demonstrates that book reviews offer fresh insight into the construction of the Chick Lit genre. They are made up of nuanced layers of metadiscourse and evaluation. Reviewers themselves become key in understanding the genre boundaries as they reflect on tropes and archetypes represented in books. While these tropes and archetypes are not always explicitly named, the reviewer's evaluation of the plot may signal the use of them.

However, these tropes and archetypes continue to construct a genre that reinforces neoliberal ideals.

6. Analysis Two: The Exclusion

While Chick Lit has been hailed for its creation of a genre that is recognisable to women, a key facet that is often not accounted for are the assumptions of which women fit the Chick Lit mould and what happens when you do not fit. This section explores the neoliberal doxa that reviewers expose through the (re)production of the boundaries of Chick Lit and the corresponding and monolithic neoliberal norms. This normalisation of exclusion was traditionally overlooked in earlier critiques, which instead focused on the apoliticism of feminist issues. As noted earlier, Chick Lit has been defined as a genre ‘by women, for women’. Deciding which women and what experiences are ‘Chick Lit worthy’, however, has led to gatekeeping and homogeneity (Harzewski, 2011).

Traditionally, the Chick Lit genre has endorsed stories of a predominantly privileged identity category of women—middle-class, white, and cishet (Harzewski, 2011; Spencer, 2019). This is not dissimilar to the books in my dataset, where the majority of the protagonists fit this pattern. For example, while some non-cisheteronormative romantic relationships are noted in the reviews, all the romantic relationships of the main protagonists continue to perpetuate the cishet model of love.

Example set 8

- 3A: a larger story that includes **LGBTQIA+** relationships
- 4C: begins dating EJ's best friend, Jamie, a **white trans woman**
- 5B: Diana is Black and **bisexual**, **Marilla and Rachel are in a relationship**

These examples illustrate the cycle of othering regarding non-cisheteronormative relationships and characters. In these examples of genre outliers, reviewers highlight the subversion of these societal norms, but never extend so far as to include the main protagonists and their main relationship in this subversion. This perpetuates the normative expectation that Chick Lit protagonist relationships are heteronormative (Spencer, 2019). This exposes the othering and exclusion that is infused in the reviewers’ (re)production of the genre.

As noted earlier, Chick Lit books that subvert these norms are often othered within the genre, creating subgenres such as Asian Lit or Muslim Lit (Butler & Desai, 2008; Newns, 2018). This reduction of the experiences of non-white and non-middle-class women through othering is still endorsed in my dataset. I argue that the traditional Chick Lit genre is actively constructed through reviewers marking deviations from the genre’s expectations. When there are subversions to the norm that are explicitly pointed out, this reinforces that there remains a Chick Lit formula that excludes many women and their experiences.

Example set 9

- 4C: The commitment to diversifying a very white classic is **commendable**, and the passages about being a Black woman in majority white spaces are beautifully and sensitively written, Austenites will likely take issue with both Will's characterization and the clumsy updates on famous lines and themes from the original.
- 5B: Fans of L. M. Montgomery's 1908 novel will be **pleasantly surprised** to see familiar characters, locations, and phrases show up here, in new ways.
- 12B: Guillory infuses ample charm and within Ben and Anna's interactions as she **deftly highlights the lack** of public sensitivity to mental health issues and the prevalence of sizeism and racism in popular culture.
- 16A: The novel's setting in Melbourne and New Zealand, a protagonist from the Anglo Indian diaspora, and the inclusive representation of vitiligo are **welcome departures from the standard setups** in the romance genre

In these examples, reviewers evaluate and comment on deviations from the status quo. These evaluations and metadiscursive comments then show the boundaries that Chick Lit has traditionally been constrained to. This metadiscourse offers access to interesting doxa. For example, *pleasantly surprised* inherently others this book's diversification because it goes against the norms. A reviewer that acknowledges that a book deviates or challenges the genre through the representation of non-white, non-cis/het, non-middle-class women is ultimately defining the genre, acknowledging that these subversions differ from the norm and confirming that there is a pre-existing hegemony.

Example set 10

- 1E: **consequences of public achievement on private happiness**
- 1G: when ambition goes awry, when **money and fame come before your marriage and morals**
- 4A: The cast of characters is diverse—EJ is Black, Jamie is a recently out trans woman, Tessa is Filipina, and Will has both Chinese and Korean heritage—and hearing EJ, Jamie, Tessa, and the other women who populate Longbourn **discuss ambitious career goals**, healthy sex lives, and more **with unabashed frankness is refreshing**.
- 17A: Zoya Sahni is a high-spirited, dark-skinned, and overweight girl in a world that idolizes fair skin, slim bodies, and subservient women. Not fitting societal standards is only one of Zoya's problems. **Choosing between getting married or having a career are her bigger concerns**.

The excerpts in Example set 10 illustrate the emphasis on the neoliberal work/life balance in reviews even from books that attempt to subvert many neoliberal norms. For example, in reviews 1E and 1G, the detrimental effects of not successfully achieving the work/life balance are discussed. This book, *The Startup Wife*, does attempt to subvert many neoliberal beliefs, yet reviewers continue to centre the work/life balance in their evaluations of the book. Review 4A highlights the prominent position *ambitious career goals* hold in *The Bennet Women*. The reviewer's comment on this career dream highlights the overarching influence of neoliberal ideals of personal success. The protagonist in this book, therefore, aligns with the archetypal Chick Lit career woman (Harzewski, 2011; Spencer, 2019). Review 17A

perfectly exemplifies the construction of subversions to the normative white protagonists and their reliance on the neoliberal norms of the work/life balance. Zoya's dilemma to either get married or have a career is said to be more significant than her other struggles of not fitting many societal standards; Zoya's marriage vs career choice is framed as her bigger *concern*. This uplifts the neoliberal feminist norms of the work/life or family balance as the main obstacle for protagonists, disregarding the complexities of race, gender, ethnicity, nationality and sexuality.

Interestingly, as I noted in my earlier analysis, reviewers construct the genre through explicit labelling that does not include 'Chick Lit', but rather terms such as *rom-com* or *contemporary romance*. Out of all the 20 books in my wider dataset, each book contains at least one review that defines the book under these labels, bar two books—1: *The Startup Wife* and 13: *Yoga Pant Nation: A Novel*. As seen in Example set 10, these two books are constructed simply as *novels*, without any reference to other genre labels.

Example set 11

- 1A: newest novel
- 1H: zippy novel
- 1I: South Asian diasporic literary traditions
- 13A: Fans of previous Class Mom novels (starting with Class Mom, 2017)

These two books also appear to deviate from the Chick Lit formula in fresh ways. Firstly, *The Startup Wife* strongly challenges neoliberal norms, defying the traditional Chick Lit genre. While the book discusses the work/life balance of the protagonist, it examines how certain hegemonies impact the success of the protagonist's career and happiness through discussions of "sexism and racism (Asha is Bengali) and how migrant experiences differ" (review 1K) and "gender inequity, racism, homophobia, and male white privilege" (review 1A). On the other hand, *Yoga Pant Nation: A Novel* is the third book in a series about an older mother. It explores the duties of motherhood as the protagonist balances being a 'class mom' and the tasks this brings: "helping care for granddaughter Maude and trying to kick-start her career as a spin instructor while balancing her usual jobs as wife, mother, daughter, and class mom" (review 13A). In this sense, it does not entirely fit the formula of a young career woman navigating love in Chick Lit, yet it still aligns with neoliberal ideals of work/life balance. Pointing out their deviations in reviews in other circumstances might be seen as positive for showing the changing nature of the genre, yet in this circumstance, it is saying this deviation is noticeable—especially when those that sit outside the norm are assigned 'novel'.

This begs the question, why are these books assigned Chick Lit on Good Reads rather than other genres? From the outset, it may appear that these books are working to subvert and challenge the norms of Chick Lit books; they continue to showcase neoliberal beliefs. However, even though these books are being included as Chick Lit on Good Reads, reviewers are pointing out how they do not entirely fit. When there are challenges to the norm, they are not being accepted as fully fledged Chick Lit, but rather are treated as guests in the house

of Chick Lit⁵. They are acknowledged as doing something interesting yet patronised as not being included in the Chick Lit formula.

As Rottenberg (2018) perfectly sums up:

It is important to stress—even at the risk of repetition—that neoliberal feminism is an unabashedly exclusionary feminism; it reinscribes white and class privilege and heteronormativity, while, at least until the time of writing, presenting itself as post-racial and LGBTQ friendly. This new variant of feminism, in other words, can indeed accommodate women of color, queer or trans women who espouse the happy work-family balance ideal, even as neoliberalism does not really require anti-racism or LGBTQ acceptance (p. 20).

These exclusionary practices are evident in my data. While some books appear to appeal to ‘post-racial’ and LGBTQIA+ inclusionary ideals, these books are still constructed as ‘other’ by their reviewers. What’s more, the acceptance of these books is conditional on the adherence to neoliberal norms of the work/life balance.

7. Discussion: Ideologies of Neoliberalism

CDS aims to expose inequalities made apparent by underlying hegemonies and to “solve [these] problems” (van Dijk, 1986, p. 4). Through my analysis of Chick Lit reviews and the ways they work to construct, define, and limit the genre, I expose the underlying hegemonies and assumptions of neoliberalism and its influence on the neoliberal feminism represented in the genre (Grewal, 2005; Rottenberg, 2018). My analysis indicates that the genre boundaries of Chick Lit have created clear messages for what is included and what is excluded and that these are adhered to by reviewers.

Even if some argue that Chick Lit as a concept precedes its 1990s coinage (Harzewski, 2011), the labelling, acceptance, and promotion of the current Chick Lit genre seen in the data aligns closely with the rise of neoliberal feminism. Interestingly, while Example set 1 showed how reviewers do not explicitly label books as ‘Chick Lit’, the genre remains a recognisable genre through the formula they contain. Example sets 2 to 7 led me to understand how reviewers orient to these formulaic tropes and archetypes. Not unexpectedly, the tropes of HEA and career woman archetypes match the core features of neoliberalism (Missler, 2017). However, these are not recognised as such, and instead, they are largely whitewashed, conforming to the apolitical white, cishet, middle-class expectations of the genre.

Through this construction of the Chick Lit protagonist and formula in these example sets, we see the influence of neoliberal ideas of individualism, rationality, and capital on a feminist lens (Grewal, 2005; Rottenberg, 2018). Grewal (2005) describes neoliberal feminism through the idea of having choices. These choices are individualised yet situated within complex global transnational contexts. Rottenberg (2018) links the rise of neoliberal feminism to the discourses of successful work/life balance for women. She argues that the label ‘feminist’ has

⁵ Compare benevolent racism (described by Lipinoga, 2008) and benevolent patronage (described by Holmes, 2014).

increasingly been claimed by women in positions of power and leadership, who are able to exercise these choices (in her case using the example of Hillary Clinton). This feminist label is thus championed by women embodying neoliberal success and normalised class privilege. The significance of their success is measured, in part, by their ability to compete with wealthy, powerful men. This leads to a new form of feminism—neoliberal feminism.

This ideal of a successful work/life balance was seen in the reviews of Chick Lit books. In Example sets 6 and 7, the framing of the ‘real dreams’ and career success of the Chick Lit protagonists highlights the genre as a site of neoliberal norms. Protagonists continue to embody class privilege through their middle-class existence. The reviews in Example set 7 expose the preference for the archetypical successful career woman in Chick Lit. As expected in the confines of neoliberal feminism, reviewers uplifted class privilege and economic success norms by forefronting the experiences of successful or career-driven protagonists. This ultimately constructs Chick Lit protagonists within a compulsory work/life balance that upholds personal success, showing up simultaneously in both career and romantic dreams. This compulsory requirement for representing ‘balance’ was pervasive in all representations of the genre. Crucially, this compulsory work/life balance in the data further exposed the homogeneity within the genre.

Example sets 9 to 11 uncovered the tense relationship between intersectionality and neoliberalism in Chick Lit. As I noted earlier, neoliberal feminism has a complex relationship with race, sexuality, class, ethnicity, and globalisation. As Rottenberg (2018, p. 20) notes, neoliberal feminism “can indeed accommodate women of colour, queer or trans women”. This accommodation was particularly emphasised in the example sets in Analysis Two. Example set 9 highlighted that reviewers understand and recognise a traditional expectation for the genre and meta-evaluatively reveal this through the othering of challenges to this expected norm.

This endorsement of intersectional representation needing to align with middle-class values and privileges is entirely pervasive in my dataset. Example sets 8 to 10 show how reviewers represent books that attempt to subvert neoliberal exclusionary norms. My analysis illustrates how even if Chick Lit is challenging some gender norms, such as the creation of ‘by women, for women’ books, they are still aligning with neoliberalism in challenges to the norm. As seen in Example set 9, only subversions to the white and cis het norms that align with the successful “work-family balance ideal” are acknowledged as conforming to the genre (Rottenberg, 2018, p. 20). In this sense, neoliberal ideas do not inherently promote social justice, but rather value and uphold class privilege above any other representation or inclusion. Interestingly, Example set 11 ultimately exposed the prescribed and expected formula for Chick Lit books through the explicit othering of the experiences of women that do not fit the mould.

These claims about the hegemonic norms of the neoliberal work/life balance have also been examined in other feminist literature (Prügl, 2015; Rottenberg, 2018; Sørensen, 2017). Similarly, the neoliberal impact on Chick Lit has been acknowledged (Butler & Desai, 2008; Missler, 2017). However, my analysis allows me to move this forward by examining the key neoliberal feminist ideals of the work/life balance within Chick Lit. Despite the belief that

social justice and the Chick Lit genre have transformed quickly, neoliberal hegemonic norms endure in 2021.

8. Conclusion

Chick Lit might not be where you would expect to find neoliberalism, but my analysis has demonstrated that we see its impact in every space. Through my exploration of the metadiscourse of reviewers of Chick Lit, I have explored the formulaic (re)production of Chick Lit. The ultimate neoliberal feminist goal of the work/life balance shines through in my reviews and analysis of the genre.

My analysis indicates that the reviews contribute to the construction of the genre through the use of archetypes (the career woman), tropes (happily ever after, opposites attract, enemies-to-lovers), stereotypes (including modern-day retellings/adaptations of classics), and identity categories (in particular the explicit labelling of any character outside the 'standard'). Reviewers orient to recurrent ideologies that are accessible to the readers of the genre. Overall, reviewers (re)produce gendered neoliberal norms within Chick Lit through these ideologies.

Through the reviewers' exposure to doxa, I revealed how reviewers acknowledge neoliberal hegemonies, including the underlying hegemony of the apolitical white, middle-class, cishet woman. Attempts to challenge these hegemonies, for example, discussion of books with non-white and non-cishet women characters, are recognised for their difference yet continue to be framed within neoliberal feminist constraints. There is a constant underlying acknowledgement of the work-life balance that is key to neoliberal feminism. Subversions to the norm are accepted as meeting the criteria of Chick Lit if they largely comply with the affirmation of neoliberal feminist understandings, revering this work/life balance.

While in my analysis I have been able to examine the gendered neoliberal norms that are persistent in Chick Lit, in future research we should examine discourses that attempt to subvert the power of neoliberalism within the growing body of Chick Lit that exists outside the Anglo-American, middle-class corpus but rather has been assigned subgenres. Researchers have examined the emergence of Muslim Chick Lit and Asian-American Chick Lit among other subgenres (Butler & Desai, 2008; Newns, 2018; Spencer, 2019). These sites that are inherently 'emancipated' from traditional Chick Lit may offer access to critical challenges to neoliberal ideals, acknowledging intersectional impacts on individual choice and success.

Through my analysis, I have contributed to a critical reading of Chick Lit and neoliberal feminism. I have explored how the traditional understanding of the genre remains intact through the way the Chick Lit genre is viewed in the early 2020s. By acknowledging this failure and bringing it to the attention of others, we may start to see actual change within the emancipatory agenda of FCDS. As it stands, identifying this hegemonic acceptance has exposed the hidden neoliberal hegemonies that Chick Lit maintains and shows that attempts to trouble these norms are failing to make headway in breaking them down.

References

- Adamson, M. (2017). Postfeminism, neoliberalism and a 'successfully' balanced femininity in celebrity CEO autobiographies. *Gender, Work & Organization*, 24(3), 314–327. <https://doi.org/10.1111/gwao.12167>
- Bacon, C. K., & Kim, S. Y. (2018). "English is my only weapon": Neoliberal language ideologies and youth metadiscourse in South Korea. *Linguistics and Education*, 48, 10–21. <https://doi.org/10.1016/j.linged.2018.09.002>
- Baratz-Logsted, L. (2005). Introduction. In L. Baratz-Logsted (Ed.), *This is Chick-lit* (pp. 1–6). BenBella Books.
- Baxter, J. (2015). Feminist poststructural discourse analysis. In K. Tracy, C. Ilie, & T. Sandel (Eds.), *The International Encyclopedia of Language and Social Interaction* (pp. 1–6). Wiley-Blackwell. <https://doi.org/10.1002/9781118611463.wbielsi020>
- Bettache, K., & Chiu, C. Y. (2019). The invisible hand is an ideology: Toward a social psychology of neoliberalism. *Journal of Social Issues*, 75(1), 8–19. <https://doi.org/10.1111/josi.12308>
- Billig, M. (2001). Humour and hatred: The racist jokes of the Ku Klux Klan. *Discourse & Society*, 12(3), 267–289. <https://doi.org/10.1177/0957926501012003001>
- Birhan, A. T. (2021). An exploration of metadiscourse usage in book review articles across three academic disciplines: A contrastive analysis of corpus-based research approach. *Scientometrics*, 126(4), 2885–2902. <https://doi.org/10.1007/s11192-020-03822-w>
- Blommaert, J. (2005). *Discourse: A critical introduction*. Cambridge University Press.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge University Press.
- Butler, P., & Desai, J. (2008). Manolos, marriage, and mantras Chick-Lit criticism and transnational feminism. *Meridians*, 8(2), 1–31.
- Caldas-Coulthard, C. R. (1995). 'Women who pay for sex. And enjoy it': Transgression versus morality in women's magazines. In C. R. Caldas-Coulthard & M. Coulthard (Eds.), *Texts and Practices*. (pp. 250–270). Routledge.
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345–354. <https://doi.org/10.1509/jmkr.43.3.345>
- Chun, C. W. (2017). Neoliberalism, globalization and critical discourse studies. In J. Flowerdew & J. E. Richardson (Eds.), *The Routledge handbook of critical discourse Studies* (pp. 421–433). Routledge.
- Cooke, M. L. (2006). *The great escape: Modern women and the Chick Lit genre* [BA thesis, Boston College]. <http://dlib.bc.edu/islandora/object/bc-ir:102412>

- Fairclough, N. (2013). *Critical discourse analysis: The critical study of language* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315834368>
- Ferriss, S., & Young, M. (2013). Introduction. In S. Ferriss & M. Young (Eds.), *Chick Lit: The new woman's fiction* (pp. 1–16). Routledge.
- Fraser, N. (2013). *Fortunes of feminism: From state-managed capitalism to neoliberal crisis*. Verso Books.
- Gill, R., & Herdieckerhoff, E. (2006). Rewriting the romance. *Feminist Media Studies*, 6(4), 487–504. <https://doi.org/10.1080/14680770600989947>
- Gill, R., & Scharff, C. (2011). Introduction. In R. Gill & C. Scharff (Eds.), *New femininities: Postfeminism, neoliberalism and subjectivity* (pp. 1–17). Palgrave Macmillan.
- Google Books Ngram Viewer. (n.d.). Retrieved August 30, 2021, from https://books.google.com/ngrams/graph?content=chick+lit%2Cchick+lit+jr%2Cmommy+lit%2Cdick+lit&year_start=1990&year_end=2019&corpus=26&smoothing=3
- Gordon, C. (2011). Gumperz and Interactional Sociolinguistics. In R. Wodak, B. Johnstone, & P. Kerswill (Eds.), *The SAGE handbook of sociolinguistics* (pp. 67–84). SAGE Publications Ltd. <https://doi.org/10.4135/9781446200957>
- Grewal, I. (2005). *Transnational America: Feminisms, diasporas, neoliberalisms*. Duke University Press. <https://doi.org/10.1515/9780822386544>
- Gumperz, J. J. (2008). On interactional sociolinguistic method. In S. Sarangi. & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 453–472). De Gruyter Mouton. <https://doi.org/10.1515/9783110208375.4.453>
- Harzewski, S. (2011). *Chick Lit and postfeminism*. University of Virginia Press.
- Holmes, J. (2014). Joining a new community of workplace practice: Inferring attitudes from discourse. In E. Stracke (Ed.), *Intersections: Applied linguistics as a meeting place* (pp. 2–21). Cambridge Scholars Publishing.
- Jaworski, A., Coupland, N., & Galasinski, D. (2012). *Metalinguage: Social and ideological perspectives*. de Gruyter.
- Kauppinen, K. (2013a). At an intersection of postfeminism and neoliberalism: A discourse analytical view of an international women's magazine. *Critical Approaches to Discourse Analysis Across Disciplines*, 7(1), 82–99.
- Kauppinen, K. (2013b). 'Full power despite stress': A discourse analytical examination of the interconnectedness of postfeminism and neoliberalism in the domain of work in an international women's magazine. *Discourse & Communication*, 7(2), 133–151. <https://doi.org/10.1177/1750481313476596>

- Kay, L. (2016, September 19). What do we mean when we say women's fiction? *Literary Hub*. <https://lithub.com/what-do-we-mean-when-we-say-womens-fiction/>
- King, B. (2019). *Finding ideologies in talk about talk*. New Zealand Discourse Conference, Wellington, New Zealand.
- Koller, V. (2017). Critical discourse studies. In B. Vine (Ed.), *The Routledge handbook of language in the workplace* (pp. 27–39). Routledge.
- Lazar, M. M. (2006). Discover the power of femininity! *Feminist Media Studies*, 6(4), 505–517. <https://doi.org/10.1080/14680770600990002>
- Lazar, M. M. (2007). Feminist critical discourse analysis: Articulating a feminist discourse praxis. *Critical Discourse Studies*, 4(2), 141–164. <https://doi.org/10.1080/17405900701464816>
- Lazar, M. M. (2009). Entitled to consume: Postfeminist femininity and a culture of post-critique. *Discourse & Communication*, 3(4), 371–400. <https://doi.org/10.1177/1750481309343872>
- Lazar, M. M. (2017). Feminist critical discourse analysis. In J. Flowerdew & J. E. Richardson (Eds.), *The Routledge handbook of critical discourse studies* (pp. 372–387). Routledge.
- Lipinoga, S. (2008). Benevolent racism in an adult educator's talk. *Working Papers in Educational Linguistics*, 23(2), 47–73.
- Manral, K. (2017). Why I'm not ashamed to be called a chick lit author (and you shouldn't be either). *Scroll.in*. <https://scroll.in>. <https://scroll.in/article/858680/why-im-not-ashamed-to-be-called-a-chick-lit-author-and-you-shouldnt-be-either>
- Marra, M., & Dawson, S. (2021). Workplace and institutional discourse. In M. Haugh, D. Z. Kádár & M. Terkourafi (Eds.), *The Cambridge handbook of sociopragmatics* (pp. 475–495). Cambridge University Press.
- Mathisen, E. (2010). *A textual analysis of book reviews of critically acclaimed & Chick Lit novels, 1998–2008* [Master's thesis, University of Toronto].
- Mazza, C. (2013). Who's laughing now? A short history of Chick Lit and the perversion of a genre. In S. Ferriss & M. Young (Eds.), *Chick Lit: The new woman's fiction* (pp. 17–28). Routledge.
- Mazza, C., & DeShell, J. (Eds.). (1995). *Chick Lit: post-feminist fiction*. FC2.
- McRobbie, A. (2015). Notes on the perfect. *Australian Feminist Studies*, 30(83), 3–20. <https://doi.org/10.1080/08164649.2015.1011485>
- Mills & Boon: The rrt of romance. (2008, December 3). *The Guardian*. <http://www.theguardian.com/books/gallery/2008/nov/27/mills-and-boon-covers>

- Missler, H. (2017). *The cultural politics of Chick Lit: Popular fiction, postfeminism and representation*. Routledge.
- Montoro, R. (2012). *Chick Lit: The stylistics of cappuccino fiction*. Bloomsbury Publishing.
- Newns, L. (2018). Renegotiating romantic genres: Textual resistance and Muslim Chick Lit. *The Journal of Commonwealth Literature*, 53(2), 284–300.
<https://doi.org/10.1177/0021989416686156>
- Ouellette, L., & Hay, J. (2008). *Better living through reality TV: Television and post-welfare citizenship*. Wiley.
- Paltridge, B. (2012). *Discourse analysis: An introduction*. Bloomsbury Publishing.
- Phelan, S. (2014). *Neoliberalism, media and the political*. Springer.
- Phelan, S., & Dawes, S. (2018). Liberalism and Neoliberalism. In *Oxford research encyclopedia of communication*. Oxford University Press.
<https://doi.org/10.1093/acrefore/9780190228613.013.176>
- Prügl, E. (2015). Neoliberalising feminism. *New Political Economy*, 20(4), 614–631.
<https://doi.org/10.1080/13563467.2014.951614>
- Rottenberg, C. (2018). *The rise of neoliberal feminism*. Oxford University Press.
<https://doi.org/10.1093/oso/9780190901226.003.0001>
- Silverstein, M. (1976). Shifters, linguistic categories, and cultural description. In K. H. Basso & H. A. Selby (Eds.), *Meaning in anthropology* (pp. 11–55). University of New Mexico.
- Skurnick, L. (2003, November 20). Chick Lit 101. *Orlando Weekly*.
<https://www.orlandoweekly.com/orlando/chick-lit-101/Content?oid=2260390>
- Smith, C. J. (2007). *Cosmopolitan culture and consumerism in Chick Lit*. Routledge.
- Sørensen, S. Ø. (2017). The performativity of choice: Postfeminist perspectives on work–Life balance. *Gender, Work & Organization*, 24(3), 297–313.
<https://doi.org/10.1111/gwao.12163>
- Spencer, L. G. (2019). ‘In defence of chick-lit’: Refashioning feminine subjectivities in Ugandan and South African contemporary women’s writing. *Feminist Theory*, 20(2), 155–169. <https://doi.org/10.1177/1464700119831544>
- Statista. (2021). Goodreads: Number of registered members May 2011 to July 2019. *Statista*.
<https://www.statista.com/statistics/252986/number-of-registered-members-on-goodreadscom/>
- Stubbe, M., Lane, C., Hilder, J., Vine, E., Vine, B., Marra, M., Holmes, J., & Weatherall, A. (2003). Multiple discourse analyses of a workplace interaction. *Discourse Studies*, 5(3), 351–388. <https://doi.org/10.1177/14614456030053004>

- Talbot, M. (2007). *Media discourse: Representation and interaction*. Edinburgh University Press.
- The Guardian. (2001, August 23). Bainbridge denounces chick-lit as 'froth'. *The Guardian*. <https://www.theguardian.com/books/2001/aug/23/bookerprize2001.bookerprize>
- van Dijk, T. A. (1996). Discourse, power and access. In C. R. Caldas-Coulthard & M. Coulthard (Eds.), *Texts and practices: Readings in critical discourse analysis* (pp. 84–104). Routledge.
- Vásquez, C. (2015). "Don't even get me started...": Interactive metadiscourse in online consumer reviews. In E. Darics (Ed.), *Digital business discourse* (pp. 19–39). Palgrave Macmillan UK. https://doi.org/10.1057/9781137405579_2
- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism Management*, 30(1), 123–127. <https://doi.org/10.1016/j.tourman.2008.04.008>
- Webs they weave: David Shapiro x Emily Gould. (2014, July 2). *Interview Magazine*. <https://www.interviewmagazine.com/culture/david-shapiro-emily-gould>
- Wells, J. (2013). Mothers of Chick Lit? Women writers, readers, and literary history. In S. Ferriss & M. Young (Eds.), *Chick Lit: The new woman's fiction* (pp. 47–70). Routledge.
- Wetherick, D. (2019). Are UK music therapists talking past each other? A critical discourse analysis of three book reviews. *British Journal of Music Therapy*, 33(2), 67–73. <https://doi.org/10.1177/1359457519874443>
- Wodak, R., & Meyer, M. (2009). Critical discourse analysis: History, agenda, theory, and methodology. In R. Wodak & M. Meyer (Eds.), *Methods of critical discourse analysis* (2nd ed., pp. 1–33). SAGE Publications.
- Womens Fiction. (2021). *Good Reads*. <https://www.goodreads.com/genres/womens-fiction>
- Woolard, K. A. (1998). Introduction: Language ideology as a field of inquiry. In B. B. Schieffelin, K. A. Woolard & P. V. Kroskrity (Eds.), *Language ideologies: Practice and theory* (pp. 3–47). Oxford University Press.
- Yen Li, M. K. (2019). *Multimodality in the front covers of chick-lit books* [Master's thesis, University of Malaya]. <http://studentsrepo.um.edu.my/9904/>

Wellington Working Papers in Linguistics (WWPL)

Policy Guidelines

1. The WWPL are a production of the School of Linguistics and Applied Language Studies at Victoria University of Wellington.
2. The primary objective of the WWPL is to provide an initial avenue of publication for high quality material in the area of linguistics produced by students and staff of the department.
3. Contributions may take the form of papers, reviews, squibs, critical commentary etc.
4. Issues of the WWPL will be produced as opportunity to publish appropriate material arises, with the aim of producing at least one issue per year.
5. Any member of staff (including Research Fellows) may act as editor of an issue of WWPL. Guest editors may be appointed on occasion.
6. The content of the WWPL will usually include material produced by post-graduate students and staff, but, in special circumstances, may include contributions from people outside the School.
7. Copyright remains with the author(s) of contributions. Authors are welcome to publish contributions to WWPL in other journals. It would be appreciated if a re-published article contained an acknowledgment that the article had been first published in WWPL.
8. The School should be informed of issues planned by individual staff members.

Contents of Volumes 1–25

Volume 1, 1990

'Anahina 'Aipolo & Janet Holmes

The Wellington Tongan community: Prospects for language maintenance

Nicola Daly

Sri Lankans and Sinhala language maintenance in New Zealand

Jane Pilkington

Mixed marriages and language maintenance: Some Samoan data

Wendy Thompson

Attitudes to Maori and the use of Maori lexical items in English

Volume 2, 1990

Laurie Bauer

English vocabulary during the Twentieth century: An experimental approach

Lisa Matthewson

The negative clitic in Middle High German

Elizabeth Pearce

An analysis of negated infinitivals in Middle French

Xuezhong Zhang

The structure of Chinese dative/benefactive and double object sentences

Volume 3, 1991

Janet Holmes

Women's verbal contributions in public settings

Caroline McGhie

The jargon of Wellington taxi dispatchers

Catherine Neazor

Language maintenance and shift in the Wellington Polish community

Michael Williams

Post-vocalic (r) in the urban speech of the Isle of Wight

Volume 4, 1992

Laurie Bauer

Review of J. Kelly and J. Local *Doing Phonology*

Gavin Carr

On heads in morphology and syntax

Lisa Matthewson

Prosodic morphology in Alabama negation

Matthew Scott

An assimilatory neutralization in New Zealand English

Volume 5, 1993

Chris Lane

Repetitive questioning in courtroom interaction and interlanguage communication

Lisa Matthewson

Talking to the TV: Conversational behaviour of television viewers

Jane Pilkington

'Don't try and make out that I'm nice!' The different strategies women and men use when gossiping

Maria Stubbe

What's the score? Qualitative analysis in gender research.

Volume 6, 1994

Anita Easton

Talk and laughter in New Zealand women's and men's speech

Jen Hay

Jocular abuse in mixed gender interaction

Janet Holmes & Allan Bell

Consonant cluster reduction in New Zealand English

Camille Plimmer

Language maintenance and shift in the Italian community in Wellington

Volume 7, 1995

Laurie Bauer

Is the morpheme dead?

Jen Hay

The Adjacency Condition and the Atom Condition: Compatible morphological constraints

Elizabeth Pearce

V-movement and optionality

Paul Warren

The sound of desert trains: Delay strategies and constraints in spoken sentence processing

Volume 8, 1996

Jen Hay

No laughing matter: Gender and humour support strategies

Gary Johnson

The management of interaction in the television interviews of Maggie Barry

Shelley Robertson

Māori English and the bus-driving listener: A study of ethnic identification and phonetic cues

Ben Taylor

Gay men, femininity and /t/ in New Zealand English: Report on research in progress

Janet Holmes & Chris Lane

Interactional variation in environmental interviews

Book Review

Mary Crawford *Talking Difference*. Reviewed by Janet Holmes

Volume 9, 1997

Diane Massam

Three faces of Niuean *aki**

Elizabeth Pearce

DP licensing and Spec roles in Māori

Elizabeth Pearce

Genitive case in the Māori DP

Shizuka Torii

Two types of evaluation time and subject marking in Japanese

Volume 10, 1998

Edited by Janet Holmes

Janet Holmes

The linguistic construction of gender identity

Jane Pilkington, Janet Holmes & Chris Lane

Gossip: Its context and its boundaries

Sandra Shearn

Interviewing styles on New Zealand National Radio: Is Mike Hosking really so outrageous?

Robert Sigley

Interpreting social variation using stylistic continua: The strange case of relativiser choice

Lynnette Sollitt-Morris

The paradox of silence in interaction: An indicator both of power and powerlessness

Volume 11, 1999

Edited by Janet Holmes

Sai Hui

Humour in a Cantonese family: An analysis in an asymmetrical small group setting

Jinnie Potter

Chartwell School: Sixteen years of a Japanese-English bilingual venture

Maria Stubbe, Chris Lane, Jo Hilder, Elaine Vine, Bernadette Vine, Janet Holmes, Meredith Marra & Ann Weatherall

Multiple discourse analyses of a workplace interaction

Volume 12, 2000

Edited by Elizabeth Pearce

Angela Ford

A DP analysis of laai noun phrases

Elizabeth Pearce

Transitivity, incorporation and animacy in laai

Elizabeth Pearce & Samuel Ukevea Wadjeno

Uny me cako: laai text

Shizuka Torii

What is tense?

Volume 13, 2001

Edited by Laurie Bauer

Laurie Bauer

Whither the thesaurus

Laurie Bauer

How and why the phonological word and the morphosyntactic word do not coincide

Hannah Buchanan

Neutralisation of DRESS and TRAP before /l/ in New Zealand English

Yono Sukarno

vP-aspect: Aspectual base properties of Indonesian predicates

Volume 14, 2002

Edited by Paul Warren

Laurie Bauer & Paul Warren

Affix-able words: morphological productivity as the basis for (de)composition in processing

Gloria Hu

Phonological awareness in young Cantonese-Mandarin bilinguals

Megan Rae & Paul Warren

The asymmetrical change in progress of NEAR and SQUARE vowels in NZE: psycholinguistic evidence

Jen Hay & Paul Warren

Experiments on /r/-intrusion

Volume 15, 2003

Edited by Paul Warren

Helen Ainsworth

How she says it and how he says it – differences in the intonation of dairy farming women and men in

South Taranaki Patricia Vermillion

The ups and downs of Kiwis: An experiment investigating tonal cues used to identify NZE intonation

Paul Warren, Shari Speer & Amy Schafer

Wanna-contraction and prosodic disambiguation in US and NZ English

Joel Zwartz & Paul Warren

This is a statement? Lateness of rise as a factor in listener interpretation of HRTs

Volume 16, 2004

Julia de Bres

Intergenerational attitudes towards Dutch language maintenance in New Zealand

Jeh Sie Tan

The use of *got* in Malaysian English

Stephanie Schnurr

How female leaders use humour to integrate their professional and their gender identities

Janet Holmes

Monitoring, mentoring and managing: the complexities of workplace discourse

Luke McCrohon

'2B or nt 2B': Txt speak as an in-group marker

Ann Weatherall

'Whr r u? tb!': A preliminary study of language use in young people's text messages

Volume 17, 2005

Kalangis Bembe & Elizabeth Pearce

Unua texts

Laura Dimock

The bilabial trill in Unua

Glorious Oxenham, Elizabeth Pearce & Agnes Terraschke

Roviana text

Martin Paviour-Smith

Mood marking on Malakula

Martin Paviour-Smith & Willy Makenzie

Exacting the hen's revenge: An initial enquiry into the nature of narrative in Aulua

Elizabeth Pearce

The reflexes of Proto-Oceanic *na in Unua

Volume 18, 2006

Edited by Dianne Bardsley

Katherine Quigley

The metaphors of economic change

Amigo Westbrook

Te reo Maori words in job advertisements: Lexemes of New Zealand English?

John Macalister

"That place would be better named Glover": Establishing and contesting identity through the renaming of places.

Volume 19, 2007

Edited by Meredith Marra

Kazuyo Murata

Laughter in Japanese business meetings — a relational perspective

Leilarna Kingsley

Explicit language policy and language practices in multilingual banks in Luxembourg

Jeannie Fletcher

Powerhouses of organizational knowledge creation: Communities of practice or micro-communities of knowledge?

Julia De Bres

Using workplaces to research attitudes and behaviours towards the Māori language in Wellington

Mariana Lazzaro Salazar

Politeness in intercultural workplace interaction: A literature review

Volume 20, 2008

Edited by Derek Wallace

Sophia Jarlov Wallingford

The pluralisation of nouns in New Zealand Sign Language

Sophia Jarlov Wallingford

A preliminary formal syntactic analysis of *wh*-questions in New Zealand Sign Language

Raquel Direnzo

Double realization of verbs in Argentinian Spanish

Xitao Fu

Metonymy and metaphor: Continuum or hierarchy?

Anna Piasecki & Paul Warren

Language-specific cues – a cue to language?

Volume 21, 2013

Edited by Paul Warren

Jessica Scott

Learning the ropes

Rachel Leggett

A day in the life of an eldercare worker

Roseanna Finkle-Vern

Development of sociolinguistic competence in children from a Montessori preschool

Khadijeh Gharibi and Mortaza Yamini

Politeness in young children's speech

Jennifer Gilbert

Sign Language, interpreters and power

Volume 22, 2017

Edited by Emily Greenbank & Amy Giles-Mitson

Danielle Ashby-Coventry & Caitlin Andrews

The development of IM language over time

Alexandra Birchfield

"Both a maid and a man": The use of Do-support as a marker of gender in Shakespeare's cross-dressing plays

Lou Kendall

Gloriavale and the case of the opening MOUTH

Kaitlyn Smith

Deconstructing 'disabling' discourses: the co-construction of disability identities in interaction

Caleb Stone

Attitudes to Samoan English and Pākehā English

Lou Kendall

How does contrastive accenting affect pronominal reference resolution?

Emma Wollum

Swearing is caring? Investigating links between expletive vocabulary size, emotional vocabulary size, and expletive use

Katharine Levendis

Yeah nah as a pragmatic marker of cultural politeness in New Zealand English

Volume 23, 2017

Edited by Heidi Quinn, Diane Massam, and Lisa Matthewson

Laurie Bauer

How can you put Liz into a tree?

Sigrid Beck

An alternative semantic cycle for universal quantifiers

Adriana Belletti

Passive and movement of verbal chunks in a V/head-movement language

Guglielmo Cinque

A note on Romance and Germanic past participle relative clauses

Nicola Daly and Julie Barbour

Teachers' understandings of the role of translation in vernacular language maintenance in Malekula: some early thoughts

William D. Davies

Untangling multiple Madurese benefactives

Paul de Lacy

Circumscriptive haplogizing reduplicants

Mark Hale

Phonetics, phonology and syntax in synchrony and diachrony

Hans Henrich Hock

Indo-European linguistics meets Micronesian and Sunda-Sulawesi

Leina Isno

Nembangahu – The big stone

Richard S. Kayne

The syntax of wherewithal

Michael J. Kenstowicz

A note on the phonology and phonetics of CR, RC, and SC consonant clusters in Italian

Alistair Knott and Martin Takac

A sensorimotor interpretation of Logical Form, and its application in a model of Māori sentences

Paul Law

Some issues on verbal reciprocals in Malagasy

John Lynch

Why did Erromangan wind names turn 90 degrees?

Lisa Matthewson, Heidi Quinn, Diane Massam, and Lynsey Talagi

The curious case of preverbal ko in Niuean

Timothy Mckinnon, Peter Cole, Yanti, and Gabriella Hermon

Phrase-level stem alternations in Sumatran Malayic

Miriam Meyerhoff

Possession marking in Nkep (East Santo, Vanuatu)

Yuko Otsuka

On Cia and C-final bases in Polynesian

Bill Palmer

Pronouns and the DP in Hoava

Luigi Rizzi

A note on the typology of topic and focus markers

Nick Thieberger

Unable to say too much about kano in Nafsan (South Efate)

Lisa deMena

Travis Adjacency and DP licensing

Dieter Wanner

Surselvan 1s /-əl/, or: *Jeu anflel quei buca curios*

Volume 24, 2022

Edited by Shelley Dawson

Shae Holcroft

Taem i stap go: Marking tense and aspect in Bislama

Matilda Neyland

The Sexual Other: Discursive constructions of migrant sex workers in New Zealand media

Reuben Sanderson

Breaking frames with Babish: How community boundaries are managed through humour on a professional YouTube channel

Volume 25, 2022

Edited by Shelley Dawson

Francisca Knarston

Returning New Zealanders and the workplace

Luané Lennox

The left and right peripheries of Afrikaans

Bryer Oden

New Zealand identity in (social) media: Who is a New Zealander in the wake of COVID-19?

Reuben Sanderson

An historical analysis of /s/-retraction in New Zealand English