

Overview

Exemplar theory is the speech processing theory which posits that listeners match speech input with 'clouds' of fully (socio-) phonetically detailed memories of words - 'exemplars' - rather than filtering out all detail.

Why find out?

Sociolinguistic processing research has been increasingly interested in **exemplar theory** to explain how socio-phonetic information is processed:

Walker & Hay (2011) find that old sounding voices speed up lexical access to words used by older people. This suggests that sociolinguistic information (i.e. an old voice) is stored at the level of the word-based exemplar.

However, modern iterations of exemplar theory are all **hybrid**, incorporating both specific detailed exemplars and abstractions.

But which of these dominate accent recognition?

Hybrid models of exemplar theory posit that speech processing involves both exemplars and abstractions formed on the basis of those exemplars.

Research question

Does it matter for accent recognition whether people hear an accent feature in:

1. A high-frequency word?

- Exemplars are available and easily accessible.

2. A low-frequency word?

- Exemplars might not be available or very accessible.

3. A non-word?

- Exemplars definitely not available.

Set-up

In an online gamified 'Guess the accent!' quiz, listeners will be presented with features of different accents in different frequency conditions.

For example a Geordie FACE vowel [ɪə] in the words:

day

clay

chay

The other conditions:

- Geordie
- clear /l/
- Yorkshire
- GOAT & FACE
- General American
- KIT & LOT
- SSBE
- BATH & GOAT

Speakers

- No listener will hear the same speaker more than once, to avoid recognition.
- Speakers are spread out over a high number of versions like a between-subjects matched guise test.

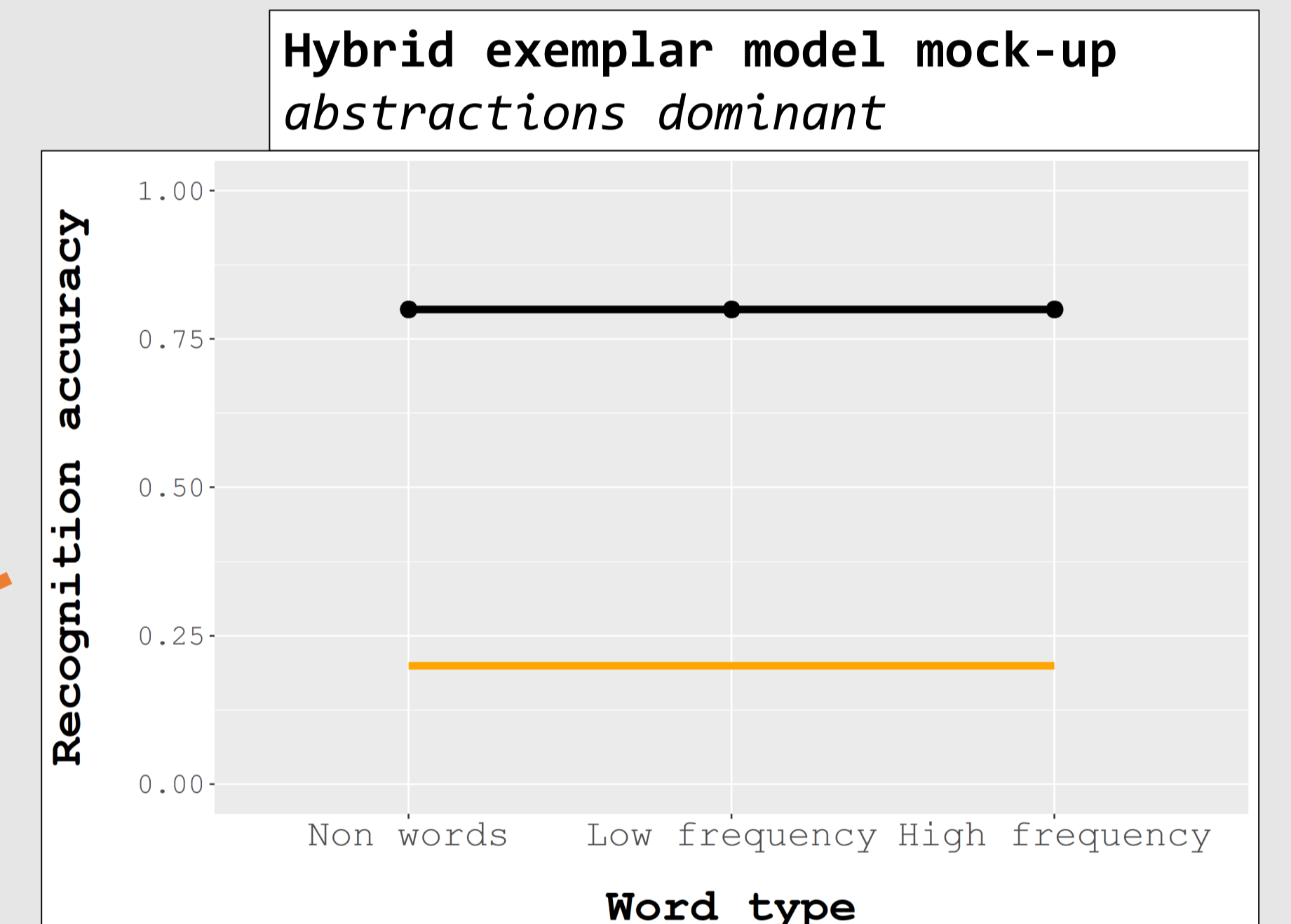
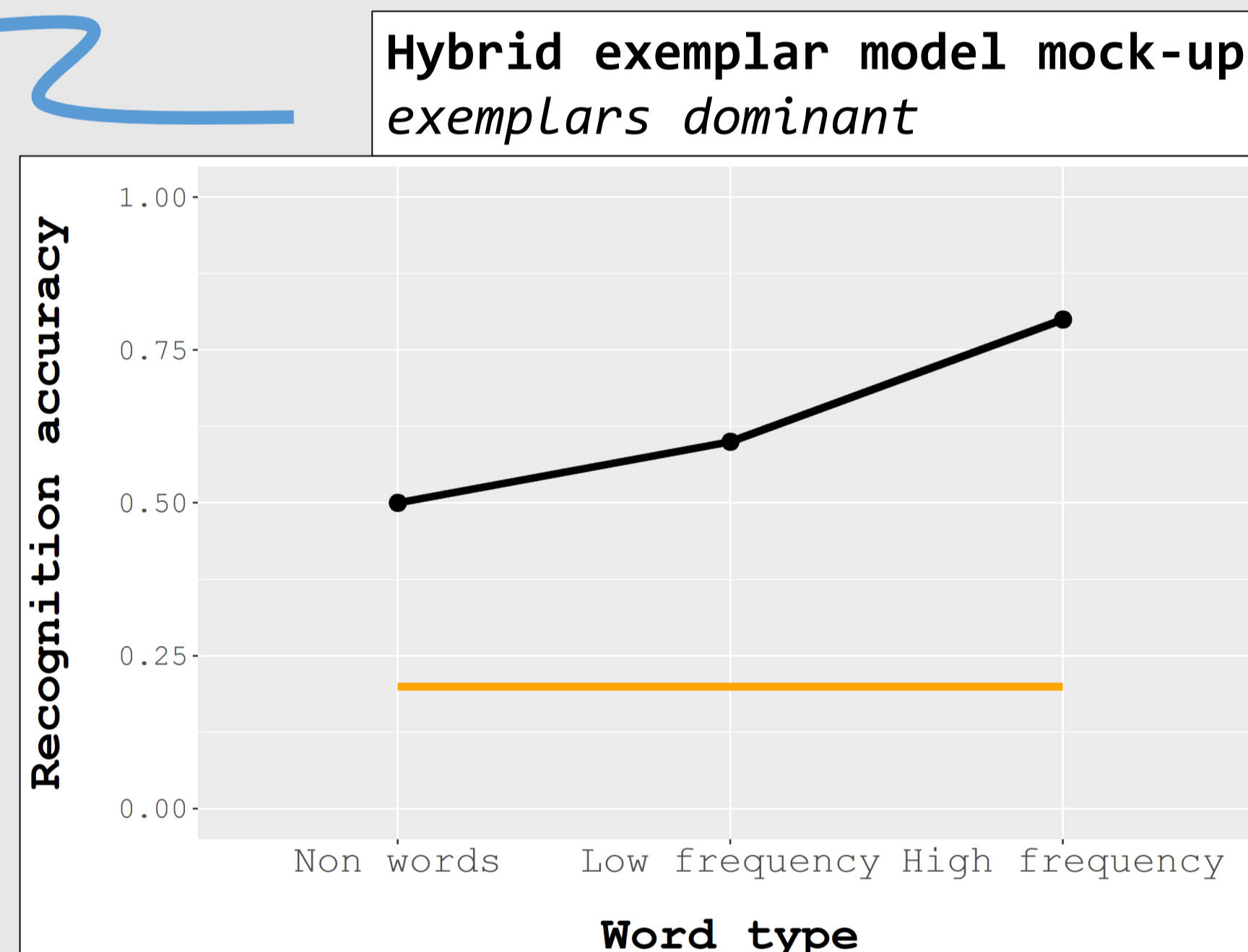
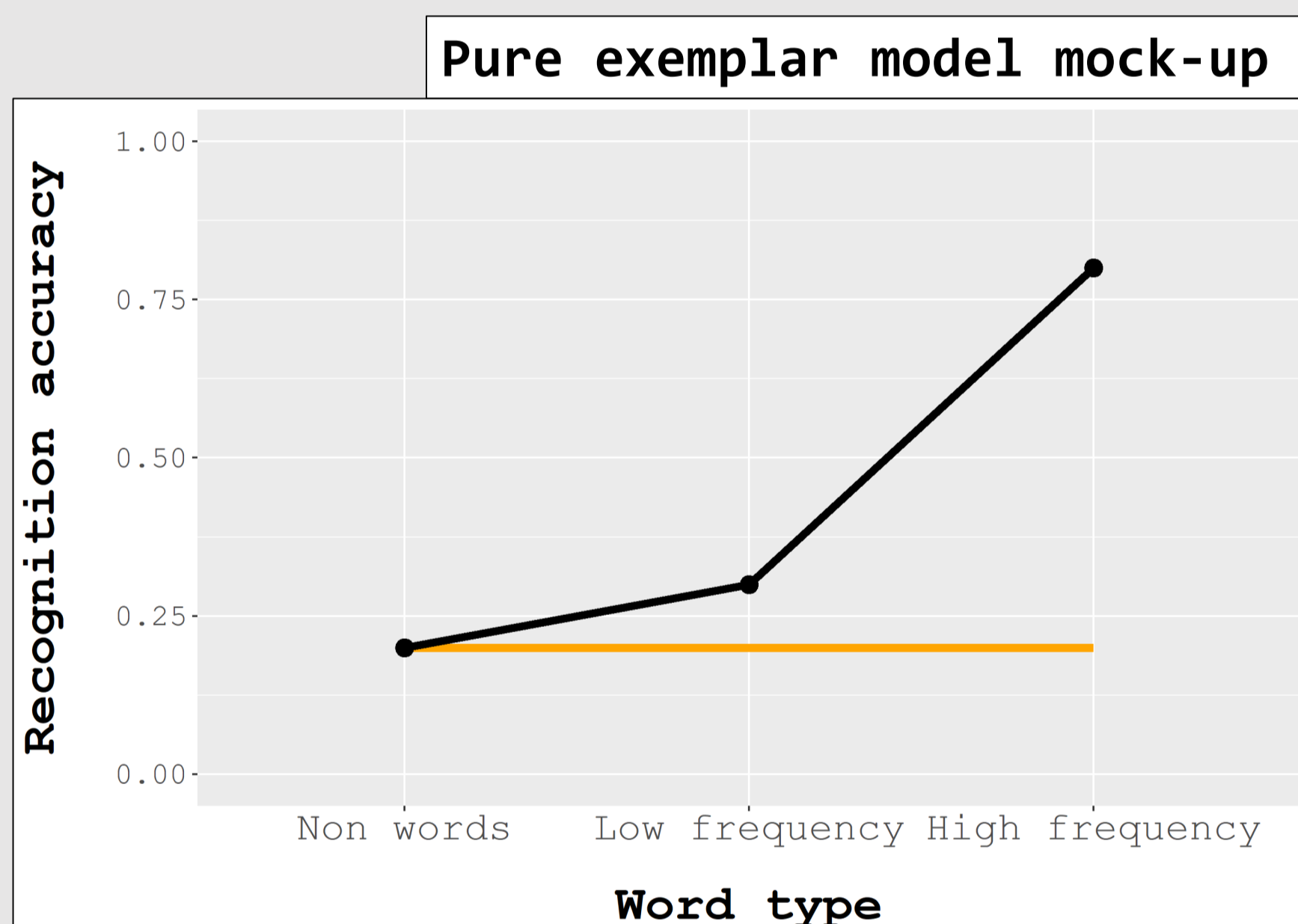
Potential outcomes

- If accent recognition is better in high-frequency words than in low-frequency words and non-words, this means that exemplars must play an important role in accent recognition.
- If accent recognition is equally good in all conditions, abstractions play the most important role.

Hielke Vriesendorp - hadvriesendorp1@sheffield.ac.uk

How abstract are the linguistic units we use to recognise accents?

Are they word-specific memories? Or abstract allophones?



Conditions

The comparison of accent recognition in different frequency conditions will be conducted across 5 different accents and two recognisable features per accent.

Versions

If in one version one speaker's high-frequency stimuli is presented, the other two listener versions presented their low-frequency and non-word counterparts.

Accent	Geordie						Yorkshire						General American						SSBE					
	FACE vowel			syllable final /l/			FACE vowel			GOAT vowel			LOT vowel			KIT vowel			BATH vowel			GOAT vowel		
Recognisable feature	high	low	non-word	high	low	non-word	high	low	non-word	high	low	non-word	high	low	non-word	high	low	non-word	high	low	non-word	high	low	non-word
Frequency	day	clay	chay	well	dwell	chell	came	cane	stame	no	quo	zo	job	sob	wob	is	fizz	chiz	ask	flask	vask	home	cone	shome
Stimuli	may	fray	zay	tell	swell	kell	name	cape	ane	so	fro	spo	dog	hog	chog	did	hid	zid	laugh	lance	gance	go	foe	spo

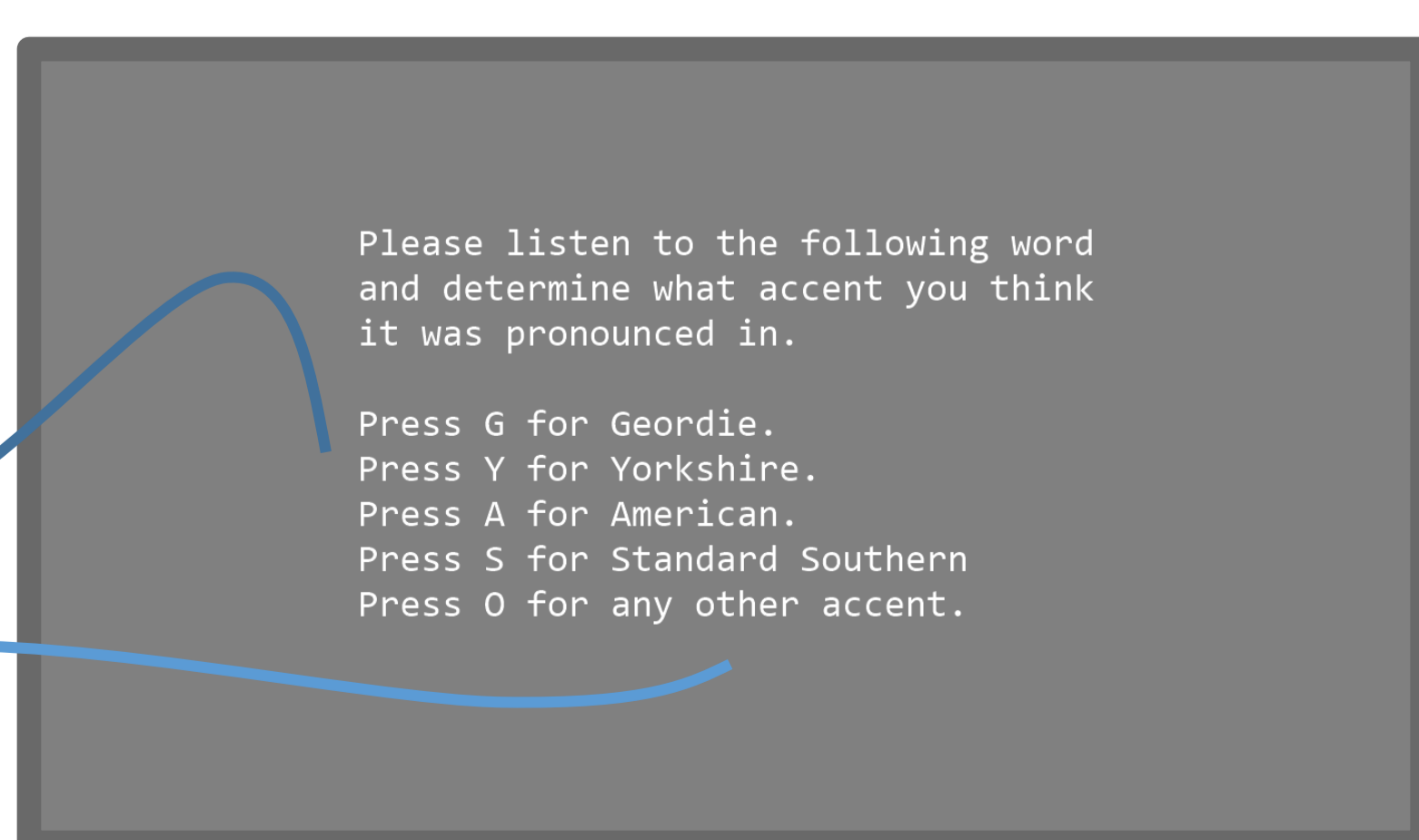
Speakers

To ensure that no listeners hear one speaker more than once, 100 different speakers were recruited (20 per accent).

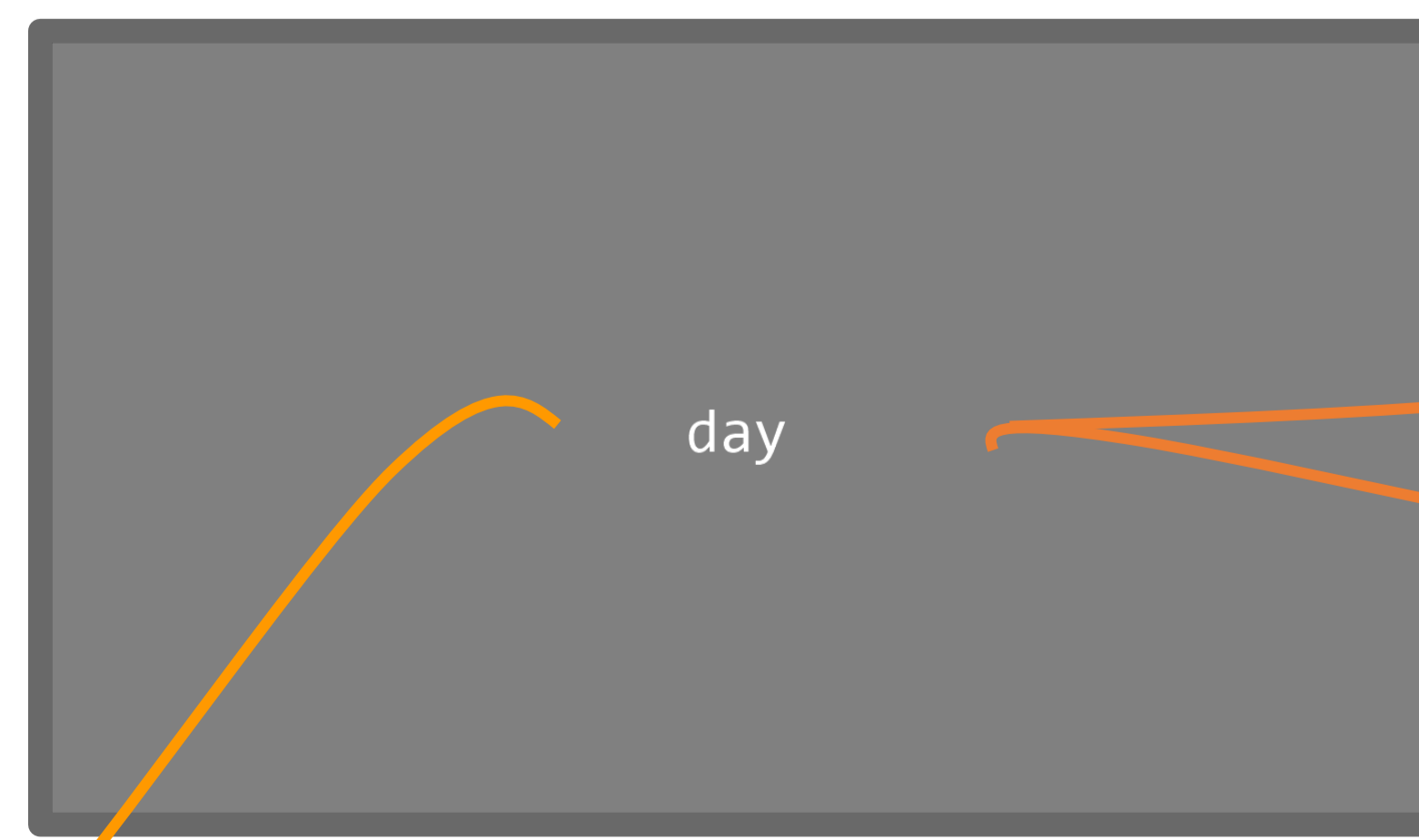
Listeners

The experiment is geared towards British speakers of English. The gamified and online nature of the experiment will (hopefully) allow for a high number of participants.

Multiple choice with 5 options



Orthographic co-presentation to prevent confusion about intended phoneme



Critical items (60%)

Distractor items (40%)

Distractor accents: Scouse, Brummie, Cornish, Welsh, Scottish, Australian

