Talker adaptation in dialectal communication: Scottish - English production study

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Conversation partners can adjust various characteristics of their utterances to align better with one another (e.g. lexical choice [1]; accounting for interlocutor's prior knowledge [2]). Such adjustments may be particularly necessary for communication to succeed in cross-dialectal situations; indeed, [3] showed that accommodations, which enable communicative efficiency, are often made when talkers of different dialects converse. However, the underlying processes of talker adaptation in cross-dialectal communication warrant more experimental investigation. In the present study, we ask: (i) whether talkers modify their utterances to match dialect-speaking interlocutors over the course of one laboratory session; and (ii) whether any adaptation observed is initially egocentric (e.g. [4]) or shows early adaptation (e.g. [5]). Egocentric processing refers to a talker's failure to disregard items which are unknown to their listener. In two referential communication experiments, we investigate participants' responses to one (intra-dialectal: Exp 1) and two (intra- and inter-dialectal: Exp 2) interlocutors by examining lexical choice and fixations. We predict that, if early adaptation occurs, participants will increasingly produce fixations and responses which align with their interlocutor's dialect as the experiment progresses. If processing is egocentric, such a pattern will not emerge.

Design. The current study uses a referential communication task comprising two roles: director and addressee. Working with one or more confederate(s), the participant completes the task while alternating roles across trials. In each trial, the director views an array (Figure 1) while the addressee views its counterpart (Figure 2). The director names the target out loud, using one of the words provided, for the addressee to click on. The dependent measures are the (participant, not confederate) director's lexical choice and fixations; the addressee's responses are not analysed. Stimuli are presented in two blocks, with block 1 serving as a baseline for comparison with block 2. In **Exp 1**, Scottish participants (N=30) interacted with a Scottish-accented confederate who produced Scottish dialect words on critical trials. In **Exp 2**, Scottish participants (N=60) completed an equal number of trials with two confederates each: one Scottish-accented confederate who produced Scottish dialect words on the critical trials, and one English-accented confederate who only ever produced standard English words.

Results. In **Exp 1**, participants produced more Scottish words in block 2 than block 1. Likewise, more Scottish words were produced in block 2 than block 1 of **Exp 2**, when participants addressed their speech to either Scottish or English interlocutors. However, the response dialect of individual utterances did not align with the dialect of the confederate to whom it was supposedly addressed (see Table 1). In **Exp 1** (Table 2), fewer looks were made to English words in block 2 than in block 1, while the proportion of looks to Scottish words remained consistent throughout. As participants overwhelmingly look at the item they subsequently produce, this pattern matches the fewer English words produced in block 2. A slightly different pattern emerged in **Exp 2** (Table 3). When the participant produced the English word, looks to the Scottish item remained steady in both blocks; however, when the participant produced the Scottish word, looks to the English item dropped between block 1 and 2. Looking less towards the English competitor suggests that participants were drawn more strongly to their own Scottish dialect and less towards the interlocutor's English one as the experiment progressed.

Conclusion. Scottish talkers do produce more dialect words overall when exposed to a Scottish dialect user. However, in a multi-talker, mixed dialectal context, Scottish talkers' individual utterances do not match the dialect of their assumed listener. Apparently, exposure to Scottish dialect encouraged participants to say more dialect words irrespective of the addressee's (assumed) knowledge. In fact, participants grew more egocentric as the task progressed. Whether processing appears egocentric because adaptation is impossible, or simply because the current paradigm was insufficient to elicit adaption, will require further investigation. Our planned **Exp 3** will refine the current methodology to address this.

References [1] Brennan & Clark (1996), J of Experimental Psychology; [2] On Yoon & Brown-Schmidt (2018), Discourse Processes; [3] Trudgill (1986), Dialects in contact; [4] Keysar, Barr, Balin, & Brauner, (2000), Psychological Science; [5] Hanna, Tanenhaus & Trueswell (2003), J of Memory & Language.

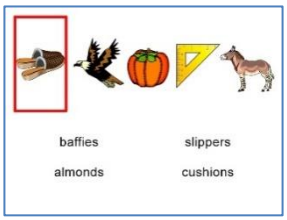

Figure 1 – director's display (block 1) shows target in red box plus four unrelated images; Scottish/English translation pair [baffies/slippers] plus two unrelated distractors [almonds, cushions]. Array position and fillers are unique for each trial while each critical target appears twice, once in each block. Block 2 display retains target image and translation pair; fillers and screen position differ.

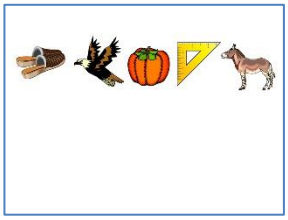

Figure 2 – addressee's display (block 1) shows same images as director's, without red box or text. Items were counterbalanced so that each individual target could be used in both director and addressee trials (presented to different participants). No participant encountered an item in the addressee role which had been or would subsequently be presented to them in the director role.

Table 1 – means number of trials (SD) and significance for lexical choice data

Experiment	*Block 1 – Mean (SD)*	*Block 2 – Mean (SD)*	*Sig.*
Exp 1 (Scottish word)	*13.633 (5.840)*	*15.200 (6.343)*	*
Exp 2 (Scottish word)	*6.983 (3.811)*	*7.533 (4.196)*	*
Exp 2 (Contingent word)	*17.817 (2.873)*	*18.183 (2.587)*	-

Table 2 – Proportion of looks by lexical choice, interest area and block in Exp 1

Choice	*Block 1*		*Block 2*	
	Fixations to Scottish	*Fixations to English*	*Fixations to Scottish*	*Fixations to English*
Scottish Word	*0.088 (N=388)*	*0.046 (N=388)*	*0.080 (N=444)*	*0.043 (N=444)*
English Word	*0.046 (N=314)*	*0.093 (N=314)*	*0.037 (N=313)*	*0.091 (N=313)*

Table 3 – Proportion of looks by lexical choice, interest area and block in Exp 2

Choice	*Block 1*		*Block 2*	
	Fixations to Scottish	*Fixations to English*	*Fixations to Scottish*	*Fixations to English*
Scottish Word	*2.723 (N=399)*	*1.073 (N=399)*	*2.233 (N=444)*	*0.690 (N=444)*
English Word	*0.987 (N=1627)*	*2.467 (N=1627)*	*0.709 (N=1701)*	*2.365 (N=1701)*