

THE ICE-IPAC PROJECT: TESTING THE PROTOCOL ON NORWEGIAN AND FRENCH LEARNERS OF ENGLISH

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Keywords: interphonology, English as a Foreign Language (EFL), English as a Second Language (ESL), inter- & intra-speaker variation, L1 diversity.

1. INTRODUCTION

Different learner corpora of English exist already, but they typically tend to focus on various aspects of the grammar, vocabulary, and written forms, e.g. the *International Corpus of Learner English, ICLE* [7]; the *Longitudinal Database of Learner English, LONGDALE* [13], see also [12]. There has been less emphasis on interphonology, but see the *Asian English Speech Corpus Project, AESOP* [10] [15], and projects which focus on prosody in L2 English, e.g. the *LeaP Corpus* [8].

English interphonology has hitherto been fairly understudied and, still, many questions merit attention: Which factors influence interlanguage phonology the most? Do interphonological phenomena surface in a similar fashion, and to the same extent, in situations of EFL vs. ESL? In other words, do learners develop the same features, regardless of whether they are EFL learners or ESL learners? If not, how different are they and which extra-linguistic factors are involved? To what extent is such comparison tenable altogether, both theoretically and empirically? What is the role of input in contexts where different varieties of English are spoken?

2. ICE-IPAC AND ITS MOTHER PROJECTS

ICE-IPAC is inspired by two well-established corpus projects, namely IPFC (*Interphonologie du Français Contemporain* [3]), which focuses on learners of French as a foreign language, and PAC (*Phonologie de l'Anglais Contemporain* [2] [5]), which focuses on variation in contemporary L1 English.

The originality of the PAC research project lies in the stability of the research protocol, open access to the sound files and the transcribed data, and a variety of tools and coding conventions adapted for

PAC and/or its sister project PFC (*Phonologie du Français Contemporain* [4]). Taken together, the protocol and the analytic tools offer an initial treatment of the data, as well as inter-speaker and inter-variety comparability, with possibilities of extending the linguistic analysis on several levels.

The originality of the ICE-IPAC research project stems from the fact that it provides an international database of L2 English phonology and phonetics, consisting of learners with different L1s (Spanish, Norwegian, etc.), learners with different L1 varieties (Hexagonal French, Canadian French, etc.), and learners with different L2 varieties as their target/model (and not simply traditional models of English such as RP or American English). The corpus includes different tasks within the same dataset (e.g. word lists and conversation), emphasizing both inter-speaker and intra-speaker variation, all while taking into account the social background of learners. The ICE-IPAC protocol further allows for a comparison between learners and native speakers of English, as it shares some aspects of the PAC protocol. As for the structure of the datasets, the ICE-IPAC protocol provides recording of various speech styles for each speaker, that is 1 repetition task (word lists), 2 reading tasks (word lists and text), and 2 conversations (formal interview and informal conversation). The 2 word lists include: 1) a *common list* applied to all learners in the different corpora; 2) an *L1 specific list* adapted to verify difficulties frequently observed in the production of the learners of a given L1.

The general proficiency level of learners who are invited to participate in the study ranges from A1-B1 to B2-C1 of the *CEFR (Common European Framework of Reference for Languages)*.

3. PHENOMENA TO BE STUDIED

3.1. Segmental features

The common word list includes, among other things, the tense vs. lax vowel contrast, low front vs. back vowels, and the lenis-fortis contrast in word-initial

and word-final stops. As for the last phenomenon, French speakers tend to produce pre-voiced vs. unaspirated voiceless stops; neutralization of word-final voicing is observed in most West Germanic and Slavic languages; no voicing or aspiration contrast for word-final obstruents, or no word-final obstruents at all in many East Asian languages. See Section 4 for Norwegian speakers.

The specific word list includes, among other things, voiced (or lenis) fricatives for the Norwegian learners, and the /ʃ/-/tʃ/, /r/-/w/ and /h/-/Ø/ contrasts for the French learners.

3.2. Word stress-related and suprasegmental features

Some features related to word stress will be analyzed from the two word lists, as follows: vowel reduction in unstressed position (letter, comma), vowel quality in the stressed position of disyllabic words containing particular digraphs (e.g. *aunt*, *awful*), vowel quality in the stressed position of polysyllabic words containing two distinct vowels (e.g. *continuity*), and stress-imposing endings with a diphthong (*-ize*, *-ify*, *-ate*). As far as suprasegmental features are concerned, the learners' rhythm (i.e. coefficient of variation of consonants and vowels, pauses, speech tempo, speech rate, etc.) and their intonation system (range and slope of F0, etc.) will also be studied.

4. PRELIMINARY RESULTS

During the academic year 2014/2015, a pilot study has been conducted with 2 L1 Norwegian and 2 L1 French learners of English following the PAC protocol. The two female Norwegian learners (NW1 and NW2) are enrolled at UiT The Arctic University of Tromsø, while the two female French learners (FR1 and FR2) are enrolled at the University of Lyon. All four have performed two tasks, i.e. reading of two word lists and an informal conversation between the two.

Some phonological phenomena observed in the L2 English of the Norwegian learners:

1) devoicing of fricatives /z/ /ʒ/ and affricate /dʒ/, not part of the Norwegian sound system. First, /z/ is replaced by [s]: e.g. *seal-zeal* are near-homophonous; *graze* is produced [gɹeɪs] or even [gɹæɪs]. Second, /ʒ/ is replaced by [ʃ]: e.g. *leisure* is produced ['leɪʃə]. Third, /dʒ/ is replaced by [tʃ]: e.g. *batch-badge* are both produced with [tʃ].

2) partial neutralization of the lenis-fortis contrast in word-final stops. Even though pre-fortis clipping is observed, voicing ceases well before the release of the lenis coda. *fat-fad* are near-homophonous, i.e. [fæt]-[fæt]; [p] is used for /b/, making *lap-lab* near-

homophonous [læp]-[læp]. In some cases, however, the underlying stop contrast is clearly preserved by the target voiceless member being aspirated, e.g. *sack* [sæk^h] vs. *sag* [sæk]; the latter observation is anticipated by the Norwegian L1 system, in which the underlying contrast is primarily expressed through aspiration and not voicing on the edges of words [11].

3) post-vocalic rhoticity (although NW1 is more consistent with it); *carter* ['kɑ:ɾə].

4) production of [v] for phoneme /w/, not part of the Norwegian sound system: *word* [vɔ:ɾd], *which* [vɪtʃ], *worthy* ['vɔ:ɾdi]; hypercorrected production of [w] for phoneme /v/ in *vexed* [wɛkst]; epenthesis of labial [v] or [w] in front of rounded, single onset, [ɹ]: *written* ['vɪɪtn], *run* [vɹʌn].

5) interdental fricatives, not part of the Norwegian sound system, replaced by coronal plosives: [t] for /θ/ in *farther* ['fɑ:ðə] and [d] for /ð/ in *worthy* ['vɔ:ɾdi].

Some phonological phenomena observed in the L2 English of the French learners:

1) no systematic difference in the quality of production between /i:/ and /ɪ/, or /ɔ:/ and /ɒ/ [6] [9].

2) <i> is pronounced [aɪ] in *sinner* or *simmer*. This may be the result of an overgeneralization of one of the L2 pronunciation rules for <i> [16].

3) /h/ is deleted in words like *here*, *hurry*, etc. (FR2 is more consistent with it) [1].

4) <ch> in *witch* or *China* is pronounced [ʃ] instead of [tʃ], especially while reading the word list [17].

5) postvocalic rhoticity; *carter* and *garter* are pronounced [kɑ:ɾə] and [gɑ:ɾə] respectively. [14]

Most interphonological phenomena observed at the segmental level seem to be in correlation with the spelling, which is also visible in the conversation task.

5. CONCLUSION

The phenomena observed in the preliminary recordings will be compared with future recordings of speakers of other languages in foreign and second language contexts.

6. ACKNOWLEDGEMENTS

We would like to thank Audrey Bonfiglioli and Ioana Trifu for their help in the collection of the French learner data.

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