Processing liaison in L2 French: the case of non-traditional learners

Ellenor Shoemaker
Université Sorbonne Nouvelle – Paris 3
Laboratoire de Phonétique et Phonologie (CNRS/ UMR 7018)

Sophie Wauquier
Université Paris 8
Structures Formelles du Langage (CNRS/ UMR 7023)

The misalignment of syllable and word boundaries in spoken French poses significant challenges for spoken word recognition processes in learners of French as both a first and second language (L1 and L2, respectively). Liaison, for example, is a phonological phenomenon in French that involves the surfacing of a latent coda consonant before a vowel-initial word (e.g. /n/ in *un enfant* [ɛ̃nɑ̃fɑ̃] 'a child' versus *un livre* [ɛ̃livʁ] 'a book'). The liaison consonant (LC) is subsequently resyllabified as the onset of the following word (e.g. *un enfant* 'a child' is syllabified as [ɛ̃.nɑ̃.fɑ̃] instead of [ɛ̃n.ɑ̃f.ɑ̃]), in effect masking the vocalic onset. The difficulties posed by the misalignment of boundaries are evident in L1 production errors, which reveal that children initially segment the nominal group incorrectly by interpreting the resyllabified LC as a lexical onset consonant. They detach the determiner from the noun without taking into account the special prosodic status of the LC, producing for example [le.nuʁs] instead of *les ours* [le.zuʁs] 'the bears'.

Production errors observed in the current L2 literature differ from child errors in that adult learners appear to be influenced by the orthography of individual words and, therefore, may fail to internalize the underlying prosodic position of the LC (Thomas, 2004). Subsequently, many adult learners produce L2 French on a word-by-word basis without taking into account the phonological processes that occur across word boundaries. Observed L2 errors include a lack of resyllabification of the LC (e.g. [ɛ̃n.ɑ̃fɑ̃] for *un enfant* [ɛ̃.nɑ̃fɑ̃]), production of the graphic form of the underlying LC (e.g. [ɛ̃gʁɑ̃dami] for *un grand ami* [ɛ̃gʁɑ̃tami]), or omission of the LC entirely, often coupled with the insertion of a glottal stop (e.g. [ɛ̃.ʔɑ̃fɑ̃] for *un enfant*). However, as Wauquier and Shoemaker (2013) note, currently available production data on the L2 acquisition of liaison offer but a partial picture of acquisitional strategies in that adult learners in the currently available literature all have a systematic orthographic knowledge of French, which can influence spoken productions. Furthermore, participants in the current literature are primarily speakers of Germanic languages (English, Dutch, Swedish), languages which mark word boundaries with relatively salient acoustic cues. To our knowledge, no available data take into account how learners of L2 French from other language families perform in a learning situation based predominantly on oral input without systematic orthographic support, i.e. a learning situation that more closely mirrors child learning.

In the current study, native speakers of Mandarin Chinese (N=5) and Bengali (N=5), who were beginning learners with primarily oral exposure to French, were tested on their productions of determiner (Word1) + noun (Word2), a case of obligatory liaison in spoken French. Participants first saw an image and heard a sentence produced by a native speaker such as *Voici un ours* [vwa.si.ɛ̃.nuʁs] 'Here is a bear'. They were instructed to repeat the sentence they had heard and then to produce the corresponding plural, e.g. *Voici deux ours* [vwa.si.dø.zuʁs] 'Here are two bears'. This paradigm allows us to investigate whether learners have internalized the particular prosodic position of the LC in that it requires them 1) to recognize that /n/ in *un* in the first sentence is a resyllabified LC and not a lexical-initial

consonant and 2) to produce a liaison with the latent /z/ in *deux* in the second sentence. Participants heard in total 90 words, of which 45 were consonant-initial distractors. Of the 45 vowel-initial test words, 22 were masculine and 23 were feminine. The test items and distractors were further divided as to word-length, comprising one-, two-, and three-syllable words.

Preliminary analysis of the production data from these learners points to a mixture of both L1 and L2 processing strategies previously observed in the literature. For example, we observed several production errors that have been previously documented in L2 learners such as a total omission of the LC [vwa.si.dø.uʁs] and/or the insertion of a glottal stop as the onset of Word2 [vwa.si.dø.ʔuʁs] for *Voici deux ours* [vwa.si.dø.zuʁs], suggesting the use of a lexical strategy in which *ours* [uʁs] 'bear' is produced without resyllabification. This implies that these learners have not internalized the particular prosodic position of the LC.

However, the majority of production errors included instances of surface segmentation in which /n/ was produced as the lexical onset of Word2 in the plural (e.g. [vwa.si.dø.nuʁs] for *Voici deux ours* [vwa.si.dø.zuʁs]), an error only previously observed in child learners. In these instances, participants seem to be implementing a syllabic segmentation strategy in that they are relying solely on the surface input as children initially do, without taking into account the prosodic position of the LC. This particular error has not previously been observed in L2 learners and suggests that adult learners with relatively little written input rely more heavily on syllable boundaries and surface input, whereas adult learners with primarily written exposure rely more heavily on a lexical strategy that involves the processing of individual items on a word-by-word basis as has been seen in the existing literature.

The intention of the current study is to remove as much as possible the influence of orthography in the processing of liaison and resyllabification in adult learners of L2 French in order to investigate whether L2 learner strategies and phonological development differ fundamentally from those of children as has been proposed (Thomas, 2004; Wauquier, 2009). Interestingly, all of the above strategies were often observed in the same learner, suggesting that adult learners with little written exposure have some intuition that syllabic segmentation is not reliable in French, however the prosodic position of the LC is not yet established in their phonological grammar. The data will further be discussed in relation to both word length and participants' familiarity with the individual test items in order to elucidate the apparent contradiction between the use of both syllabic and lexical strategies. Typological differences between Mandarin Chinese and Bengali will also be examined in an attempt to explore the influence of phonotactic constraints as well as constraints on syllable structure on L2 productions.

REFERENCES

Thomas, A. (2004). Phonetic norm versus usage in advanced French as a second language. *International Review of Applied Linguistics*: 42, 365–382.

Wauquier, S. & Shoemaker, E. (2013). Convergence and divergence in the acquisition of French liaison by native and non-native speakers: a review of existing data and avenues for future research. *Language, Interaction, and Acquisition*: 4(2), 161–189.

Wauquier, S. (2009). Acquisition de la liaison en L1 et L2: strategies phonologiques ou lexicales? *Aile…Lia*: 2, 93-130.