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This study discusses original acoustic data concerning the output of /s/ in #/sw/ clusters in Italian. Broadly speaking, we observed two patterns (details below). In the native lexicon, #/sw/ is realised as [sw] ([sw]ono “sound”, [sw]olo “ground”), while in loanwords, mostly from English, the same cluster surfaces as #[zw] ([zw]atch “Swatch”, [zw]ing “swing, musical genre”). In Italian, /s/ is phonetically voiceless before a voiceless consonant ([sp]eranza “hope”, [st]ato “stato”, [sf]era “sphere”), but it is realised [z] before a voiced consonant ([zb]attere “slam, inf.”, [zr]egolato “unregulated”, (Bertinetto, Loporcaro, 2005: 134). Word-initially, before a vowel, /s/ surfaces as a voiceless sibilant [s] ([sa]le “salt”, Bertinetto, Loporcaro, 2005). In this respect, glides /j w/ behave as vocalic segments since they do not trigger voice assimilation ([sj]ero “serum”, [sw]ora “nun”, Bertinetto, 2010).

As far as the labiovelar glide [w] is concerned, also the masculine definite article selection hints at a vocalic, hence nuclear, interpretation, since *l’* is selected before #/wV/ (*l’uomo* “the man”), the allomorph recurring before vowels, as in *l’albero* “the tree” (Marotta, 1988; Marotta, 1993; Bertinetto, Loporcaro, 2005; Canalis, 2018); *il* is selected before (branching) Onsets (*il treno* “the train”, *il cane* “the dog”), while *lo* is preferred before sC and the so-called “intrinsic geminates” /ʃ ɲ ɰ ts dʒ/ (Marotta, 1993), e.g. *lo sparo* “the shot”, *lo [ʃ:]ame* “the swarm”, *lo [d:z]ero* “the zero”, etc.). In loanwords, interestingly, *il* is selected before #/w/, as in *il weekend*, *il workshop* (Bertinetto, Loporcaro, 2005), while *lo* recurs before #/sw/, e.g. *lo Swatch*, *lo swing* (Janni, 1992). Even though /w/ may only precede /ɔ/ in Italian (unless it follows /k g/, as in [kw]into “fifth”, Marotta, 1988), the allomorph selection pattern observed in loanwords cannot be attributed to the syllabification of /w/ in Onset position when illicit diphthongs, as in [wi]kend and [swi]ng, are concerned: in loanwords, also [wɔ] and [swɔ] select *il* and *lo*, respectively. However, the CV syllabification in loanwords (vs. VV in the native lexicon) of /wV/ diphthongs cannot be excluded. The CV interpretation is likely to depend on some property of the loanword phonology in Italian, where /w/ is always a consonant. We refer to this view as the Loanword Phonology Hypothesis (LPH). Alternatively, as Janni (1992) observed, the consonantal status of the grapheme <w> representing /w/ leads to a consonantal interpretation of the glide itself in the phonological representation. This is in fact Baroni’s (2020) conclusion when discussing results from an article selection task involving glide-initial (pseudo-)words in Italian and French. Thus, if /w/ is a C segment, the preceding /s/ cannot occupy the Onset position, since /s/-headed branching Onsets are illicit in Italian (Kaye, Lowenstamm, Vergnaud, 1985). This view is referred to as the Orthographic Hypothesis (OH).

In line with the article selection, the /s/-voicing observed in our data (#/swV/ > #[zwV] in loanwords, > #[swV] in the native lexicon) can be explained by positing two syllabifications: C.CV in loanwords, i.e. a case of *s impurum*, CVV in the native lexicon, i.e. /s/ in Onset position followed by a branching Nucleus. As claimed above, both LPH and OH assume this. The two hypotheses make different predictions, though. LPH predicts a CV syllabification for every /wV/ diphthong in loanwords, while OH only predicts that when /w/ : <w>. LPH and OH have been tested by analysing acoustic data, obtained through a reading task (30 Italian L1 speakers, 20-30 years old). Readings have been recorded with a Zoom Handy 5 recorder. Stimuli were meaningful sentences in standard Italian. Each sentence included, as a target word, a loanword or a native lexeme, in a prosodically prominent position, showing a word-initial /sC/ or /sw/ cluster; filler sentences were added in order to distract the speaker/reader from the real aim of the study. Among loanwords, we included also (non-English) lexemes commonly used in Italian whose glide /w/ is not represented by <w>, rather by vocalic graphemes, e.g. *soirée* “elegant party”, *Suarez* “person name”. According to LPH, we expect /s/ > [z] in the production of *soirée*-like words, while OH implies a voiceless realisation [s] in the same context.

Data were analysed by means of the *voice report* function of Praat, which indicates the percentage of voiced portion in a segment, according to the classification in Davidson (2015): [z], if more than 90% of the segment is voiced; [s], if less than 10% is voiced; values between 10% and 90% are considered partially voiced. It resulted that [z] or a partially voiced alveolar sibilant are systematically produced before a voiced consonant or before /w/ if written <w>. In all other contexts, i.e. /s/ preceding a voiceless obstruent or /w/ represented by vocalic graphemes, /s/ surfaced as [s]. The results indicate thus that OH is more adequate than LPH in our case study. Moreover, Oh can also account for the article selection, considering that before native spellings of loanwords, such as <sua(h)ili> (a less common variant of <swahili>), the allomorph selected is *il* (*il sua(h)ili* vs. *lo swahili*).

Still, the Orthographic Hypothesis is controversial among linguists. In fact, it is by no means clear how orthography interacts with phonology. Nevertheless, much psycholinguistic literature has discussed the possibility that the alphabetic knowledge is able to influence the phonological representation or the way literate speakers access it – a process generally defined as the Orthographic Effect (Seidenberg, Tanenhaus, 1979; Ziegler, Ferrand, 1998; Taft, 2006; Bassetti *et al.*, 2017). The theoretical relevance of the Orthographic Effect (OE) has been often diminished, mostly due to the metaphonological tasks used in the literature above, such as phoneme counting or rhyme detection (Ziegler, Ferrand, 1998). Tasks of that kind involve an indirect access to phonology: orthography may thus be used by participants in order to facilitate the task accomplishment. Consequently, the Orthographic Effect could not be interpreted as an evidence of an actual influence of orthography on phonology. Bassetti (2017) and Ziegler, Ferrand (1998) may be viewed as counter-examples, though.

In any case, it is difficult to interpret our data by solely making reference to phonological properties without taking into account the orthographic level. Probably, the “orthographic effect” we observed is enhanced by the ambiguous nature of glides, in particular of /w/: there is no widely accepted consensus about their phonological status among linguists. Further research is certainly needed in order to test the Orthographic Hypothesis here advocated.

References

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