

The life of yers in Slavic and elsewhere: an argument for empty Nuclei

Probably the most fundamental phonological phenomenon in Slavic phonology are the vowel-zero alternations of the type shown under (1). This pattern is found with some variation in all Slavic languages. It has fed the widely accepted "abstract" yer-based analysis which is known as Lower (Lightner 1965, Gussmann 1980, Rubach 1984). Before discussing Lower, let us state the empirical situation in pure surface terms. What I call the yer-context appears below.

- (2) the yer-context a) $V / _C\{\#,C\}$ and $/ _CV_x$ if V_x alternates with zero itself
 b) zero/ $_CV_x$ if V_x does not alternate with zero

That is, an alternation site is vocalised if it occurs in a closed syllable or in an open syllable in case the following vowel is alternating itself. It is not vocalised if it appears in an open syllable provided that the following vowel is not alternating with zero. Obviously, it is the parameter on the alternating vs. non-alternating character of the following vowel that makes the yer-context outstanding and puzzling.

The purpose of my talk is to show that (2) conditions much more than just vowel-zero alternations, both inside and outside Slavic. In fact, an important generalisation about phonological structure in general is missed if, continuing the traditional attitude, (2) is treated as an idiosyncratic inner-Slavic phenomenon. Also, I show another tradition (the French one) has gone completely different, in fact opposite ways when being confronted with the same empirical object (2). I conclude arguing that the Slavic analysis, i.e. Lower, is the correct one, and evaluate the consequences of this claim.

(3) shows four more alternations from Western Slavic that are governed by the yer-context. Ultimately (i.e. diachronically speaking), (3a-c) represent the same phonological process. Its instantiations in the modern languages is "messy" in the sense that some words with the input context follow the pattern, while others do not. This, however, does not make the conditioning context less real. The two Polish alternations are sometimes discussed alongside with the vowel-zero alternations of (1) (e.g. Szpyra 1992), but despite identical triggering conditions no unified treatment has been proposed. The Czech alternations in vowel length (3d), though, which cover a the full feminine -a and neuter -o paradigms (but are not entirely regular either), have not been related to (1) as far as I know. Could it be an accident that the various segmental effects under (1) and (3) obey an identical and highly specific context?

This question is even more intriguing when considering the French data under (4). These are well-known under the label of Closed Syllable Adjustment since Dell (1973), see e.g. Tranel (1987). The important information here is that in French schwa alternates with zero and thus holds the function of the Slavic yers.

In spite of the identical empirical object (2), the French data have traditionally been analysed opposite to the way things were done on the Slavic side (Anderson 1982). That is, Lower and its various modern varieties make the claim that vowels which alternate with zero are underlyingly present in the form of yers. Also, these yers follow the last consonant of C-final words. The rule, then, is that yers are vocalised before another yer, else are deleted. In other words, $[_C\#]$ and $[_CC]$ are interpreted as $/_Cyer/$ and $/_CyerC/$, respectively, and yer vocalisation then applies to open syllables only. The French take is opposite: alternating vowels are underlyingly present as well in the form of an empty Nucleus, but the rule of "yer"-vocalisation applies to closed syllables only. That is, $_Cyer$ is reinterpreted as $_C.yer$ by coda-capture: "make the onset of a nucleus that alternates with zero the coda of the preceding syllable". Hence, the [l] of $/a.p\acute{e}.l\acute{e}.ra/$ will be captured to yield $/a.p\acute{e}.l\acute{e}.ra/$, and all $/\acute{e}/$ s in closed syllables will then be turned into $[\epsilon]$ (thus also the original ones in $/a.p\acute{e}.l/$).

I argue that it is not by accident that the highly specific yer-context recurrently governs various alternations in different languages. The same mechanism is at work in all of its instances. Making it a typological property of Slavic languages is missing an important phonological generalisation. Furthermore, I show that the French interpretation of (2) is wrong. If the Slavic analysis controls the French data, then, there must be yers in French. This is of course outlandish as long as "yer" is a high centralised vowel that occurred in Common Slavic. The modern interpretation of the word "yer", however, has always been explicit on the fact that we face an "abstract vowel". This is the line of reasoning that I shall adopt: "yers" are empty Nuclei, both in Slavic and in French. The idea that vowels which alternate with zero are actually empty Nuclei has been developed in Government Phonology (Kaye et al. 1990, Harris 1994) since some time. In this talk, I thus aim at bringing together three traditions, two of which are defined empirically (Slavic, French), while the third roots in a particular theoretical approach. A side-effect thereof is also an account for the two major patterns of vowel-zero alternations that occur across languages: Havlík ("given a chain of yers, counting from the right edge, vocalise every other yer") vs. Lower ("given a chain of yers, vocalise all of them except the rightmost one").

(1) E.g. Polish *wojn-a* "war NOMsg" shows a vowel between the [j] and the [n] in case there is no expressed suffix, *wojen* "id., GENpl", and when the consonant-initial adjectival suffix *-ny* is added, *wojen-ny* "id., adj". Hence, it looks like the alternating vowel is absent in open, but present in closed syllables. However, its distribution is further complicated by the fact that not all open syllables trigger its absence. Namely, if the following vowel is an alternating one itself, the alternation site is vocalised: *pies* "dog NOMsg", *ps-a* "id., GENsg", but *pies-ek*, not **ps-ek* "id., diminutive NOMsg". The fact that the vowel of the diminutive suffix *-ek* alternates with zero itself may be seen in *pies-k-a* "dog dim GENsg".

| (3) | alternation ó=[u], û=[uu] | __CV _x if V _x does not alternate with ø __CV | object occurring in __C{#,C} and __CV _x if V _x alternates with zero | | |
|-----|------------------------------|--|--|---------------------------------|--------------------------------|
| | | | __C# | __C.CV | __C _{yr} |
| a. | Polish o-ó | o krow-a "cow NOMsg" | ó krów GENpl | ó krów-k-a, dim NOMsg | ó krów-ek, dim GENpl |
| b. | Czech o-û | o nož-e "knife GENsg" | û nůž NOMsg | û nůž-k-y, scissors NOMpl | û nůž-ek, scissors GENpl |
| c. | Polish ą-ę | ę zęb-a "tooth GENsg" | ą ząb NOMsg | ą ząb-k-a, dim GENsg | ą ząb-ek, dim NOMsg |
| d. | Czech V-VV | VV žáb-a "frog NOMsg" | V žab GENpl | V žab-k-a, dim NOMsg | V žab-ek, dim GENpl |

(4) a. ATRness of mid vowels: Southern French varieties ("Midi French")

| | __CV _x if V _x does not alternate with ø __CV = +ATR | __C{#,C} and __CV _x if V _x alternates with zero | | |
|---|---|---|-----------------------------|----------------------------------|
| | | __C# = -ATR | __C.CV = -ATR | __Cə = -ATR |
| e | fete fêter, to party | fɛt je fête, I party | alɛrte alerter, to alert | sɛləri céleri, celery |
| o | kode coder, to code | kɔd je code, I code | pɔrte porter, to carry | mɔkəri moquerie, mockery |
| ø | apøre apeuré, frightened | øɾæz heureuse, happy | æрте heurter, to punch | øɾæzəmə heureusement, happily |

b. schwa - [ɛ]: all French varieties

| | __CV _x if V _x does not alternate with ø __CV = ə | __C{#,C} and __CV _x if V _x alternates with zero | | |
|--|--|---|--------|---------------------------------------|
| | | __C# = ε | __C.CV | __Cə = ε |
| | apəle appeler, to call | apɛl j'appelle, I call | — | apɛləra il appellera, he will call |

References

- Anderson, Stephen 1982. The analysis of French shwa: or, how to get something for nothing. *Language* **58**, 534-573.
- Dell, François 1973. *Les règles et les sons*. Paris: Hermann.
- Gussmann, Edmund 1980. *Studies in Abstract Phonology*. Cambridge Mass.: MIT Press.
- Harris, John 1994. *English sound structure*. Oxford: Blackwell.
- Kaye, Jonathan, Jean Lowenstamm & Jean-Roger Vergnaud 1990. Constituent structure and government in phonology. *Phonology Yearbook* **7**, 193-231.
- Lightner, Theodore 1965. *Segmental Phonology of Contemporary Standard Russian*. Ph.D. dissertation, MIT.
- Rubach, Jerzy 1984. *Cyclic and Lexical Phonology: The Structure of Polish*. Dordrecht: Foris.
- Szpyra, Jolanta 1992. Ghost segments in nonlinear phonology: Polish yers. *Language* **68**, 277-312.
- Tranel, Bernard 1987. Floating Schwas and Closed Syllable Adjustment in French. *Phonologica* 1984, edited by Wolfgang Dressler, Hans Luschützky, Oskar Pfeiffer & John Rennison, 311-317. London: Cambridge University Press.