

Prosodic boundaries and the behavior of monosyllabic Czech prepositions

Scott McClure
scott.mcclure@yale.edu
Yale University

This paper provides a theoretical analysis of stress assignment in Czech prepositional phrases. I show, on the basis of evidence collected in a recent corpus study, that the characterizations that have been put forth in the previous descriptive work on Czech miss certain key generalizations about the interaction of prosodic boundaries and stress assignment in prepositional phrases. I go on to demonstrate that these correct generalizations can be captured under both a rule-based and a constraint-based theory of clitics.

Czech is a stress-initial language, in which lexical words appear with the first syllable stressed. However, there are certain monosyllabic words in Czech that can surface without stress: in particular, the second-position clitics never appear with stress, and monosyllabic prepositions are only sometimes stressed. In certain contexts, these monosyllabic prepositions appear with stress, and with no stress on the following lexical word, while there are other contexts in which they appear without stress, and with typical word-initial stress on the following lexical word. For example, the prepositional phrase *do školy*, ‘to school (gen.)’, can be realized as either *'do školy* or as *do 'školy*, depending upon the context. The study presented here is concerned with distinguishing contexts that call for stress to fall on the preposition from the contexts that call for stress to fall instead on the following lexical word.

To date, this question has not received rigorous treatment in the literature. Most authors repeat some variation of the ČSAV's² (1986) description of stress assignment within the prepositional phrase. According to this description, the preposition will surface with stress at the expense of the lexical word to its right (i.e., the *'do školy* pattern) unless one of the following three conditions is met:

- (1) Contrastive focus falls on the lexical word that follows the preposition.
- (2) The next lexical word is an indeclinable adverbial.
- (3) The next lexical word is ‘very long’.

At the very least, though, this set of conditions does not characterize the full set of contexts in which the *do 'školy* pattern is used in place of *'do školy*. In particular, the study presented in this paper finds that the *do 'školy* pattern is preferred to the *'do školy* pattern whenever there is no prosodic boundary to the immediate left of the preposition. This is consistent with an analysis in which the preposition is an enclitic onto the phonological material to its left when no boundary is present, and in which the preposition is the initial, stressed syllable of a phonological word consisting of the preposition and the following lexical word in contexts where a prosodic boundary is present to its immediate left. In short, the results show that an accurate account of stress assignment on monosyllabic prepositions in Czech must take the placement of prosodic boundaries into consideration.

The study analyzes news broadcasts from two female and two male speakers on the Radio Prague network. Recordings of the news stories were downloaded from the Radio Prague website and

² The Czechoslovak Academy of Science, ČSAV.

analyzed in Praat. In accordance with the prosodic constituents recognized in Czech in the work of Palková (1974, 1994), Dankovičová (1997, 2001), and others, the potentially relevant prosodic constituents were assumed to be the prosodic word (PWd), the intonation phrase (IP), and the sentence (S). The prosody of prepositional phrases in IP-medial, IP-initial, and S-initial positions were compared. In IP-initial and S-initial positions, all 13 out of 13 monosyllabic prepositions were realized with stress falling on the preposition, and no stress falling on the following lexical word. This contrasts with IP-medial positions, where only 8 out of 48 monosyllabic prepositions were realized with stress falling on the preposition. In the remaining 40 out of 48 tokens, the preposition was unstressed and stress instead fell on the initial syllable of the lexical word following the preposition. In many of these tokens where the preposition was unstressed, the pitch-track followed an uninterrupted downward slope through the preceding lexical word and the preposition itself. These facts indicate that a monosyllabic preposition can usually be characterized as an enclitic on the prosodic material to its immediate left. In cases where an IP-level or S-level prosodic boundary intervenes between the preposition and the next prosodic word to its left, however, this cliticization cannot occur.

The paper goes on to discuss the theories of clitics that can be used to analyze these generalizations. The findings from this experiment can be readily incorporated into a rule-based system that controls the prosodic behavior of prepositions on the basis of their prosodic context. A system of ranked, violable constraints—such as the kind of system familiar from Prince and Smolensky (1993), and revised to make it applicable to the behavior of clitics in Anderson (2005)—can also account for prepositions' behavior, as long as the set of constraints is adequate. The three-parameter system for determining clitic placement laid out in Klavans (1985) cannot be used, however, to describe the behavior of these prepositions: while Klavans provides a theory of clitic placement, her three-parameter system cannot capture the alternation between stressed and unstressed forms depending on whether there is a prosodic boundary to the left of the preposition. Instead, the theory must be able to capture the fact that the preposition will only be stressed if the preposition cannot be an enclitic on the prosodic word to its left.

References

- Anderson, Stephen R. 2005. *Aspects of the theory of clitics*. Oxford studies in theoretical linguistics 11. New York, N.Y.: Oxford University Press.
- Československá Akademie Věd. 1986. Jan Petr, ed., *Mluvnice češtiny*, vol. 1: fonetika, fonologie, morfonologie a morfemika, tvoření slov. Prague, Czechoslovakia: Academia.
- Dankovičová, Janá. 2001. *The linguistic basis of articulation rate variation in Czech*. Frankfurt am Main, Germany: Forum Phonetikum 71.
- Dankovičová, Janá. 1997. The domain of articulation rate variation in Czech. *Journal of phonetics* 25: 287 – 312.
- Klavans, Judith L. 1985. The independence of syntax and phonology in cliticization. *Language* 61: 95 – 120.
- Palková, Zdena. 1974. *Rytmičká výstavba prozaického textu*. Studie ČSAV 13. Prague, Czechoslovakia: Academia.
- Palková, Zdena. 1994. *Fonetika a fonologie češtiny*. Prague, Czech Republic: Karolinum.
- Prince, Alan; and Paul Smolensky. 1993, revised 2002. Optimality theory: constraint interaction in generative grammar. Available online as ROA-537 from the Rutgers Optimality Archive at roa.rutgers.edu.