

**INTERNATIONAL
JOURNAL OF
SLAVIC LINGUISTICS
AND POETICS**

XXXVIII

1988/1995

Slavica Publishers, Inc.

REVIEW

Ilse Lehiste and Pavle Ivić: *Word and Sentence Prosody in Serbo-Croatian*. Cambridge: MIT Press, 1986. xiii + 329 pp.

1.0. As they explain in the introduction, Lehiste and Ivić began their collaboration on the study of Serbo-Croatian prosody in 1960. It should come as no surprise, therefore, that this volume contains the most thorough discussion to date of the phonetic and phonological aspects of Serbo-Croatian word and sentence intonation. The authors have reproduced here the results of earlier work, with current interpretations (or reinterpretations) of that work, along with an analysis of their newest research, which is published here for the first time. In addition, they have included lengthy surveys of earlier work by other scholars on various aspects of Serbo-Croatian prosody. Considering both this fact and the concise organization of the book, it should also be easy to understand that one cannot, in the space of a review, include an exhaustive discussion of so rich a volume. I will attempt to provide here a description of the structure of the book, as well as of the goals, methods and major conclusions reached by the authors, reserving my own comments for only some of the issues discussed.

Not all accent-related questions are addressed in this volume. Ivić and Lehiste describe it as "an investigation of the phonetic (and phonological) nature of prosodic distinctions and not of their use in either morphophonemics or the lexicon..." (p. 2). The authors also assiduously avoid any discussion of diachrony, except for a simplified explanation of the neoštokavian stress shift (p. 1), the evidence of Slavonian dialects on the process of the neoštokavian stress shift (pp. 91-92), and noting Simić's¹ characterization of a more archaic northern neoštokavian stress system and a more innovative southern neoštokavian system (p. 249). These limitations allow the authors to address a single complex issue — the description and phonological status of Serbo-Croatian word accents — from several sets of facts which they have studied in some detail, without being drawn into speculation on broader aspects of the problem. Still, the reluctance of the authors to relate the phonological aspect of the problem to the morphophonemic issues, if only briefly, as well as the lack of any discussion of the diachronic implications of their work, will require comment below.

2.0. The volume is divided into four sections, each consisting of a single chapter. The first is a history of Serbo-Croatian accentology. The second contains a phonetic analysis of word prosody. The third chapter examines sentence intonation and its relation to word prosody. The

fourth chapter is devoted to the question of the phonological analysis of Serbo-Croatian word accents. As the authors themselves state, the first two chapters are more complete and reliable, both in terms of the data presented and the conclusions which can be drawn from them. The experiments on sentence prosody (and therefore also the conclusions which can be drawn from them) are at a less advanced stage.

2.1. Chapter 1, after a brief introduction to the aims of the volume, contains a survey of opinions on the nature of the Serbo-Croatian accents, based on non-experimental methods from the early nineteenth century up to modern times. Special attention is given to the views of Masing, as well as to the process by which the terms "short falling," "short rising," "long falling" and "long rising" gained acceptance in the scholarly community. The survey is probably exhaustive, and documents in almost painful detail the chaos of contradictory opinions which was only partially resolved over a century and a half of research. The inescapable conclusion to be drawn from this chapter is that we simply cannot reach reliable conclusions about the nature of Serbo-Croatian word accents in the absence of rigorous experimental methodology. Just as importantly, it becomes clear from this development that the designations "short falling," etc., which are taken for granted today as accurate descriptions of phonetic reality by many students of the language, do not correspond to any universally held intuition on the part of native speakers, and gained general usage only following a government edict aimed at developing a standardized terminology for language textbooks (p. 28).

2.2. Chapter 2 is the heart of the authors' presentation. It is devoted to the elucidation of the factors which contribute to the contrast between the four types of accent, and especially to the question of just which of these factors are primary, or distinctive. Both instrumental analysis of speech samples and listening tests based on synthesized speech segments are used. The greatest attention is paid to patterns of fundamental frequency, both within the accented syllable and in the relation between the accented and post-accentual syllable. The authors attempt to provide a conclusive answer to the question of whether it is meaningful, and, if so, in what sense it is meaningful, to speak of rising and falling accents. The discussion of circumstances in neoštokavian is supplemented by a description of the accents of čakavian, kajkavian and Slavonian, each of which retains the so-called neoacute accent. Ivić and Lehiste also discuss the contribution of intensity and duration to the identification of an accented syllable, the effect of prosody (especially length) on vowel quality, the prosodic qualities of the word as a whole, and the effects of juncture on prosody.

The authors' primary conclusion is that the only consistent difference between so-called rising and falling accents is in the relation between the

accented and post-accentual syllables, a syllable following the "rising accents" having a higher fundamental frequency level than one following the so-called "falling accents." As for the tonal contour within the accented syllable itself, a syllable under a "rising accent" is more likely to have a rising F_0 pattern overall, while a syllable under a "falling accent" is more likely to have a falling F_0 pattern. Many counterexamples do occur, though, to this tendency within the accented syllable, often on account of position in the word or sentence, or due to the sentence intonation pattern.

Listening tests conducted by the authors confirm this conclusion. They nevertheless concede, and this is borne out both by their instrumental analyses and by listening tests, that there appears to be a pattern of regional variation. In the north, and particularly in Vojvodina, the conclusions just mentioned are especially valid. In southern, and especially southwestern areas, however, listeners depend more heavily (though not exclusively) on cues from within the accented syllable than on its relation to the following syllable to identify an accent as "rising" or "falling." Similarly, in their production, these (southern) speakers show less of a sustained high tone in the syllable following a "rising" accent than is the case with speakers from northern areas. The evidence adduced is quantitatively insufficient to be considered compelling, and supplementary studies, aimed specifically at elucidating this apparent variation should be undertaken. Still, such variation is in accord with the view of Simić (1977; discussion on p. 249 of the volume under review) on distinct northern and southern neoštokavian prosodic systems, as well as with our expectations based on dialect geography. We will return to this question below.

As in the first chapter, chapter 2 also contains a survey of experimental studies by other authors on the nature of Serbo-Croatian word accents.

2.3. In the third chapter, devoted to sentence intonation, major conclusions fall into two categories. One is the effect of position in a sentence and of the sentence intonational pattern on word accents. The other concerns the prosodic shape of a sentence itself.

With regard to the latter issue, the shape of a simple declarative sentence is shown to be gradually falling from beginning to end. The prosodic word and word accents fit themselves into this pattern as in vector addition, their own patterns being relative to the overall intonational pattern of the sentence, rather than to a level basic fundamental frequency. "Morphologically unmarked yes-or-no questions," and those "with *li* attached enclitically to the predicate," exhibit the "reverse pattern," in which the word in focus contains a "negative peak" — a falling-rising contour on the accented syllable, and a rising or rising-falling contour on the following syllable. Questions which begin with "Da

li ...” may contain either the reverse pattern or normal declarative sentence intonation. In questions which begin with *kada* ‘when,’ the F_0 frequency on the initial question word is higher than is normal in declarative sentences. Otherwise, such questions follow the normal declarative sentence intonation contour.

It would have been useful for the authors to relate their findings to the Russian system of intonational constructions (IK’s: cf. Bryzgunova 1981)². The reverse pattern, as described by the authors and illustrated in spectrograms and charted data, bears a striking resemblance to the Russian IK-4 (cf. Bryzgunova 1981:46). This Russian contour is usually described as applying primarily to elliptical questions beginning with the conjunction *a*, but is also a common variant for morphologically unmarked yes-no questions. The intonational pattern of questions beginning with *kada* is strikingly similar to the Russian IK-2, which is used in that language in analogous types of questions. The Russian IK-3, the normal means in that language for expressing morphologically unmarked yes-no questions, seems to be absent in Serbo-Croatian. Similarly, the intonational contour for simple declarative sentences in the two languages (Russian IK-1 vs. the gradual fall throughout the sentence described by the authors for Serbo-Croatian) would seem to be significantly different. The combination of striking similarities and equally striking differences between the sentence intonational patterns of Russian and Serbo-Croatian suggests that it is time to begin a survey of the intonational patterns of all the Slavic languages (and probably also non-Slavic languages of Europe) in order to discover areal features and to begin to understand how this situation came to be.

With regard to the effect of sentence intonation on word accents, the authors demonstrate that the distinction between “rising” and “falling” accents is subject to partial or complete neutralization in certain contexts. Complete neutralization of this distinction occurs, for example, under the “reverse pattern” even in long syllables. In final position in declarative sentences the falling-rising distinction may be neutralized, or may be maintained in the form of a greater likelihood of laryngealization in post-accentual syllables following “falling” accents than following “rising” ones. In the final position of a non-final clause, there is a characteristic rise on the stressed syllable, followed by a minimal fall. In this context there is a tendency to neutralize the distinction between the short accents, but not between the long ones.

As in previous chapters, the authors include a survey and evaluation of research by other scholars on Serbo-Croatian sentence intonation.

2.4. In chapter 4, the authors draw upon the results of their research to address the question of the phonological status of the Serbo-Croatian accents. As in the first chapter, they begin with a history of the problem, starting with Jakobson (1931)³. From that time onward researchers have

realized that it might be possible to achieve greater economy of description by reducing the number of relevant features from three (place of stress, length, and tonal contour) to two. Two general points of view have been expounded. Some, like Jakobson, note the presence of high tone on the syllable bearing a rising accent and consider this syllable the bearer of the phonological stress. Others acknowledge the relevance of the post-accentual syllable. Of those adhering to the second point of view, Ivić (in earlier work, especially 1965)⁴ recommended placing a high-tone marker *between* the accented syllable and post-accentual syllable in the case of "rising" accents. Others (e.g., Browne and McCawley 1965/1973)⁵ place the relevant tonal marker *on* the post-accentual syllable.

Of particular interest is the "compromise" scheme of Simić (1977). Simić distinguishes a more conservative northern neoštokavian system in which tone on the post-accentual syllable is considered phonologically relevant, from more innovative southern dialects in which the tonal contour on the accented syllable itself is considered relevant.

None of the schemes which have been suggested to date are without drawbacks. Those which place the relevant features on the accented syllable must find some way to specify the participation of the following syllable in the tonal contour (presumably by the admission of an implicit feature of 'presence or absence of high tone' on that syllable, thus sacrificing the economy of the description, A. C.). On the other hand, those who place the relevant features for determining word stress on the following syllable (or on the syllable boundary between the two syllables) find themselves in conflict with native speakers' unambiguous feeling that it is indeed the first of the two syllables which is the bearer of the stress.

The authors' solution to this dilemma is based on a distinction of the various functions of word stress in Serbo-Croatian. They reason that Serbo-Croatian word stress fulfills both a culminative function (i.e., it aids in the delimitation of the phonological word), and a distinctive function (i.e., words may be distinguished from one another by the nature of their accent). Since native speakers hear the accent unambiguously on the first of the two syllables which participate in a "rising" tonal contour, clearly it is on that syllable that the culminative accent must be said to fall. With regard to the distinctive function of accent, however, the authors' researches have shown that in all neoštokavian dialects the post-accentual syllable plays the primary role (or at least a major role) in the distinction of rising and falling accents. They would thus seem to be justified in favoring (and they do in fact seem to favor) the placement of the indicator on the post-accentual (i.e. second) syllable of a rising tonal contour.

It may seem awkward to spread the prosodic information of a word over two syllables, and in this respect the authors' suggestion is perhaps

at a disadvantage in comparison with earlier systematizations of Serbo-Croatian word stress. Its advantages, however, are also easy to see. Unlike earlier schemes, this one is in conflict neither with experimental evidence nor with native speakers' intuition. In addition, rather than being subject to criticism for increasing the complexity of the description, the positing of a distinction between the culminative and distinctive functions of word stress simply acknowledges the presence of a complicating factor which has been present all along, whether or not we were prepared to see it.

The admission of the separate roles played by the culminative and distinctive functions in defining the shape of the Serbo-Croatian word accents may thus be seen as a virtue, rather than a disadvantage, of Ivić's and Lehiste's analysis. Rather than attempting to force the system of word stress into a theoretical "straitjacket" — an explanation which attempts to limit the number of relevant features to two at any cost — the authors have seen fit to expand their explanation to take into account both form (observed and experimentally controlled) and the intuition of the native speakers of the language. To the extent that intuition can be said to be in conflict with observed patterns in the data, this should be seen as a significant fact (which may in fact have a direct influence on future developments in the language), and not as an anomaly which we should strive to eliminate through theoretical sophistication.

The authors do not formalize their ideas in a notational system. From earlier discussion, it seems clear that their proposal could be implemented within the notations proposed by Browne and McCawley (1965/1973), or Ivić (1965: 1965a in the volume's bibliography).

The one surprising omission in the discussion of the phonological status of the Serbo-Croatian word accents is any mention of the question of stress shift onto proclitics. It is true that the authors state at the outset that "The study of morphophonological prosodic alternations likewise falls outside the scope of this book..." (p. 2). Still, Browne and McCawley (1965/1973) have explicitly discussed the relevance of "recessive" vs. "neoštokavian" (these terms are not used by the authors) retraction for the phonological status of the Serbo-Croatian word accents. The absence of any comment on this issue by Ivić and Lehiste seems to reflect the authors' wish, to the extent possible, to keep their description of the phonological status of the Serbo-Croatian word accents within the framework of taxonomic phonology. Still, we are forced to wonder whether the authors feel that this distinction does not lend any significant new arguments to the discussion, or whether they perhaps consider the distinction of "recessive" vs. "neoštokavian" retraction sufficiently marginal and decadent that it can no longer be reliably used as evidence of the phonological status of the word accents.

3.0. The other striking omission in this book is any discussion of diachrony. As noted above, the authors carefully avoid discussing the historical implications of their researches, except where unavoidable. They thus note Simić's proposal that the southern neoštokavian dialects are innovating in the direction of phonologically monosyllabic rising accents, but they do not discuss the validity of this suggestion in detail. They also discuss in some detail the processes by which neoštokavian rising accents are developing in the Slavonian dialects, while interacting with the old metatonic (neoacute) rising accent, which is retained in this region.

In general, the changes in a linguistic system over time provide insight into the synchronic structure of the language during the period under study. In this particular instance, however, developments within neoštokavian accentuation may also provide valuable clues for the overall pattern of development of word prosody from Common Slavic to the present. Specifically, the proposal of Simić, if justified, yields strong evidence for the cyclic nature of accentual processes in Slavic. If neoštokavian is indeed developing in the direction of a monosyllabic rising stress, might we not wish to hypothesize that the metatonic acute followed a similar course of development, first as a disyllabic accent, and only following the fall of weak jers and the loss of the original Common Slavic rising-falling distinction being reinterpreted as a monosyllabic rising accent? We would thus have a cyclic process of prosodic change, with Common Slavic tone being eliminated and replaced by neoacute tone, the latter itself being eliminated and subsequently replaced by neoštokavian tone. Throughout this process the place of stress in existing words would gradually migrate toward the first syllable. Needless to say, it is easy to become overly speculative in discussing such matters. Still, the hypothesis of cyclic prosodic change does involve certain testable predictions, particularly concerning the phonetic characteristics of pretonic syllables. It is therefore imperative that we discover whether the facts of neoštokavian do in fact suggest such a process.

Whether or not neoštokavian is innovating in the direction suggested by Simić, we must agree with the authors that at the present time the tone of the post-accentual syllable remains relevant in all neoštokavian dialects. Were this not the case — that is, if there were neoštokavian dialects in which all prosodic information was located within the ictus-bearing syllable — we would predict for such dialects the rise of some words or forms with rising accents in final syllables, or new forms consisting entirely of Serbo-Croatian elements with internal falling accents. In other words, we would expect developments analogous to the spread of the neoacute accents beyond their original "phonetic" environments, as in verbs of the type of Russian *ношú, нóсишь*, etc.

4.0. The combination of concise organization and detailed discussion makes this volume useful both to specialists in Slavic linguistics and to researchers just beginning their study of Serbo-Croatian prosody. The authors have included in the appendices lists of the test words and sentences used in their research, along with English glosses of those words and sentences.

The book does contain a number of technical flaws, apparently resulting from oversights in the final editing. Since these do not in general affect comprehension, and are quite insignificant when set against the importance of this work for the study of prosody, both in Serbo-Croatian and in general linguistic research, I feel that it is justified, indeed fitting, to omit any discussion of them here.

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Notes

¹ Radoje Simić. "Srpskohrvatska ortotonija i slovenski akcent (Sto godina jedne naučne dileme)," *NSSVD* 6:35–46.

² Е. А. Брызгунова. *Звуки и интонация русской речи*. 4-е издание, переработанное. Москва: «Русский язык».

³ Roman Jakobson. "Die Betonung und ihre Rolle in der Wort- und Syntagmaphonologie," *TCLP* 4:164–182. Reprinted in *Selected Writings I. Phonological Studies*. The Hague: Mouton, 1962, pp. 117–136.

⁴ "Prozodijski sistem savremenog srpskohrvatskog standardnog jezika," *Symbolae linguisticae in honorem Georgii Kuryłowicz*, pp. 135–144. Wrocław-Warszawa-Kraków: Polska Akademia Nauk. The reference on p. 245 of the volume under review to Ivić 1965b should read 1965a.

⁵ "Srpskohrvatski akcent," *ZFL* 8:147–151. Reprinted in English as "Serbo-Croatian Accent," in *Phonology: Selected Readings*, edited by Erik C. Fudge, pp. 330–35. Penguin Books, 1973.