Teodora Radeva-Bork. *Single and double clitics in adult and child grammar*. Frankfurt am Main: Peter Lang, 2012. [xvi] + 230 pp.

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Clitics have intrigued linguists for decades. By definition, they occupy an intermediate position between words and affixes (e.g., 's in English). They fulfill syntactic roles but do not carry stress and form a phonological unit with the preceding or following word. In *Single and double clitics in adult and child grammar*, Teodora Radeva-Bork presents fresh observations and new data on the topic. The main contribution of the work is empirical data on the acquisition of direct-object clitics and direct-object clitic doubling in Bulgarian. The book, however, makes important theoretical contributions to the understanding of these phenomena cross-linguistically.

While the intended audience of the book is scholars of syntax and first-language acquisition, the book is accessible also to non-experts. Chapter 1 provides a useful overview of the book, chapter 2 goes into depth in the definition of clitics and the evolution of theoretical thinking about them, and chapter 7 presents a bullet-point summary of the main arguments and findings. Extensive cross-referencing within and between chapters also contributes to the clarity and coherence of the work.

The core is clearly organized, presenting two pairs of a theory-focused chapter and an empirical chapter. The first pair (chapters 2 and 3) focuses on single clitics, and the second (chapters 4 and 5) on clitic doubling. Chapter 2 provides an overview of the definition of clitics, their spread, and the current theoretical landscape with respect to single clitics. Bulgarian has direct-object clitics, indirect-object clitics, and auxiliary clitics, but the book concentrates on direct-object clitics. The chapter develops the idea that Bulgarian direct-object clitics ("clitics" henceforth) are case markers (K heads) but that they also have agreement properties.

Chapter 3 begins by shedding light on an intriguing pattern in the crosslinguistic data on the acquisition of clitics. In some languages (Catalan, French, Italian, and European Portuguese) clitics emerge

around age three and go through a stage during which children omit them. In other languages (Spanish, Romanian, Greek, and Croatian), children begin to produce clitics around age two and make few errors. Unlike other scholars, who have focused on explaining clitic acquisition in a single language (usually one showing a late emergence pattern), Radeva-Bork looks for an explanation of the cross-linguistic pattern. She suggests that the explanation can be found in the Unique Checking Constraint (Wexler 1998). On the basis of this constraint, she suggests that Bulgarian children should show early emergence of clitics, even though other recent data have suggested that this is not the case (Ivanov 2008). But Radeva-Bork supports her prediction with data from two elicited production studies with Bulgarian two- to four-year-old children, the data for which are extensively presented and discussed. The children show practically error-free use of the clitics, a pattern indistinguishable from adult performance.

Clitic doubling refers to the doubling of a verbal argument by a weak pronoun (the clitic) within the same clause. Chapter 4 overviews the spread of this phenomenon (with a focus on the Balkans) and its current treatments. Radeva-Bork argues that, unlike in Romance languages where clitic doubling may result from left or right dislocation of an argument, in Bulgarian it is genuine clitic doubling. This is shown by the lack of a prosodic boundary between the clitic and its adjacent associate. The chapter also makes the case that there are three types of triggers of clitic doubling in Bulgarian: object marking (especially when non-SUBJ-first word order is used), topic marking, and accusative or dative experiencers (again conditioned by word order).¹ Previously research has emphasized semantic factors, and Radeva-Bork presents data suggesting that syntactic conditions and information structure are stronger constraints on clitic doubling in colloquial Bulgarian.

¹ Compare (ia), an OVS sentence where the accusative experiencer requires a clitic, to (ib), its SVO counterpart, where no clitic is required.

⁽i) a. Decata *(gi) boljat krakata. children_{DEF} them_{CL,ACC} hurt legs_{DEF}

b. Krakata boljat decata. $legs_{DEF}$ hurt children $_{DEF}$ 'The children's legs hurt.'

After reviewing acquisition data from Spanish, Greek, and Albanian, chapter 5 goes on to report a study on the acquisition of clitic doubling in Bulgarian. In particular, the study investigates the interpretation of sentences containing syntactically triggered clitic doubling, where a clitic is required in order to get the intended reading of OVS sentences.² Radeva-Bork uses an elicited comprehension task, also known as a sentence-to-picture matching task, in which the participants need to choose the picture corresponding to the sentence. While the adults pick up the intended referent 100% of the time, the two- to four-year-old children are on average 54% correct. On the basis of this result, the author concludes that clitic doubling is a means of object marking in child grammar, albeit an optionally used one (p. 181).

In chapter 6, Radeva-Bork addresses the contrast between the relatively early mastery of single clitics and the relatively late mastery of clitic doubling. The proposal she puts forward is that single clitics rely on language-internal computations (involving syntax and phonology), while clitic doubling requires computations involving also pragmatics.

A notable limitation of the work is in the treatment and interpretation of data. One open question is the conflicting findings on children's acquisition of direct-object clitics (chapter 3) and those reported by Ivanov (2008), especially as the two studies are based on the same procedure. Radeva-Bork points to several factors that may bear on the different outcomes of hers and Ivanov's studies: sociolinguistic factors (e.g., the different urban centers where the research was conducted), differences in the number of items used, lack of information in Ivanov's study about whether children used full DPs instead of clitics, and attention to the children's mean length of utterance. On a closer consideration, perhaps only the last factor is significant. One also cannot help noticing that if the age groups of the two studies are aggregated so that the age ranges roughly match (2;0-3;0, 3;1-4;6), then the differences in clitic usage are not that great (see Table 1), even though differences in correct usage may remain. There is an intuitive appeal in the conclusions of Radeva-Bork as they fit neatly into her theoretical framework. Yet there is need for further data and perhaps agreement on what rates of clitic usage and error count as "adult-like" to substantiate her proposal.

² SVO is the most frequent word order in Bulgarian.

Table 1. Comparison of Ivanov's and Radeva-Bork's data on clitic production, aggregating across age groups

Age group	Ivanov (2008)	Radeva-Bork (2012)
2;0 – 3;0	45% (n = 32)	58% (n = 17)
3;1 – 4;6	88% (n = 32)	89% (n = 29)

Furthermore, the conclusions drawn on the basis of the clitic-doubling data presented in chapter 5 seem unwarranted. To see why, consider the task and what response pattern indicates chance behavior. There are three pictures to which the sentence can be matched. This may suggest that chance is 33%. But really children are choosing between two pictures because the third one can be eliminated on the basis of the lexical non-overlap with the sentence. Indeed, children never pick the picture with without lexical overlap. While this picture may make the sentence pragmatically felicitous (creating an appropriate pragmatic context for clitic doubling), it is not a realistic response option. Thus, chance responding in this task is 50%. None of the child groups responds reliably differently from 50%. Thus, the conclusion that Bulgarian children understand clitic doubling as a means of object marking is not really supported by the data. If children had shown clitic doubling 50% of the time in the context of elicited production, that could have been taken as evidence that they have some knowledge of its syntactic function. However, chance performance in a forced choice paradigm does not allow one to draw similar conclusions. Children may simply have chosen an answer based on the lexical match between the sentence and the two pictures; there is no evidence that they understood the role of the clitic.

Despite these reservations, Radeva-Bork's monograph unquestionably makes both empirical and theoretical contributions to the study of clitics and their acquisition. Empirically, Radeva-Bork's research presents a much-needed installment of child language data from Bulgarian. Although the interpretation of the data on clitic doubling is problematic, the author presents the data carefully and with extraordinary detail, allowing readers to draw their own conclusions and build on the present work. Theoretically, the synthesis of existing cross-linguistic data is particularly impressive and one of the book's strongest aspects. The resulting insights are likely to inspire much future work on clitic acquisition across languages.

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