

From P2-clitic to verb-clitic: three approaches to an explanation

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0 Introduction

The Romance and Slavonic families provide well-documented examples of the change from a second-position (P2) clitic system to a verb-adjacent clitic system.¹ In Latin clauses, for instance, the clitics in question occurred at P2, but in the modern Romance languages; French and Spanish, the corresponding clitics are positioned adjacent to the verb. Similarly, on the basis of Old Church Slavonic, Common Slavonic is assumed to have had a P2-clitic system, and the same type of system is preserved in the majority of the Slavonic languages, but modern Bulgarian and Macedonian position their clitics adjacent to the verb. It is obviously of interest, therefore, to explain how a P2-clitic system changes to a verb-clitic system. This article will briefly consider three rather different approaches.

1 A minimalist generative approach

In their discussion of the Slavonic languages generally, Franks & King (2000:311-30) analyse the P2-clitic languages, i.e. the majority of the Slavonic languages, in the following terms. Pronominal clitics are base-generated as arguments of the verb and, like all NPs in these languages, they are part of a higher KP (case phrase). From their argument positions they raise, as K^0 heads, to Agr, for case-checking purposes. Specifically, dative clitics move to AgrIO; accusative clitics to AgrO; and reflexive clitics to Ref. The majority of the auxiliary-verb clitics (those which precede the pronominal clitics within a clitic cluster) are treated as AgrS heads, but those auxiliaries which occur at the end of a clitic cluster, such as Slovene 3sg. *je* or the Slovene future auxiliary *bom, boš, bo...*, are analysed as heading a Tense phrase. In the verb-clitic languages Bulgarian and Macedonian, on the other hand, pronominal clitics do not occur as arguments but rather are treated as pure agreement markers. As such they are base-generated under Agr. Adjacency between clitics and the verb, in these languages, is achieved by movement of the verb. Verb-clitic languages also exhibit the phenomenon of "clitic doubling", illustrated by the Macedonian sentence in (1):

- (1) Marija go poznavava učenikot [Mac]
 Mary him knows pupil.DEF
 'Mary knows the pupil'

(In P2-clitic languages, where clitic objects are arguments of the verb that subsequently move to Agr, there is no possibility of clitic doubling, since a clitic object in an argument position rules out the possibility of a full NP occupying that same position.)

As regards the history of Bulgarian and Macedonian, Franks & King see the loss of case and the introduction of articles, which are also characteristic of these languages, in terms of the original KP giving way to a DP (determiner phrase), and the K^0 morpheme – instead of moving to Agr – being reanalysed as base-generated in Agr

¹ The clitics with which we are concerned correspond to independent words from a number of categories including, in particular, object pronouns and auxiliary verbs. That the change in question is not limited to Indo-European, is demonstrated by Steele (1977:539) on the basis of Uto-Aztecan data.

(2000:318). Thus they treat the loss of case and the rise of articles as triggering the change from the P2-clitic system of 'Older Bulgarian' [and 'Older Macedonian'] to the verb-clitic system of the present-day languages.

The work of Ritel (1975) and Andersen (1987) on Polish demonstrates that over the last 500 years this language has been gradually undergoing a change from a P2-clitic system to a verb-clitic system (and the further stage at which the verb-clitics become verb inflections). (See also Bennett 2002:180-83 for further discussion.) However, Polish still has a rich case system and it has not developed articles. Polish thus demonstrates that the Franks & King (2000:318) 'diachronic scenario' is not generally valid as an explanation of the shift from a P2-clitic system to a verb-clitic system.

2 A competition-based network-grammar approach

The second approach (Bennett 2002:179-80, 184-5) started from 'functional', as opposed to 'formal', considerations. It was suggested that in a P2-clitic system the clitics are positioned on the basis of discourse structure, including information structure (Halliday 1994), and are specifically 'thematic' and 'given', whereas in a verb-clitic system they are positioned on the basis of their semantic relatedness to the verb.² Three varieties of P2-clitic placement are illustrated by the Slovene, Croatian and Serbian examples in (2) – (3), taken from the respective translations of George Orwell's *Nineteen Eighty-Four*. (The clitics are italicised in the three Slavonic sentences, and hold emphasis in the English original indicates which constituent is the obvious candidate for tonic stress in the discourse context in question.)

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|-----|---------------------|-----------|------------|------------|------------|-----------|--|--|
| (2) | [Če ne-] <i>vam</i> | <i>bo</i> | slovar | izročil | moj | služabnik | [Sin] | |
| | if not to-you | will | dictionary | hand-over | my | servant | | |
| | | | | | | | 'If not,] my servant will give you the dictionary.' | |
| (3) | a. | moj | če | <i>vam</i> | sluga | dati | riječnik | [Cro] |
| | | my | will | to-you | servant | give | dictionary | |
| | b. | moj | sluga | če | <i>vam</i> | dati | rečnik | [Ser] |
| | | my | servant | will | to-you | give | dictionary | |
| | | | | | | | | ' my servant will give you the dictionary.' |

The main clause of the Slovene example, (2), is a classic case of a clause that progresses (in Hallidayan or Prague-School terms) from what is maximally 'thematic' and 'given', to what is maximally 'rhematic' and 'new', or, alternatively, that exhibits a progressively increasing level of 'communicative dynamism'. As regards the suggestion that the clitics here are 'thematic' and 'given', *vam* 'to-you' is situationally given, in that it refers to the addressee, and the futurity signalled by *bo* 'will' is predictable in the sense that the event of handing over the dictionary necessarily follows the situation alluded to in the subordinate clause *Če ne* 'If not'.

That the clitics in (2) occur in clause-initial position in the main clause depends also on the fact that the Slovene clitics in question are prosodically neutral, i.e. able to be attached to a neighbouring accented word either enclitically or proclitically (Toporišič 1976:58, 535). Sentence (2) would typically be said with an intonational break after *Če ne* 'If not', and the clitics are then attached to the following accented word *služabnik*

² We are concerned here exclusively with the positions occupied by clitic clusters as a whole. The important issue of the order of elements within a clitic cluster is ignored in this article.

'dictionary'. Even though the clitics in this example occur in clause-initial position in the main clause, it is nevertheless appropriate to describe them as P2 clitics. Just as in German, the (non-clitic) verb *gehe* 'go' occurs in second position in both (4) and (5) – since the subordinate clause *Wenn es regnet* 'If it rains', like the adverb *Jetzt* 'now', occupies the first slot within the sentence as a whole – so also in (2) the subordinate clause *Če ne* 'If not' occupies the first slot within the overall structure of this sentence; and the clitics, which immediately follow the subordinate clause, are therefore in second position.

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|-----|------------------------|-------------|-------------|--------------|----------------------|-------|-------------------------------|
| (4) | <i>Jetzt gehe</i> | <i>ich</i> | <i>nach</i> | <i>Hause</i> | [Ger] | | |
| | now | go | I | to | home | | |
| | | | | | 'I'm going home now' | | |
| (5) | <i>Wenn es regnet,</i> | <i>gehe</i> | <i>ich</i> | <i>nach</i> | <i>Hause</i> | [Ger] | |
| | if | it | rains | go | I | to | home |
| | | | | | | | 'If it rains, I'm going home' |

The corresponding Serbian and Croatian clitics are strictly enclitic, and may not follow a pause. In (3a) they follow the first word of the (main) clause, even though this entails interrupting a complex clause constituent; and in (3b) they follow this constituent as a whole. Like the issue of the order of elements within a clitic cluster (cf. fn. 2), the important difference between (3a) and (3b) is not our primary concern in this paper.

The notion of 'competition', which features in the title of this section, is relevant here in particular in connection with the shift of clitics from P2 positioning to verb-adjacent positioning. However, it is also relevant in relation to P2-clitic placement itself. Within an Optimality Theory framework (e.g. Anderson 2000), the clitics of examples (2) – (3) would be seen as conforming to a series of conflicting constraints, within which higher-ranking constraints win out over lower-ranking constraints. Assuming that an EDGEWORT constraint applies in Slovene, Croatian and Serbian, and that the clitics ideally occur at the left edge of their domain (because they are thematic in our terms), this constraint is out-ranked in Croatian and Serbian by the fact that the clitics have to be NON-INITIAL in their clause (because they are specifically enclitic).³

In connection with the view that the shift from P2-clitics to verb-clitics involves a change from discourse-oriented positioning to semantically-oriented positioning (Bennett 2002:180), it was suggested that at any given time particular clitics are subject to two different pressures – on the one hand, the pressure to congregate with other informationally non-prominent items near the beginning of a clause and, on the other hand, the pressure to be attached to the word to which they are most closely related semantically, i.e. the verb. It was suggested, in addition, that over time there is a gradual shift in the magnitude of the two pressures, such that particular originally P2 clitics gravitate progressively to the verb. Even in a primarily P2-clitic system such as that of Old Church Slavonic or Old Russian, the (accusative) reflexive clitic frequently occurred immediately after the verb rather than at P2 (Stone 1996:216, And 1975:96-97). Bennett assumed (2002:180) that in such cases the pressure to occur next to the verb was greater than the pressure to occur in the thematic position at/near

³ Among the questions facing such an analysis is that of the domain within which the constraints apply in Slovene, Croatian and Serbian.

the beginning of the clause, because reflexive verbs are often equivalent to middle voice verbs or intransitive verbs.

Given such an informal account of the facts, the next step was to consider how it might be formalised. The fact that we seemed to be dealing with competition between two possibilities, with the stronger one winning out, brought to mind Dell & Reich's (1980) computer-simulation of slips of the tongue. In a relational network grammar (RNG) framework incorporating the notion of 'spreading activation', Dell & Reich were able to simulate all categories of commonly attested slips of the tongue and also to make a number of testable predictions. To take a simple example of competition in their model, suppose the system was attempting to pronounce the 'word string' *hop deck*, it could happen that at the point where /d/ needed to be pronounced, /b/ was still receiving some degree of activation; and it could even happen that the level of activation of the /b/ would be higher than that of the /d/ – in which case the computer would 'pronounce' the perseveration error *hop beck* instead of *hop deck*. The likelihood of this happening in the simulation was related to the frequency with which the /b/ node had been used immediately before (1980:76–78). The competition in this case involves the fairly straightforward situation where two phonemes are competing to occur in the same slot. By contrast, the clitics example seemed to involve two different slots competing for the same item, which appeared rather more difficult to formalise in the RNG framework.

It turns out, however, that there is a major problem with our informal account of the change from a P2-clitic system to a verb-clitic system. If the strength of the two different pressures on clitics can change over time in such a way that discourse-oriented positioning gradually gives way to a semantically-oriented positioning, one would predict that the reverse change could also take place.⁴ Yet, on the basis at least of the Slavonic and Romance languages, this latter possibility seems not to occur. We need therefore to look for some alternative understanding of the facts, which gives specific recognition to the unidirectional nature of the change in question.

3 A lexicalisation-based neuro-cognitive approach

The RNG framework mentioned in the previous section was a continuation of the theory known originally as 'stratificational grammar' (Lamb 1966). From early on, this approach aimed not merely to characterise the knowledge that constitutes linguistic competence but also to model various aspects of performance, such as the speech-production mechanisms that give rise to speech errors (Dell & Reich 1980). In the terminology of Lamb (1999:293), the theory at this stage was aiming to meet the requirement of 'operational plausibility', i.e. to provide a plausible account of the processes of producing and understanding speech. Further work within this framework added a second requirement, that of 'developmental plausibility', according to which the theory needs to provide a plausible account of how the proposed linguistic system can be learned by children. More recently still, a third requirement has been added, that of 'neurological plausibility', according to which a successful theory of language needs to be compatible with what is known about the brain from neurology and cognitive neuroscience. To reflect its concern with this third requirement, the model is now referred to specifically as 'neuro-cognitive relational network grammar' (Lamb 1999:passim), which I will abbreviate as NC-RNG.

⁴ I am grateful to Janez Oresnik for spotting this defect of Bennett (2002). As far as I can tell, the Franks & King 'diachronic scenario' fares no better on this issue.

The crucial notion within NC-RNG, from the point of view of the shift of P2-clitic systems to verb-adjacent clitic systems, is Lamb's (1999:163–70) conception of lexicalisation. Even though a word such as *happiness* can be understood on the basis of the meanings of its constituent morphemes, the frequency with which this combination occurs is such that the lexicon of the typical speaker will contain not just the separate lexemes *happy* and *-ness* but also a complex lexeme *happiness*. As Lamb puts it (1999:165): 'it is repeated use rather than degree of idiomatity that determines presence or absence of a higher-level lexical [node]'.⁵ Elsewhere he writes (1999:271): 'any two things that consistently occur together are likely to become associated'. Moreover, the more frequently any part of the linguistic network (or wider cognitive network) is used, the easier it is to use it again: 'The pathways of the brain are like pathways through a meadow or field or jungle – the more they are used the easier they become to use again' (1999:179). In formalising this phenomenon in NC-RNG, lines of different strengths are used (e.g. they are drawn with different thicknesses) and it is assumed that the strengths of the lines corresponding to frequently used items will increase over time. A further relevant point is that the existence of a complex lexeme does not mean that the item in question can only be processed as a single unit. It is quite possible that the information in question is redundantly represented and reflects different analyses simultaneously within the same cognitive system (1999:233). Even in the case of idiomatic complex lexemes such as *spill the beans* 'divulge information that should have been kept secret', where one might suppose that the literal meaning of the expression would not register at all, there may be some activation of the meaning that *spill* has in non-idiomatic combinations (cf. Lamb 1999:184, where a similar point is made about *hot in hot dog*).

I suggest that such ideas provide the basis for explaining the change of a P2-clitic system to a verb-clitic system – though it will require a considerable amount of work to flesh out all the details. Here I will attempt merely to give a broad outline.

In P2-clitic languages/dialects such as Serbian and Croatian, a wide variety of constituents can occur in first position in a clause, including the subject NP, an object NP, any kind of adverbial expression, the first word of a complex constituent, or the main verb. In longer sentences beginning with, say, an adverb followed immediately by one or more clitics, it is frequently the case that the main verb occurs later and is separated from the clitic(s) by one or more constituents. However, many of the sentences that one encounters, particularly in speech, are quite short. Moreover, quite a large proportion of them consist of just one clause-constituent and one or more clitics. In such sentences, the 'one clause-constituent' is far more likely to be a verb than, say, an adverb. It seems likely therefore that combinations of a main verb and one or more clitics will be encountered rather more frequently than, say, an adverb and one or more clitics. The crucial suggestion, at this point, is that the more frequent combinations represent a more advanced stage of lexicalisation. One example of a frequently encountered combination is that of a verb and a reflexive pronoun, and in Russian the process of lexicalisation (and grammaticalisation) in such cases has reached the stage where what used to be a reflexive clitic capable of being attached to words of a variety of categories is now specifically a verb suffix *-ca* (*-sja*) 'self'. In the course of such increasing lexicalisation in a language, the possibility gradually

⁵ I have substituted 'node' for the more technical term 'action' (Lamb 1999:72–77). In the present context it is unnecessary to digress to explain the precise definition of the latter term.

arises that, in sentences where the verb is not the first constituent, the clitic will be attached to the verb rather than occur at P2. As for the unidirectional nature of the change in clitic positioning, this would depend on the unidirectional nature of lexicalisation, which in NC-RNG is seen as involving a gradual strengthening of connections in the network as a result of increased frequency of use.

In discussing 'prototype effects', in the light of NC-RNG's account of language learning, Lamb writes (1999:226): 'One happy consequence... is that the network will automatically account for prototypicality phenomena without any additional theoretical equipment'. In a similar way, one might perhaps speculate that lexicalisation, which is an essential component of the normal use of a grammar in production and understanding, is not only a diachronic process in itself but may also be the cause of other, more far-reaching, diachronic processes.

4 Further discussion

The approach outlined in section 3 is obviously speculative. Its main advantage over the approaches discussed in sections 1 and 2 is that it offers the prospect of providing an explanation for the unidirectional nature of the change of P2-clitic systems to verb-adjacent clitic systems. One way to explore this approach further would involve corpus-based work aimed at establishing the relative frequency of particular constructions involving clitics. It would then be of interest to determine the extent to which this frequency information correlates with known diachronic facts – e.g. that on the whole, auxiliary-verb clitics gravitate to the main verb before pronominal clitics (except reflexive pronouns).

Finally, it is worth considering whether our preference for the third approach requires us to throw out the first two approaches in their entirety. From the first approach we might want to salvage, for instance, the distinction between arguments and agreement markers (Franks & King 2000:311). From the second, we might not want to abandon the view that P2 clitics are thematic and 'given'. Whatever components of the first two approaches can be shown to be valid will hopefully find a place in an appropriately elaborated version of the third approach. In any case, much work remains to be done.

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