Binding within nominal phrases in Bulgarian

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Abstract

Теория на свързването, първоначално формулирана от Чомски в края на 70-те и началото на 80-те години, продължава да бъде един от основните компоненти на съвременната генеративистика. Теория на свързването прави опит да обясни системни закономерности в разпространението на референтно бедни езикови елементи, като възвратните и невъзвратните местоимения например, чиято интерпретация зависи директно от връзката им с определен изреченски антецедент (най-често някаква номинална фраза). Свързването между местоимението и неговия антецедент е продукт на структурно взаимоотношение помежду им (c-command), което се осъществява в рамките на даден структурен периметър (binding domain).

През последните две десетилетия се извършиха внушителен брой емпирични изследвания по въпросите на свързването в различни езици и доста широко се споделя мнението, че в преобладаващ брой случаи съответният структурен периметър на свързване е или простото изречение (S), или именната фраза (NP).

В рамките на българския език през последните години също бяха извършени някои мащабни изследвания по въпросите на свързването, но макар че предложените теоретични модели имат безспорни достойнства, анализът им е ограничен върху езиков материал в рамките на простото изречение, докато на свързването в рамките на именната фраза не е отделено никакво внимание.

Настоящата статия прави опит да запълни тази празнина в описанието на свързването в българския език. За целите на изследването бяха съставени 39 изречения, съдържащи свързване в рамките на именната фраза, и бяха привлечени 34 информанти, които бяха поканени да оценят граматичността/приемливостта на всяко от тези 39 изречения по скала от четири стойности. Резултатите бяха обработени статистически и бяха съотнесени към резултати от предишни изследвания на свързването в рамките на български. На базата на това бяха предложени някои обобщения от теоретичен характер.

Introduction

In the now colossal literature dealing with binding, it is widely recognized that the clause (S) and the noun phrase (NP) typically constitute relevant domains for binding of referentially dependent elements, such as reflexives and pronominals (see e.g. Chomsky 1981, 1986, among many others), as in (1):

1) a. [$_S$ John$_i$ was dissatisfied with himself$_i$/him$_j$]
   b. [$_{NP}$ John$_i$'s dissatisfaction with himself$_i$/him$_j$]

The last several years have seen an increasing number of publications investigating aspects of binding in Bulgarian (Moskovsky 2001, 2002, 2004b,c; Schürcks 2003), presenting fairly specific and fine-tuned proposals in relation to binding in this language. Most of these studies, however, have almost exclusively dealt with binding

within clauses, and have had very little or nothing to say about binding within Bulgarian nominals. This state of affairs is probably understandable in view of the fact that, in contrast to languages like English where constructions like (1b) occur relatively frequently, in Bulgarian they seem to be rather uncommon[1].

Needless to say, regardless of the scarcity of data involving binging within nominal expressions (henceforth NP-binding) in Bulgarian, excluding them from the picture would leave any account of binding in this language incomplete. Besides, the scarcity of such constructions is quite remarkable in itself, and deserves to be studied, because it may hide implications for the Binding Theory in Bulgarian, and also more generally.

Some theoretical preliminaries

Binding involves c-command (Reinhart 1983) and co-indexation (imposing coreferential reading on the two elements involved in a binding relationship): the bindee is c-commanded by, and co-indexed with, the binder. In addition, certain locality constraints apply: in the most typical case reflexives must, while pronominals cannot, occur within the same domain as their binders:

2) Bill$_j$ resents [$_{NP}$ John's$_i$ dissatisfaction with himself$_{i*j}$/him$_{j*i}$]

In (2) the reflexive *himself* can only be interpreted as referring within the containing NP, while the pronominal *him* can refer to the matrix subject *Bill* (and also to a range of other external referents), but cannot refer to the NP-internal binder *John*.

The question of what constitutes the relevant domain within which binding takes place has long been an issue of some contention, and has seen a significant amount of attention over the years. The best known proposals come from Chomsky (1981) and Chomsky (1986), defining the binding domain (henceforth, BD) in terms of *governing category* (GC)[2] and *complete functional complex* (CFC) respectively (the latter derived from, and incorporating, the former). There have been a variety of other proposals, more or less closely related to that by Chomsky, including some which have contended that anaphora is strictly a discourse phenomenon (see Burzio 1991, Huang 1991, Levinson 1991, Reinhart & Reuland 1993, among many others).

In a study specifically investigating reflexive and pronominal binding in Bulgarian, Moskovsky (2001, 2002) proposes the concept of 'core binding domain' (CBD) to account for the distribution of reflexives and pronominals within clauses in that language. In this approach, CBD is defined as follows (2002:105):

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[1] Moskovsky (2002:37), e.g., reports that a corpus of around 10 000 instances of reflexive and pronominal binding in Bulgarian did not contain a single case of binding within a nominal expression of the type in (1b).

[2] *Government* is one of the central theoretical constructs in the Government/Binding Theory; it is a relation between a lexical head and another constituent within the same structural node: the lexical head governs all constituents within its structural node. *Governing category* and *Complete Functional Complex* are structural domains within the 'governing range' of a lexical head and including a clausal or a nominal subject.

3) **γ is the CBD for α iff:**
   (i) γ is the minimal maximal projection containing both α (α reflexive or pronominal) and a (potential) binder β for α;
   (ii) there is no δ (δ any maximal projection) intervening between α and β

The second condition of this definition disallows any intervening maximal projections between binder and bindee, and the relevant BD proposed for Bulgarian is thus significantly smaller than other proposals for BDs (more specifically GC and CFC, which effectively cover the whole containing clause or NP).

This proposal has been motivated by the differences in the distribution of clitics and non-clitics in Bulgarian. Verbal clitics invariably occur adjoined to the head of IP[3], with no intervening maximal projections between the clitic and the potential binder: the subject NP. Complementarity between reflexive and pronominal clitics in this structural position is complete:

4) a. $[_{IP}$ Аз$_i$ $[_I$ му$_{j*i}]$ $[_{VP}$ казах истината$]]$
        I   him$_{CL}$ told the-truth[4]
   b. $[_{IP}$ Аз$_i$ $[_I$ си$_{i*j}]$ $[_{VP}$ казах истината$]]$
        I   self$_{CL}$ told the-truth
      "I told me/myself the truth."

Possessive pronominal clitics and non-clitic pronominals occur outside of the proposed BD and can therefore freely corefer with the clausal subject:

5) a. $[_{IP}$ Аз$_i$ не $[_{VP}$ мисля за   мене$_i]]$
        I   not   think about me
      "I am not thinking of me."
   b. $[_{IP}$ Аз$_i$ $[_{VP}$ разказах на Иван за   работата ми$_i]]$
        I   told   to Ivan about the-work my$_{CL}$
      "I told Ivan about my work."

Possessive reflexive clitics and non-clitic reflexives do occur overtly outside of the CBD, but are assumed to undergo a covert head movement to the head of IP at the level of Logical Form (LF), which is a fairly standard assumption about featureless reflexives[5] (see, e.g., Cole & Sung 1994, and the references cited there).

6) a. $[_{IP}$ Аз$_i$ не $[_I$] $[_{VP}$ мисля за   себе си$_i]]$

        I   not   think about self
      "I am not thinking of myself."

   b. $[_{IP}$ Аз$_i$ $[_I$] $[_{VP}$ разказах на Иван за   работата си$_i]]$

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[3] Arguably, after undergoing movement out of the VP.
[4] The definite article is actually a morphological suffix attached to the linearly first element of the NP, but this fact is of no consequence for the current discussion and therefore glosses will not reflect it.
[5] Bulgarian reflexives are completely void of phi-features (person, number, gender); they are only marked for morphological case.

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I          told      to  Ivan about the-work self'sCL
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"I told Ivan about my work."

This movement is motivated by the need of the featureless reflexive to acquire phi-features in order to be interpreted: it undergoes cyclic head movement to the head of IP where it inherits the phi-features (person, number and gender) of the clausal subject. This also explains the so called subject orientation of reflexives in languages like Bulgarian, Norwegian, etc.: by virtue of its position in the head of IP, the reflexive can only refer to the clausal subject and no other phrasal projection can qualify as the binder (see Hestvik 1991, Moskovsky 2002).

A much more detailed account of this proposal can be found in Moskovsky (2001, 2002). The concept of CBD is presented here, because it may be of relevance to the discussion of NP-binding in Bulgarian.

Basic objectives of the current study

The main objective of the study is to measure, using a grammaticality judgement task, Bulgarian speakers' perceptions of the acceptability of constructions involving NP-binding of the type in (7), in which β is the (potential) binder, while α is the bindee, a reflexive or a pronominal:

7) $[_{NP} \dots \beta_i \dots \alpha_i \dots]$

and then, based on the data derived through the grammaticality judgement task, to offer an explanation on the distribution of reflexives and pronominals within nominal expressions in Bulgarian.

Research protocol

The study involved a grammaticality judgement task consisting of 39 sentences containing instances of NP-binding of the type presented in (7) above, e.g.:

8) $[_{NP}$ Моето$_i$ огорчение   от   уволнението си$_i$]   дълго не ме напусна.
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       my      resentment  from  the-sacking  self'sCL long   not me leave
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   "My resentment at having been sacked lingered for a long time."

The sentences in the grammaticality judgement task contain the following combinations involving a (potential) binder and a bindee:

◇ possessive clitic – clitic[6]
◇ possessive non-clitic – clitic
◇ possessive clitic – non-clitic
◇ possessive non-clitic – non-clitic

The set of sentences used in the grammaticality judgement task includes three completely grammatical control sentences (## 2, 13, 38) in which binding occurs at

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[6] The clitic status of a pronoun is marked as such in the glosses only where it bears relevance to the issue under investigation.

the level of the clause. In these sentences the binder is an NP: either a nominal or a personal pronoun.

All 39 sentences are provided in Appendix A.

34 native speakers of Bulgarian[7] were invited to evaluate these sentences on a scale of four values:

> (1) completely acceptable;
> (2) more acceptable than unacceptable;
> (3) more unacceptable than acceptable;
> (4) completely unacceptable.

In addition, respondents were offered the option of providing a more acceptable version in those cases in which they gave a sentence a value larger than (1). Respondents were specifically instructed to evaluate the acceptability of the sentences in the reading imposed by the supplied indices. For instance, in relation to (9) below respondents were to evaluate the acceptability of the sentence only in the coreferential reading of the two co-indexed pronominals:

9) Неудовлетворението му$_i$ от   него$_i$ е разбираемо.
   the-dissatisfaction   his$_{CL}$ from him   is understandable
   "His dissatisfaction with him is understandable."

The data from the grammaticality judgement task derived for each of the 39 sentences were submitted to a few simple statistical analyses: **distribution of hits** (i.e. respective numbers of acceptability values assigned to each sentence), **mean** of values for each sentence, and **standard deviation** (indicating the level of disagreement in the values provided for each sentence). A summary of the results is provided in Appendix A.

In addition to this, the study conducted another analysis categorizing sentences in terms of the proportion of (3)'s and (4)'s in the total number of values assigned to each sentence. These are what we can define as the "negative values" in the scale: (3) *more unacceptable than acceptable*, and (4) *completely unacceptable*. This analysis was motivated in the following way. In terms of acceptability, there is a clear divide between the values (1) and (2) on the one hand, and values (3) and (4) on the other: the former are "positive" in the sense that they reflect acceptability, while the latter are "negative" as they mark unacceptability. We are contending that the relative acceptability of a sentence is better understood by the ratio of positive to negative values. A comparative ranking of the 39 sentences according to "percentage of negative values" and "mean" is provided in Appendix B.

Finally, the study conducted two other statistical analyses: a categorization of the test sentences according to the form of the bindee (i.e. whether it is a clitic or a non-clitic, a possessive or a non-possessive), incl. the mean for each category, as well as a ranking of the sentences according to the structural distance between

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[7] Respondents with at least some background in the discipline of linguistics were specifically selected for the purposes of the study.

binder and bindee, measured in terms of intervening lexical projections and based on common mean. Results are presented in Appendix C.

Discussion

In view of the main objective of this project, the grammaticality judgement task used for the purposes of the study would, in an ideal situation, have produced results showing a clearly defined boundary between grammatical and ungrammatical constructions (of the type tested). Even a cursory glance at the rankings presented in Appendix B will indicate that this is not the case. What we actually find is a continuum from completely acceptable sentences (such as ##12 and 13) to completely unacceptable sentences (such as ##3 and 17).

Careful examination of the conditions of the grammaticality judgement task, as well as some of the data obtained through the task will show that the continuum-like nature of the results may have occurred as a result of factors which have little or nothing to do with the actual grammaticality of the tested constructions, and consequently the continuum-like data derived may not completely unambiguously reflect the actual differences between the test sentences in terms of their grammaticality. We will therefore consider some of the possible non-language factors that may have been at play, and the way(s) in which these may have affected the respondents' performance in the grammaticality judgement task. Following this, it will be demonstrated that the data derived through the task, regardless of its continuum-like nature, can still yield some valid generalizations about the relative (un)grammaticality of the tested constructions

The construction of the grammaticality task for this study involved the type of conflict that is often found in the design of other language tasks (e.g. second language competence tests): considerations of representativeness of the sample would require that the number of items in the task be as large as possible, but at the same time the longer a task the more likely it becomes that fatigue will start having a constraining effect on the subjects' ability to perform. In relation to this particular task, given the relatively large number of test sentences included, it cannot completely be ruled out that fatigue became a relevant factor with at least some of the subjects, yielding responses which may have otherwise been different.

In view of the fact that essentially the same type of construction (as in (7) above) was present in almost all of the test sentences, the operation of another factor, which I will informally call "familiarity", cannot be excluded either. It may have been the case that, as respondents proceeded with the task, they became more and more familiar, and consequently more comfortable, with these constructions, with the effect that more "lenient" values were assigned to some of the tested constructions than would have been otherwise. Indeed, the contrast in the values assigned to sentences (10) and (11) below (which occur as #5 and #31, respectively, in the grammaticality task) is indicative of the problem referred to here as "familiarity": the sentence occurring earlier in the list has a mean of 3.11 and a 70.6% of

unacceptability, while the sentence occurring in the last quarter of the list has a mean of 2.55 and only 47.1% of unacceptability.

10) Агресивното му*i* отношение към своята*i* жена ме озадачи.
    aggressive his_CL attitude towards self's_CL wife me puzzled
    "His aggressive attitude towards his wife puzzled me."

11) Агресивното му*i* отношение към жена си*i* ме озадачи.
    the-aggressive his_CL attitude towards wife self's_CL me puzzled
    "His aggressive attitude towards his wife puzzled me."

This contrast is particularly striking given that it is essentially the same sentence, the only difference being with respect to the form of the bindee: a non-clitic in the former, and a clitic in the latter[8]. This difference may actually emphasize the scope of the problem in view of the fact that it goes against a distinct tendency whereby sentences involving a reflexive non-clitic bindee (as in (10) above) were treated as more acceptable than sentences involving a reflexive clitic bindee (see Table 3 in Appendix C)[9].

A similar contrast was established between sentences 1, 3, and 4 (with a common mean of **3.70**) on the one hand, and 32, 35, and 36 (with a common mean of **2.62**) on the other: these sentences may not be identical in meaning in the way (10) and (11) above are, but are nevertheless analogous in grammatical structure, and there seems to be no obvious reason (other than "familiarity") which can explain this contrast.

In summary, fatigue and "familiarity" are likely to have been responsible for obscuring what otherwise might have been much clearer differences in the perceived acceptability of different constructions involving NP-binding.

Another factor which may also have played a more or less significant role with regard to the evaluation of sentences involving a non-reflexive bindee, and is therefore worth noting, is the very long and strong prescriptive tradition in Bulgarian linguistics, which has required that reflexive forms of pronouns be used in all contexts which allow them[10]. By way of illustration, consider (12) below (#25 in the grammaticality task):

12) Наистина ли искаш да чуеш мнението ми*i* за мене*i*?
    really Q-particle you-want to hear the-opinion my_CL about me
    "Do you really want to hear my opinion about me?"

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[8] In relation to this, C. Stamenov (personal communication) comments that clitics are, by their nature, unstressed and less salient, therefore less likely to violate the responder's sense of grammaticality. He acknowledges, however, that such an explanation goes against the distinct preference for non-clitic (or complete) forms of pronouns that the study results display, and suggests that there may be other factors (in addition to the ones discussed in the paper) affecting speakers' perception of such constructions (such as regional varieties of the language, for example).
[9] No such difference was established in relation to the form of the binder.
[10] This is widely acknowledged in sources dealing with the use of reflexives in Bulgarian (see, e.g. Andreychin et al. 1977, Stamenov 1977).

This is a completely grammatical sentence, in fact one which is quite likely to occur in normal spontaneous use of the language, yet ten of the 34 respondents have given it a negative value (one (3) and nine (4)'s). There does not seem to be any reason for that other than the prescriptivism referred to in the previous paragraph.

Last but not least, it is not unlikely that at least some respondents in at least some cases assigned an acceptability value to a sentence driven by the wrong reasons: in other words, they did not completely like a particular construction, but for reasons that have little or nothing to do with binding. The following sentence (#8 in the grammaticality judgement task) is a particularly good illustration of that point.

13) Нейното$_i$ мнение за   себе си$_i$ е нереалистично високо.
    her   opinion about self   is unrealistically   high
    "Her opinion of herself is unrealistically high."

Some of the respondents have given this sentence negative values ((3) and even (4)), simply because in this case they felt they preferred the clitic possessive in the position of the binder rather than the non-clitic one. Thus three of the respondents (who have respectively assigned two (3)'s and a (4) to this sentence) have indicated that their preferred version of (13) is as follows:

14) Мнението   й$_i$ за   себе си$_i$ е нереалистично високо.
    opinion-the her$_{CL}$ about self   is unrealistically   high

Why they thought that (14) was somehow better than (13) is a mystery, but whatever their reasons may have been, they cannot have had anything to do with binding.

Again with respect to the same sentence (but also elsewhere), some respondents provided a negative value, but didn't bother to offer a "better" version. These values have not been excluded from any of the statistical analyses, but should nevertheless be treated with some wariness. Needless to say, excluding them from the analysis would have a substantive effect on the ultimate acceptability value for this sentence.[11]

In light of this, the continuum-like nature of the results should not be surprising, and should not discourage us from trying to make some inferences and generalizations in relation to the relative grammaticality of the tested constructions. A closer look at the data in Table 2 in Appendix B will in fact reveal that the perceived differences in the grammaticality of the tested sentences are not as gradual as might have appeared at first glance. There is, e.g., a difference of nearly 15% between sentence #21 (seventh from bottom of the table) and sentence #8 (eighth from bottom of the table), and another nearly 10% jump between sentence #25 (ninth from bottom of the table) and the next one up the ranking. Curiously enough, these two sentences (##8 and 25) were specifically referred to in relation to the possible

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[11] Excluding only the three (4)'s would lower the mean for this sentence by two tens of a point: the mean would then be 1.71 (not 1.91), and its acceptability percentage will go up by nearly 9%: from 74.5% to 83.4%.

effects of the non-language factors discussed above. There are therefore valid reasons to assume that the acceptability values for these sentences would have been significantly lower in the absence of the above factors, perhaps as much as 10% or even more (see footnote 11), and in this case there would be a gap of more than 20% between sentence #8 and sentence #39, which is next up the ranking involving a bound reflexive. This also strongly suggests that sentence #8 (and 25 for that matter) should be ranked together with the group of completely acceptable sentences.

The next three sentences in the ranking (10th, 11th and 12th from the bottom) all involve the non-clitic possessive in the position of the binder: as Table 3 in Appendix C shows, non-clitic possessive bindees were treated as more acceptable compared to the clitic counterparts (one possible reason for this is briefly addressed in the next section).

The next relatively bigger gap is found between sentence #16 (nineteenth from bottom of the table) and sentence #26 (twentieth from bottom of the table). It is notable that all of the sentences below #16 in this group have a very high number of listing in the task: 29 and above. It is not unlikely that judgements on these sentences have been affected by the "familiarity" factor, attracting more "lenient" values than sentences higher up the list. Indeed, in terms of binding, it is hard to see in what ways a sentence like 29 (48.5%) is different from 7 (85.3%), and the nearly 40% difference in acceptability assigned by respondents seems totally inexplicable.

Such considerations indicate that the boundary between grammatical and ungrammatical constructions most probably falls between sentence #25 (ninth from bottom of the table) and the next one up the ranking.

Overall the results from the grammaticality judgement task clearly show that speakers generally dislike bound reflexives in constructions of the type in (7) above, repeated here for convenience,:

(7) [$_{NP}$ ... β_i ... α_i ...]

except for sentences in which the bindee is the non-possessive non-clitic reflexive *себе си*.

Those of the respondents who chose to offer preferred versions for the sentences they marked with values higher than (1), almost invariably provided an alternative version involving the corresponding non-reflexive pronoun. Thus, e.g., with respect to sentences like (15) below (#3 in the grammaticality judgement task):

15) Тъгата ми$_i$ от   загубата си$_i$ е съвсем естествена.
     grief   my$_{CL}$ from loss   self's$_{CL}$ is quite   natural
     "My grief from my loss is quite understandable."

respondents offered (16) as their preferred version:

16) Тъгата ми$_i$ от   загубата ми$_i$ е съвсем естествена.
    grief   my$_{CL}$ from loss   my$_{CL}$ is quite   natural

Respondents' reluctance to accept bound reflexives within NPs is in stark contrast with their acceptance of bound reflexives within clauses. Compare the acceptability values assigned to (17a) and to (17b) below (##2 and 28 in the grammaticality judgement task):

17) a. Изненадата, която Петър$_i$ изпита   от   появата   на жена си$_{i,}$
       the-surprise which Peter   experienced from the-arrival of wife self's$_{CL}$
       беше пълна.
       was complete
       "Peter's surprise at his wife's arrival was complete."
    b. Неговата$_i$ изненада от   появата   на жена си$_i$ беше пълна.
       his   surprise   from the-arrival of wife self's$_{CL}$ was complete
       "His surprise at his wife's arrival was complete."

The former (a control sentence) was assigned a value of **1.20** (with 100% of positive responses), while the latter was assigned a value of **3.55** (with 88.2% of negative responses): one of the top ten most unacceptable sentences in the grammaticality judgement task.

It should also be noted that some respondents have indicated that they were generally uncomfortable with NP-binding constructions of the type in (7): some offered alternatives, such as (18) below, which transpose the NP containing the reflexive into a clause:

18) a. Тъжен съм   от   загубата си   / ми.
       sad   I-am from the-loss self's$_{CL}$ my$_{CL}$
       "I am sad from my loss."
    b. Тъгата   ми   от   това, че   загубих ...
       the-sadness my$_{CL}$ from this   that I-lost
       "My sadness from the fact that I lost ..."

Results from the task also clearly show that non-clitic forms of the reflexive, especially the non-possessive *себе си*, are perceived as significantly more acceptable than clitics (see the data in Table 3 of Appendix C).

Another notable finding concerns the level of embedding of the bound reflexive: generally reflexives that are more deeply embedded were treated as less acceptable. There is a clear contrast between constructions involving one level of embedding, such as (13) above (with a common mean of **1.58**) and those with two levels of embedding, such as (15) above (with a common mean of **3.02**). Further embedding does not seem however to affect the acceptability substantially (see the data in Table 4 of Appendix C).

Towards an explanation

One of the most important findings of this study is that, in the large majority of cases, it is impossible to bind a reflexive within the NP. This finding can be explained in the spirit of the proposal presented in Moskovsky (2001, 2002), more specifically in terms of the concept of 'core binding domain' (CBD) defined in (3) above, repeated here for convenience:

(3) γ **is the CBD for α iff**:
>   (i) γ is the minimal maximal projection containing both α (α reflexive or pronominal) and a (potential) binder β for α;
>   (ii) there is no δ (δ any maximal projection) intervening between α and β

In sentences like (15) and (17b) above (as well as many other of the sentences used in the grammaticality judgement task), the reflexive is disallowed because binding it violates condition (ii) of (3) in that there are lexical projections intervening between the reflexive and its binder. As a result the use of reflexives is more or less unacceptable, while pronominals in the same position can freely co-refer with an NP-internal binder (which invariably is a possessive, presumably occupying the Spec of the NP). The fact that respondents showed fairly systematic variability in their acceptability judgements can, at least in part, be attributed to the factor 'structural distance' between binder and bindee: the data presented in Table 4 of Appendix C indicate that only constructions like (13) above, repeated here:

(13) Нейното*ᵢ* мнение за   себе си*ᵢ* е нереалистично високо.
    her   opinion about self   is unrealistically   high
    "Her opinion of herself is unrealistically high."

in which the bindee is only one maximal projection away from its binder, were treated as close to completely acceptable, and that generally the further away a reflexive is from its binder, the more unacceptable it was perceived.

In view of the very high level of perceived acceptability of sentences like (13) above, a partial revision in the second condition of the formulation of CBD in (3) seems warranted:

(3') γ **is the CBD for α iff**:
>   (i) γ is the minimal maximal projection containing both α (α reflexive or pronominal) and a (potential) binder β for α;
>   (ii) there is no **more than one** δ (δ any maximal lexical projection) intervening   between α and β

It should be noted that the proposed revision in no way compromises the original proposal in Moskovsky (2001, 2002), and may in fact yield itself much more successfully to the treatment of binding data in languages other than Bulgarian. A locality constraint as the CBD in (3') may be better equipped to account for the contrast between (19) and (20) below than the respective Governing Category or Complete Functional Complex:

19) I am not thinking of me.

20) *I hate me.[12]

In the former, the pronominal is two lexical projections away from subject and thus outside of the relevant BD, which explains the fact that it can corefer with the subject. The latter is bad because it violates (3ii).

Space considerations prevent us from pursuing this issue further.

In summary of this point, sentences like (21) below (#3 in the grammaticality task) are ungrammatical, because the reflexive is positioned (at least) two lexical projections away from its binder and is thus outside of the relevant BD:

21) Тъгата ми$_i$ [$_{PP}$ от [$_{NP}$ загубата си$_i$]]   е съвсем естествена.
    grief   my$_{CL}$ from loss   self's$_{CL}$ is quite   natural
    "My grief from my loss is quite understandable."

One legitimate question in relation to this would be why the bound reflexive (or part of it) does not undergo the same type of movement at the level of LF which has been claimed to take place with reflexives bound within clauses, as in (6) above, repeated here, and which movement would presumably move the reflexive closer to its binder:

(6) a. [$_{IP}$ Аз$_i$ не [$_I$] [$_{VP}$ мисля за   себе си$_i$]]

          I   not   think about self
      "I am not thinking of myself."

     b. [$_{IP}$ Аз$_i$ [$_I$] [$_{VP}$ разказах на Иван за   работата си$_i$]]

          I   told   to Ivan about the-work self's$_{CL}$
       "I told Ivan about my work."

There are valid reasons why LF movement of the reflexive is not a viable option within the NP. There does not appear to be a position within the NP which can serve as a possible landing site for the moved reflexive. One might argue that the head of an agreement projection dominating the NP would be eligible as a landing site for the reflexive. It is true that AGR projections are nowadays widely used in the analysis of nominals, especially in languages like Bulgarian, in which nominals involve morphological agreement in person, number and gender between the lexical head and its modifiers (see e.g. Stateva 2002). This would not, however, be a valid argument. In sentences like (6) above, the movement of the reflexive is driven by interpretability needs: the featureless reflexive adjoins to the head of IP where it acquires the phi-features of its binder, the clausal subject. The same cannot occur in the head of the presumed AGR projection dominating the containing NP, because the features contained there are different from the phi-features of the binder.

One final point that needs to be addressed briefly is the relatively higher level of acceptability assigned to constructions in which the bindee is a non-clitic possessive

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[12] These sentences are discussed in Moskovsky (2004a).

reflexive, compared to constructions involving a possessive clitic (see Table 3 in Appendix C). This may in part be explained as a consequence of assigning an emphatic reading to the reflexive. Such an assumption is not entirely implausible in view of the fact that using reflexives for the purposes of emphasis is a function that is found across many of the world's languages (see, e.g. Faltz 1985, König & Siemund 1999). Clitics cannot be used for emphasis, because emphasis necessarily involves stress, and clitics by their nature are never stressed: thus the non-clitic form must be used whenever an emphatic meaning is assigned.

Conclusion

The paper has presented the results from a grammaticality judgement task involving binding of reflexives and pronominals within nominal constructions in Bulgarian. Various analyses of the data derived through the task were conducted. The results indicate that, with the exception of cases in which the bindee is the non-possessive non-clitic reflexive *себе си*, binding of reflexives in nominal constructions is generally disallowed. The results have prompted a revision in the formulation of the concept of 'core binding domain': a locality constraint on binding proposed elsewhere.

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Number of sentences: 39

Number of respondents: n=34

Grammaticality judgement values:
- **(1)** = **completely acceptable**
- **(2)** = **more acceptable than unacceptable**
- **(3)** = **more unacceptable than acceptable**
- **(4)** = **completely unacceptable**

<u>Table 1</u>: Sentences used in the grammaticality judgement task

SENTENCES	distribution of values		Mean	st. dev.
1. Моето$_i$ огорчение от уволнението си$_i$ дълго не ме напусна. my resentment from the-sacking self's$_{CL}$ long not me$_{CL}$ leave "My resentment at having been sacked lingered for a long time."	(1) (2) (3) (4)	0 2 1 31	3.85	0.500
2. Изненадата, която Петър$_i$ изпита от появата на жена си$_i$, беше пълна. the-surprise which Peter experienced from the-arrival of wife self's$_{CL}$ was complete "Peter's surprise at his wife's arrival was complete."	(1) (2) (3) (4)	27 7 0 0	1.20	0.410
3. Тъгата ми$_i$ от загубата си$_i$ е съвсем естествена. grief my$_{CL}$ from loss self's$_{CL}$ is quite natural "My grief from my loss is quite understandable."	(1) (2) (3) (4)	0 1 6 27	3.76	0.495
4. Неговите$_i$ предпочитания за датата на сватбата си$_i$ не бяха взети под внимание. his preferences for the-date of the-wedding self's$_{CL}$ no were taken under attention "His preferences for a wedding date were ignored."	(1) (2) (3) (4)	0 3 10 20	3.51	0.667
5. Агресивното му$_i$ отношение към своята$_i$ жена ме озадачи. aggressive his$_{CL}$ attitude towards self's$_{CL}$ wife me puzzled "His aggressive attitude towards his wife puzzled me."	(1) (2) (3) (4)	2 8 8 16	3.11	0.977
6. Разводът му$_i$ с втората му$_i$ жена му причини голямо огорчение. divorce his$_{CL}$ with the-second his$_{CL}$ wife him caused great resentment "His divorce with his second wife caused him a lot of resentment."	(1) (2) (3) (4)	23 8 2 1	1.44	0.746
7. Неговият$_i$ разказ за преживелиците си$_i$ ни направи силно впечатление. his story about the-experiences self's$_{CL}$ us made strong impression "His recount of his experiences strongly impressed us."	(1) (2) (3) (4)	2 3 15 14	3.20	0.844
8. Нейното$_i$ мнение за себе си$_i$ е нереалистично високо. her opinion about self is unrealistically high "Her opinion of herself is unrealistically high."	(1) (2) (3) (4)	15 10 6 3	1.91	0.995
9. Предвижданията ми$_i$ за бъдещето си$_i$ не са прекалено оптимистични. the-expectations my$_{CL}$ about the-future self's$_{CL}$ no are too optimistic "My expectations for my future are not too optimistic."	(1) (2) (3) (4)	0 4 8 22	3.52	0.706

10. Неговото$_i$ споразумение с   жена си$_i$ донесе облекчение на всички.
    his   agreement   with wife self's$_{CL}$ brought relief   to all
    "His agreement with his wife relieved everyone."
	(1)
	(2)
	(3)
	(4)
		4
		6
		9
		15
			3.02	1.058

11. Кампанията му$_i$ за рекламиране на книгата си$_i$ започна неуспешно.
    the-campaign his$_{CL}$ for advertising   of the-book self's$_{CL}$ started unsuccessfully
   "His campaign to advertise his book started unsuccessfully."
	(1)
	(2)
	(3)
	(4)
		4
		7
		11
		12
			2.91	1.025

12. Моите$_i$ усилия за публикуване на статията ми$_i$ останаха безуспешни.
    my   efforts for publishing   of the-paper my$_{CL}$ remained fruitless
    "My efforts to publish my paper remained fruitless."
	(1)
	(2)
	(3)
	(4)
		29
		5
		0
		0
			1.14	0.359

13. Той$_i$ несправедливо укори   родителите си$_i$.
    he unfairly   reproached the-parents self's$_{CL}$
    "He unfairly reproached his parents."
	(1)
	(2)
	(3)
	(4)
		34
		0
		0
		0
			1	0

14. Неговото$_i$ разочарование от   колегите   си$_i$ беше причина да напусне работа.
    his   disappointment from the-colleagues self's$_{CL}$ was reason   to leave   work
    "His disappointment with his colleagues was the reason to quit his job."
	(1)
	(2)
	(3)
	(4)
		1
		8
		14
		11
			3.02	0.834

15. Усилията ми$_i$ за популяризиране на позицията си$_i$ донесоха   добри резултати.
    efforts   my$_{CL}$ for popularising   of the-position self's$_{CL}$ brought-about good   results
    "My efforts to popularise my position brought about positive results."
	(1)
	(2)
	(3)
	(4)
		1
		6
		14
		13
			3.14	0.821

16. Опитът й$_i$ за разясняване на програмата си$_i$ не се увенча   с   успех.
    attempt her$_{CL}$ for clarifying   of the-programme self's$_{CL}$ no self-crowned with success
    "Her attempt to clarify her programme was unsuccessful."
	(1)
	(2)
	(3)
	(4)
		4
		12
		10
		8
			2.64	0.981

17. Конфликтът ми$_i$ с   жена си$_i$ продължи цяла година.
    the-conflict my$_{CL}$ with wife self's$_{CL}$ lasted   whole year
    "My conflict with my wife lasted a whole year."
	(1)
	(2)
	(3)
	(4)
		1
		0
		7
		26
			3.70	0.629

18. Разочарованието ми$_i$ от   лошото си$_i$ представяне беше пълно.
    the-disappointment my$_{CL}$ from the-bad self's$_{CL}$ performance was complete
    "I was utterly disappointed with my performance."
	(1)
	(2)
	(3)
	(4)
		0
		6
		12
		16
			3.29	0.759

19. Неудовлетворението ми$_i$ от   себе си$_i$ придоби гигантски мащаби.
    the-dissatisfaction   my$_{CL}$ from self   acquired massive   proportions
    "My dissatisfaction with myself acquired massive proportions."
	(1)
	(2)
	(3)
	(4)
		23
		9
		1
		1
			1.41	0.701

20. Равносметката му$_i$ за   своя$_i$ живот досега хич не беше радостна.
    the-assessment his$_{CL}$ about self's life   so-far rather no was   happy
    "His assessment of his life so far was rather depressing."
	(1)
	(2)
	(3)
	(4)
		6
		15
		7
		6
			2.38	0.985

21. Изискванията му$_i$ към   себе си$_i$ са по-големи, отколкото трябва.
    the-demands his$_{CL}$ towards self   are greater   than   needed
    "His demands of himself are higher than necessary."
	(1)
	(2)
	(3)
	(4)
		24
		6
		3
		1
			1.44	0.785

22. Неудолетворението му$_i$ от   него$_i$ е разбираемо.
    the-dissatisfaction   his$_{CL}$ from him is understandable
    "His dissatisfaction with him is understandable."
	(1)
	(2)
	(3)
	(4)
		4
		4
		6
		20
			3.23	1.074

23. Според собствената ми$_i$ оценка за брака си$_i$, той е окончателно изчерпан.	(1) (2)	2 8	3.05	0.951

			Mean	SD
according-to the-own my$_{CL}$ assessment about the-marriage self's$_{CL}$ it is irrevocably exhausted "According to my own assessment of my marriage, it is irrevocably broken."	(3) (4)	10 14		
24. Възторгът ми$_i$ от постиженията си$_i$ отврати близките ми. the-delight my$_{CL}$ from the-achievement sefl's$_{CL}$ sickened the-relatives my "My delight with my (own) achievements sickened my relatives."	(1) (2) (3) (4)	0 2 13 19	3.5	0.615
25. Наистина ли искаш да чуеш мнението ми$_i$ за мене$_i$? really Q-particle want to hear the-opinion my$_{CL}$ about me "Do you really want to hear my opinion about me?"	(1) (2) (3) (4)	10 14 1 9	2.26	1.162
26. Негодуванието му$_i$ от лошото си$_i$ посрещане е разбираемо. the-displeasure his$_{CL}$ from the-bad self's$_{CL}$ welcome is understandable "His displeasure with the poor way he was welcomed is understandable."	(1) (2) (3) (4)	2 10 7 15	3.02	0.999
27. В петък бяха оповестени неговите$_i$ предвиждания за бъдещето си$_i$. in Friday were announced his expectations for the-future sefl's$_{CL}$ "On Friday, his expectations for his future were announced."	(1) (2) (3) (4)	0 3 14 17	3.41	0.656
28. Неговата$_i$ изненада от появата на жена си$_i$ беше пълна. his surprise from the-arrival of wife self's$_{CL}$ was complete "His surprise at his wife's arrival was complete."	(1) (2) (3) (4)	2 2 5 25	3.55	0.859
29. Неговото$_i$ обръщение към поданиците си$_i$ съдържаше само голи обещания. his address towards the-subjects self's$_{CL}$ contained only empty promises "His address to his subjects contained only empty promises."	(1) (2) (3) (4)	5 12 10 6	2.51	0.972
30. Кампанията му$_i$ за рекламиране на своята$_i$ книга се разви според очакванията. the-campaign his$_{CL}$ for the-advertising of self's book developed according-to the-expectations "His campaign to advertise his book developed according to expectations."	(1) (2) (3) (4)	10 8 9 7	2.38	1.128
31. Агресивното му$_i$ отношение към жена си$_i$ ме озадачи. the-aggressive his$_{CL}$ attitude towards wife self's$_{CL}$ me puzzled "His aggressive attitude towards his wife puzzled me."	(1) (2) (3) (4)	5 13 8 8	2.55	1.020
32. Безкритичността му$_i$ към децата си$_i$ е причина те да са толкова разглезени. the-uncritical-attitude his$_{CL}$ towards the-children self's$_{CL}$ is reason they to be so spoilt "His uncritical attitude towards his children is the reason why they are so spoilt."	(1) (2) (3) (4)	4 14 7 9	2.61	1.015
33. Срамът ми$_i$ от поведението на дъщеря си$_i$ не е основателен. the-shame my$_{CL}$ from the-behaviour of the-daughter self's$_{CL}$ no is justified "My shame from my daughter's behaviour is not justified."	(1) (2) (3) (4)	1 3 4 26	3.61	0.779
34. Разбиранията ми$_i$ за своето$_i$ място в обществото не се споделят от жена ми. the-views my$_{CL}$ about self's place in the-society no self-shared from wife my "My views about my place in society are not shared by my wife."	(1) (2) (3) (4)	4 6 11 13	2.97	1.029
35. Укорът му$_i$ към родителите си$_i$ беше несправедлив. the-reproach his$_{CL}$ towards the-parents self's$_{CL}$ was unfair "His reproach towards his parents was unfair."	(1) (2) (3) (4)	3 14 9 8	2.64	0.949
36. Несъгласието му$_i$ с колегите си$_i$ огорчи всички нас. the-disagreement his$_{CL}$ with the-colleagues self's$_{CL}$ distressed all us "His disagreement with his colleagues distressed us all."	(1) (2) (3) (4)	5 11 10 8	2.61	1.015

			Mean	SD
37. Неговото$_i$ обръщение към своите$_i$ поданици съдържаше само голи обещания. his address towards self's subjects contained only empty promises "His address to his subjects contained only empty promises."	(1) (2) (3) (4)	6 12 8 5	2.34	1.003
38. Аз$_i$ се засрамих от поведението на дъщеря си$_i$. I self-shamed from the-behaviour of daughter self's$_{CL}$ "I was ashamed of my daughter's behaviour."	(1) (2) (3) (4)	31 3 0 0	1.08	0.287
39. Възторгът му$_i$ от своите$_i$ постижения отврати близките му. the-delight his$_{CL}$ from self's achievement sickened the-relatives his "His delight with his (own) achievements sickened his relatives."	(1) (2) (3) (4)	9 12 6 7	2.32	1.093

Note: in some rare cases some respondents have chosen not to provide a value for a particular sentence, which is the reason why the number of responses for some sentences is less than 34 (e.g. 2, 29, 37, etc.)

Appendix B

Number of sentences: 39
Number of respondents: n=34

Grammaticality judgement values:

positive values
- (1) = **completely acceptable**
- (2) = **more acceptable than unacceptable**

negative values
- (3) = **more unacceptable than acceptable**
- (4) = **completely unacceptable**

<u>Table 2</u>: Ranking of sentences according to the proportion of "negative values"

SENTENCES	Value of (3) and (4) as a percentage of all responses	Mean
3. Тъгата ми$_i$ от загубата си$_i$ е съвсем естествена. grief my$_{CL}$ from loss self's$_{CL}$ is quite natural "My grief from my loss is quite understandable."	97.1%	3.76
17. Конфликтът ми$_i$ с жена си$_i$ продължи цяла година. the-conflict my$_{CL}$ with wife self's$_{CL}$ lasted whole year "My conflict with my wife lasted a whole year."	97.1%	3.70
1. Моето$_i$ огорчение от уволнението си$_i$ дълго не ме напусна. my resentment from the-sacking self's$_{CL}$ long not me$_{CL}$ leave "My resentment at having been sacked lingered for a long time."	94.1%	3.85
24. Възторгът ми$_i$ от постиженията си$_i$ отврати близките ми. the-delight my$_{CL}$ from the-achievement sefl's$_{CL}$ sickened the-relatives my "My delight with my (own) achievements sickened my relatives."	94.1%	3.5

18

Example	%	Rating
4. Неговите$_i$ предпочитания за датата на сватбата си$_i$ не бяха взети под внимание. his preferences for the-date of the-wedding self's$_{CL}$ no were taken under attention "His preferences for a wedding date were ignored."	91.2%	3.51
27. В петък бяха оповестени неговите$_i$ предвиждания за бъдещето си$_i$. in Friday were announced his expectations for the-future sefl's$_{CL}$ "On Friday, his expectations for his future were announced."	91.2%	3.41
9. Предвижданията ми$_i$ за бъдещето си$_i$ не са прекалено оптимистични. the-expectations my$_{CL}$ about the-future self's$_{CL}$ no are too optimistic "My expectations for my future are not too optimistic."	88.2%	3.52
28. Неговата$_i$ изненада от появата на жена си$_i$ беше пълна. his surprise from the-arrival of wife self's$_{CL}$ was complete "His surprise at his wife's arrival was complete."	88.2%	3.55
33. Срамът ми$_i$ от поведението на дъщеря си$_i$ не е основателен. the-shame my$_{CL}$ from the-behaviour of the-daughter self's$_{CL}$ no is justified "My shame from my daughter's behaviour is not justified."	88.2%	3.61
7. Неговият$_i$ разказ за преживелиците си$_i$ ни направи силно впечатление. his story about the-experiences self's$_{CL}$ us made strong impression "His recount of his experiences strongly impressed us."	85.3%	3.20
18. Разочарованието ми$_i$ от лошото си$_i$ представяне беше пълно. the-disappointment my$_{CL}$ from the-bad self's$_{CL}$ performance was complete "I was utterly disappointed with my performance."	82.4%	3.29
15. Усилията ми$_i$ за популяризиране на позицията си$_i$ донесоха добри резултати. efforts my$_{CL}$ for popularising of the-position self's$_{CL}$ brought-about good results "My efforts to popularise my position brought about positive results."	79.4%	3.14
22. Неудолетворението му$_i$ от него$_i$ е разбираемо. the-dissatisfaction his$_{CL}$ from him is understandable "His dissatisfaction with him is understandable."	76.5%	3.23
14. Неговото$_i$ разочарование от колегите си$_i$ беше причина да напусне работа. his disappointment from the-colleagues self's$_{CL}$ was reason to leave work "His disappointment with his colleagues was the reason to quit his job."	73.5%	3.02
5. Агресивното му$_i$ отношение към своята$_i$ жена ме озадачи. aggressive his$_{CL}$ attitude towards self's$_{CL}$ wife me puzzled "His aggressive attitude towards his wife puzzled me."	70.6%	3.11
10. Неговото$_i$ споразумение с жена си$_i$ донесе облекчение на всички. his agreement with wife self's$_{CL}$ brought relief to all "His agreement with his wife relieved everyone."	70.6%	3.02
23. Според собствената ми$_i$ оценка за брака си$_i$, той е окончателно изчерпан. according-to the-own my$_{CL}$ assessment about the-marriage self's$_{CL}$ it is irrevocably exhausted "According to my own assessment of my marriage, it is irrevocably broken."	70.6%	3.05
34. Разбиранията ми$_i$ за своето$_i$ място в обществото не се споделят от жена ми. the-views my$_{CL}$ about self's place in the-society no self-shared from wife my "My views about my place in society are not shared by my wife."	70.6%	2.97
11. Кампанията му$_i$ за рекламиране на книгата си$_i$ започна неуспешно. the-campaign his$_{CL}$ for advertising of the-book self's$_{CL}$ started unsuccessfully "His campaign to advertise his book started unsuccessfully."	67.6%	2.91

26. Негодуванието му$_i$ от лошото си$_i$ посрещане е разбираемо. the-displeasure his$_{CL}$ from the-bad self's$_{CL}$ welcome is understandable "His displeasure with the poor way he was welcomed is understandable."	**64.7%**	**3.02**
16. Опитът й$_i$ за разясняване на програмата си$_i$ не се увенча с успех. attempt her$_{CL}$ for clarifying of the-programme self's$_{CL}$ no self-crowned with success "Her attempt to clarify her programme was unsuccessful."	**52.9%**	**2.64**
36. Несъгласието му$_i$ с колегите си$_i$ огорчи всички нас. the-disagreement his$_{CL}$ with the-colleagues self's$_{CL}$ distressed all us "His disagreement with his colleagues distressed us all."	**52.9%**	**2.61**
35. Укорът му$_i$ към родителите си$_i$ беше несправедлив. the-reproach his$_{CL}$ towards the-parents self's$_{CL}$ was unfair "His reproach towards his parents was unfair."	**50.0%**	**2.64**
29. Неговото$_i$ обръщение към поданиците си$_i$ съдържаше само голи обещания. his address towards the-subjects self's$_{CL}$ contained only empty promises "His address to his subjects contained only empty promises."	**48.5%**	**2.51**
30. Кампанията му$_i$ за рекламиране на своята$_i$ книга се разви според очакванията. the-campaign his$_{CL}$ for the-advertising of self's book developed according-to the-expectations "His campaign to advertise his book developed according to expectations."	**47.1%**	**2.38**
31. Агресивното му$_i$ отношение към жена си$_i$ ме озадачи. the-aggressive his$_{CL}$ attitude towards wife self's$_{CL}$ me puzzled "His aggressive attitude towards his wife puzzled me."	**47.1%**	**2.55**
32. Безкритичността му$_i$ към децата си$_i$ е причина те да са толкова разглезени. the-uncritical-attitude his$_{CL}$ towards the-children self's$_{CL}$ is reason they to be so spoilt "His uncritical attitude towards his children is the reason why they are so spoilt."	**47.1%**	**2.61**
37. Неговото$_i$ обръщение към своите$_i$ поданици съдържаше само голи обещания. his address towards self's subjects contained only empty promises "His address to his subjects contained only empty promises."	**43.8%**	**2.34**
20. Равносметката му$_i$ за своя$_i$ живот досега хич не беше радостна. the-assessment his$_{CL}$ about self's life so-far rather no was happy "His assessment of his life so far was rather depressing."	**38.2%**	**2.38**
39. Възторгът му$_i$ от своите$_i$ постижения отврати близките му. the-delight his$_{CL}$ from self's achievement sickened the-relatives his "His delight with his (own) achievements sickened his relatives."	**38.2%**	**2.32**
25. Наистина ли искаш да чуеш мнението ми$_i$ за мене$_i$? really Q-particle want to hear the-opinion my$_{CL}$ about me "Do you really want to hear my opinion about me?"	**29.4%**	**2.26**
8. Нейното$_i$ мнение за себе си$_i$ е нереалистично високо. her opinion about self is unrealistically high "Her opinion of herself is unrealistically high."	**26.5%**	**1.91**
21. Изискванията му$_i$ към себе си$_i$ са по-големи, отколкото трябва. the-demands his$_{CL}$ towards self are greater than needed "His demands of himself are higher than necessary."	**11.8%**	**1.44**
6. Разводът му$_i$ с втората му$_i$ жена му причини голямо огорчение. divorce his$_{CL}$ with the-second his$_{CL}$ wife him caused great resentment "His divorce with his second wife caused him a lot of resentment."	**8.8%**	**1.44**

19. Неудолетворението ми$_i$ от   себе си$_i$ придоби гигантски мащаби.
   the-dissatisfaction   my$_{CL}$ from self   acquired massive   proportions
   "My dissatisfaction with myself acquired massive proportions."
	5.9%	1.41

2. Изненадата, която Петър$_i$ изпита   от   появата   на жена си$_i$, беше пълна.
   the-surprise which Peter   experienced from the-arrival of wife self's$_{CL}$ was complete
    "Peter's surprise at his wife's arrival was complete."
	0.0%	1.20

12. Моите$_i$ усилия за публикуване на статията ми$_i$ останаха безуспешни.
   my   efforts for publishing   of the-paper my$_{CL}$ remained fruitless
   "My efforts to publish my paper remained fruitless."
	0.0%	1.14

13. Той$_i$ несправедливо укори   родителите си$_i$.
   he unfairly   reproached the-parents   self's$_{CL}$
   "He unfairly reproached his parents."
	0.0%	1

38. Аз$_i$ се засрамих от   поведението на дъщеря си$_i$.
   I   self-shamed from the-behaviour of daughter self's$_{CL}$
   "I was ashamed of my daughter's behaviour."
	0.0%	1.08

Appendix C

<u>Table 3</u>: Ranking of sentences according to the type of bindee

1	Mean of sentences in which the bindee is: a **possessive reflexive clitic** (*си*)	3.1225
2	Mean of sentences in which the bindee is: a **possessive reflexive non-clitic** (*свой*)	2.5833
3	Mean of sentences in which the bindee is: a **non-possessive reflexive** (*себе си*)	1.5866
4	Mean of sentences in which the bindee is: a **reflexive non-clitic** (*себе си, свой*)	2.2511

<u>Table 4</u>: Ranking of sentences according to the structural distance between binder and bindee

1	Mean of sentences in which the bindee (= a reflexive) is one XP** away from the binder: [... β_i ... [$_{XP}$ ... α_i ...]]	1.587
2	Mean of sentences in which the bindee (= a reflexive) is two XPs away from the binder: [... β_i ... [$_{XP}$ ... [$_{XP}$ ... α_i ...]]]	3.017
3	Mean of sentences in which the bindee (= a reflexive) is four XPs away from the binder: [... β_i ... [$_{XP}$ ... [$_{XP}$ ... [$_{XP}$ ... [$_{XP}$ ... α_i ...]]]]]	3.106

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** Only XPs headed by a lexical category are included in the analysis.

<u>Note</u>: Values for the control sentences are not included in the above statistics.