Morphology and Syntax Inside the Word:
Pronominal Participles of Headless Relative Clauses in Turkish

Aslı Göksel

Boğaziçi University, Istanbul & SOAS, London
gokselas@boun.edu.tr

Abstract

This paper investigates the structure of pronominal participles in Turkish and their implications for the *Lexical Integrity Hypothesis* (Anderson 1992, Bresnan and Mchombo 1995, Mohanan 1995). I will argue that the expression of grammatical functions in participles is constrained by the formal properties of word structure. This claim is based on the observation that in Turkish the participles of headless relative clauses (pronominal participles) have a fixed size. Grammatical relations are then expressed within the space made available by conditions on word structure. Some interesting aspects of word structure emerge from this. One of these is that although morphological conditions determine the formal properties of words, the interpretation of word internal elements shows partial sensitivity to combinatorial ordering restrictions. The data thus support the weaker version of the *Lexical Integrity Hypothesis* as discussed by Booij (2005) where syntactic mechanisms have access to word internal elements but cannot manipulate them. Secondly, pronominal participles embody a form-function mismatch whereby the relevant suffixes that occur on pronominal participles belong to the nominal inflectional paradigm, yet they are associated with syntactic functions typical of the verbal paradigm. Finally, these participles allow the marking of non-subject arguments on a form, a phenomenon which is otherwise unattested in Turkish.[1]

1.   Introduction

Regarding the competing views on the nature of word structure, the investigation into whether a separate word formation component is warranted has been fed by two sources of research. One of these sources has to do with syntactic categories and whether head movement can give all and only the words attested in languages (Baker 1985, 1988). The other source from which the notion of a separate word formation component has been fed is the discussion surrounding the place of the lexicon in grammar as a component of word formation rules, research which dates back to Jackendoff (1975) and Aronoff (1976). A sub-branch of the views attributing word structure to a component other than syntax posits a separation of morphology from the lexicon, the former being a system of word-formation and the latter a list of items (Di Sciullo and

Williams 1987, Ackema and Neeleman 2004). Within this constellation, the notion of the impenetrability of word structure by syntactic mechanisms has a central role, as this turns out to be one of the decisive factors in the choice between these models. The structure of pronominal participles in Turkish, the participles of headless relative clauses, is one such testing ground for the place of morphology and syntax in word formation.

The structure of a pronominal participle given in (1) is three ways ambiguous in Turkish, as illustrated in (2):[2]

(1)   VERB-….-RELATIVISER-PLURAL-POSSESSIVE

(2)   a. sev-di-k-**ler-imiz**   a'. [SUB$_j$ ___$_{i (OBJ)}$ sev-di-k-**ler**$_i$-imiz$_j$]
         like-T-REL-LAR-1PL.POSS
         'those who we like/liked

      b. sev-en-**ler-imiz**   b'. [___$_{i (SUB)}$ OBJ$_j$ sev-en-**ler**$_i$-imiz$_j$]
         like-REL-LAR-1PL.POSS
         'those who like/liked us'

      c. (köpek) sev-en-**ler-imiz**   c'. [___$_{i (SUB)}$ OBJ   sev-en-**ler**$_i$-**imiz**$_i$]
          dog   like-REL-LAR-1PL.POSS
         'those among us who like/liked dogs'

Some speakers have a fourth interpretation for the sequence in (1), which is contingent on a number of factors to be elaborated in section 4.3:

      d. köpek ısır-an-**lar-ımız**   d'. [SUB ___$_{i (OBJ)}$ ısır-an-**lar**$_i$-**ımız**$_i$]
          dog   like-REL-LAR-1PL.POSS
         'those among us who dogs bite/bit'[3]

The words in (2a-d) are nominalised non-finite verb forms that function as participles in headless relative clauses. In (2a) the plural morpheme *-lAr* is coindexed with the gap in the object position, and the possessive marker agrees with the subject which may be overtly expressed, as illustrated in (2a'). In (2b) these roles are reversed. While the plural morpheme is coindexed with the gap in the subject position, the possessive marker refers to the object. The situation in (2c) and (2d) is somewhat different. In both of these, the plural morpheme indicates a subset of the denotation of the possessive marker. But in the two cases the possessive marker refers to different

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[2] The abbreviations used in this paper are: ACC: accusative, CNJ: conjunctive suffix, COMP: complementiser, CT: contrastive topic, DAT: dative, FRC: relative clause with overt lexical head, FUT: future, GEN: genitive, LAR: the set whose members are *-lAr* (3rd person plural pronominal suffix) and -Ø (3rd person singular pronominal suffix), NSR: non-subject relativiser and/or constructions containing it, OBJ: object, PASS: passive, PL: plural, P.COP: past copula, POSS: possessive (nominal agreement), PRC: pronominal/headless relative clause, REL: relativiser, SG: singular, SR: subject relativiser and/or constructions containing it, SUB: subject, T: tense

[3] The speakers for whom this interpretation is unavailable find the parallel interpretation in the corresponding full relative clause construction also unacceptable. Although this interpretation is highly marked, I shall include it in the investigation here, as it shows an interesting regularity in the interpretation of the relevant suffixes.

grammatical functions. While the denotation of the possessive marker is the subject in (2c), it is the object in (2d). These observations are summarised below:

(3)   VERB   -REL   *-lAr*   -POSS
                            a. non-subject[4]   subject
                            b. subject   non-subject
                            c. part   whole (subject)
                            d. part   whole (non-subject)

The four-way ambiguity in (2) is partly resolved by the relativising suffixes. Relativisation in Turkish employs two different suffixes which belong to a group of nominalisers: *-K-* in (2a), and *-(y)An* in (2b-d), hence the choice of possessive markers for indicating person. The internal structure of non-finite nominalised verb forms is partly determined by the lexical specifications of these relativisers, discussed in section 6. The second source is syntactic and has to do with the type of grammatical function each relativiser targets. If a non-subject relativiser is used, the following *-lAr* is interpreted as referring to the non-subject gap in the relative clause. However, neither of these constraints explains the interpretation in (2b-d). These forms show that the position of *-lAr* and the possessive marker remains fixed, but their syntactic associations are different. This leads to another well-formedness condition, one that is imposed by constraints on the formal properties of the word and the inability of syntactic operations relating to argument structure to change it.

The data also show that the participles in (2a) and (2b-d) behave differently with respect to co-ordination. As we shall argue, this has implications for the interpretation of the various versions of the *Lexical Integrity Hypothesis* as discussed by Anderson (1992), Bresnan & Mchombo (1995), Mohanan (1995) and Booij (2005). The discussion below will specifically try to bring to light the role of morphology in word-formation and the weight it has with respect to syntax in the organisation of the word. It will be claimed here that the model which best accommodates the present data is a tripartite model with a separation of the lexicon, morphology and syntax, where morphology and syntax are distinct components as suggested by Di Sciullo and Williams (1987) and Ackema & Neeleman (2004).

These claims will be based on the following points:

i.   PRC participles have a fixed ordering of affixes, irrespective of their syntactic function

ii.   PRC participles have a fixed maximal size, irrespective of whether the expression of more functions is required syntactically

iii.   PRC participles use affixes from the nominal paradigm irrespective of the fact that these fulfil grammatical functions

However, in addition to these factors which highlight the sensitivity of word structure to morphological constraints and which cannot be explained by syntactic operations, the lexical specifications of the relativisers show at the same time the

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[4] Here the term 'non-subject' will be used instead of 'object', as the observations above also apply to adjuncts.

presence of word internal compositionality typical of syntactic phrases. The topic of this paper is the interaction of these properties.

The paper is organised as follows. In section 2 I lay out the general properties of full relative clauses (FRCs, by which is meant relative clauses with lexical heads), the properties of the relativizing suffixes and headless relative clauses which I shall refer to as pronominal relative clauses (PRCs).[5] Section 3 discusses why the PRC construction is not a reduced version of an FRC construction with a deleted head, as one might be led to think from the suffixes they share. It will be argued here that *-lAr* in PRCs is not a plural marker but a 3rd person plural pronominal suffix. In section 4, further discussion on person marking in PRCs is presented. This is followed in section 5 by the role of morphology in shaping the word, and in section 6 by the permeation of syntactic factors into the word. In section 7 we look at suspended affixation and discuss to what extent it forms a diagnostic with respect to syntactic intervention. The paper concludes with a discussion of the implications of these mixed findings for the *Lexical Integrity Hypothesis*.

2.   Pronominal relative clauses and their relation to full relative clauses

2.1.   Relative clauses

A proper analysis of the internal structure of PRCs rests on whether they are head-deleted versions of FRCs. FRCs are right-headed constructions which are of two types, marked by the two distinct relativising morphemes given below:[6]

(4)   Subject relativiser   (SR):   *-(y)An*
          Non-subject relativiser (NSR):   *-K-*[7]

SR occurs under two conditions:

i.   Where the relative clause contains no subject (which means that the subject is relativised):[8]

(5)   a. ___i (SUB)   çiçek-ler-i   sev-en Semra_i
                            flower-PL-ACC like-SR   Semra
          '[the] Semra, who likes flowers'[9]

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[5] The choice of the term 'pronominal relative clause' rather than the commonly used term 'headless relative clause' is for reasons of convenience. As I refer to the participles of these clauses as 'pronominal participles' I have chosen to use the abbreviation 'PRC' for its more transparent link with its participle.

[6] Capital letters in the lexical representation of affixes indicate variability due to phonological processes (except for the abbreviation LAR which denotes a set, see footnote 2 above). The bracketed consonant 'y' is a buffer consonant occurring where two vowels would otherwise be adjacent. Hence *-lAr*: -ler/lar, *-K-* k/ğ, *-(y)An*: -en/-an/-yen/-yan.

[7] The internal structure of the NSR suffix is a matter of debate. Kural (1993), Göksel (1997), Göksel (2001), Tekin (2001), Kelepir (2007) analyse *-K-* as a separate morpheme which attaches to the tense/aspect/modality-related suffixes *-DI* and *-(y)AcAK*, while in the remainder of the literature it is implicitly assumed to be an unanalysable part of the suffixes *-DIK* and *-(y)AcAK*. The choice between these two claims has no bearing on the issues discussed here.

[8] Except where the predicate is passive. The details of this analysis are not relevant to the discussion here and its implications will not be addressed.

b. _____{i (SUB)} çok   konuş-an   insan-lar$_i$
              a.lot   talk-SR   person-PL
    'people who talk a lot'

ii.   Where the relative clause does contain a subject but one that is categorial/generic (which means that a non-subject constituent is relativised).[10] The non-subject constituent which is relativised is usually the direct object as in (6a), or the specifier inside a non-subject constituent, as in (6b):[11]

(6)   a. ____{i (OBJ)} köpek ısır-an   kız$_i$
                   dog   bite-SR   girl
    'the girl who a dog/dogs bit'[12]

        b. [_____{i (SPEC)} el-in-i]   köpek ısır-an   kız$_i$
                hand-3SG.POSS -ACC   dog   bite-SR   girl
      'the girl whose hand dogs/a dog bit'

Otherwise NSR are used. This covers cases where the direct object, indirect object or adjunct is relativised and the relative clause does not contain a categorial/generic subject. The participles of non-subject relative clauses obligatorily contain nominal agreement markers for subject agreement and they can optionally have a subject in the genitive case:

(7)   (Semra-nın)   _j_____{i (OBJ)}   sev-di-ğ-i $_j$ çiçek-ler$_i$
      Semra-GEN   like-T-NSR-3SG.POSS   flower-PL
      'the flowers that Semra likes'[13]

There is at least one case, however, where the two strategies overlap and irrespective of which relativiser is used, the interpretation of the relative clause is the same. This happens when a constituent within a sentential subject is relativised. In this case, either strategy can be used without any effect on the interpretation (adapted from Csató (1985) cited in Barker et al (1990)):

(8)   a. [[biz-im   ____i   güven-eceğ-imiz]   şüpheli   ol]-**an** adam$_i$[14]
        we-GEN   trust-COMP-1PL.POSS   doubtful   be-SR man
      'the man that it is doubtful we will trust'

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[9] The forms with *-(y)An* and *-K-* are underspecified for tense and aspect, hence in this article the translations of these predicates will variably be perfective or imperfective.

[10] While it has been recognised in the literature that *-(y)An* can occur in clauses that contain a subject, it is still commonly referred to as 'SR'. I shall therefore use this term for practical reasons.

[11] See Göksel and Kerslake (2005) for a list of such constituents.

[12] As mentioned above, this interpretation is not accepted by some native speakers.

[13] Where the participle contains a tense suffix as in (7), the relative clause is ambiguous with respect to tense. Where the participle is made up of two words, one with a lexical verb and the other with a buffer stem, the full array of tense specifications can be expressed. See Göksel (2001) for details.

[14] Note that this example, example (42) in Barker et al., has a genitive suffix on the predicate of the embedded clause, which, for the native speakers I have consulted and for myself, is ungrammatical. I have therefore taken the liberty of using my dialect in (8a), which does not affect the analysis here.

b. [[biz-im ____i güven-eceğ-imiz-in]   şüpheli   ol-du]-ğ-u   adam_i
   we-GEN   trust-COMP-1PL.POSS-GEN doubtful   be-T-NSR-3SG.POSS man
   'the man that it is doubtful we will trust'

The head of the relative clause *adam* 'man' is the oblique object of *güven* 'trust', the predicate of the clause which is the sentential subject of *şüpheli ol* 'is doubtful'. This pair is particularly pertinent to the claim made here regarding the difference between FRCs and PRCs, and we shall return to this example shortly.[15]

2.2. Structure of PRCs

It is tempting to think of PRCs as FRCs with deleted lexical heads. After all they both seem to share the same suffixes, i.e. the plural marker and a possessive marker. Indeed, the morpheme *-lAr* in PRCs seems to be 'left over' from the deleted head of an FRC:

(9) a. (ben-im) _j____{i (OBJ)}   *gör-dü-ğ-üm* _j   [konuk-lar]_i   (FRC-NSR)
     I-GEN   see-T-NSR-1SG.POSS   guest-PL
     'the guests who I saw'

   b. (ben-im) ____{i (OBJ)}   *gör-dü-k-ler_i-im*   (PRC-NSR)
     I-GEN   see-T-NSR-LAR-1SG.POSS
     'those who I saw'

(9a) is an example of a non-subject relative clause with a plural head. The same parallelism in (9) is found between subject FRCs with plural heads and subject PRCs:
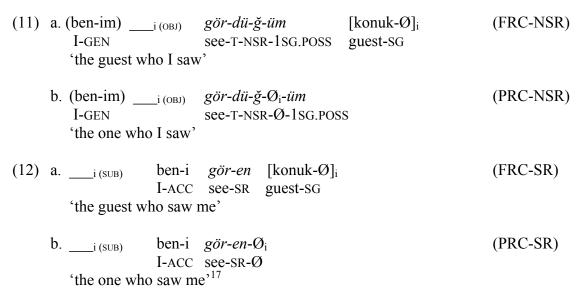
(10) a. ____{i (SUB)}   ben-i *gör-en* [konuk-lar]_i   (FRC-SR)
            I-ACC see-SR   guest-PL
     'the guests who saw me.'

   b. ben-i ____{i (SUB)}   *gör-en-ler_i*   (PRC-SR)
     I-ACC   see-SR-LAR
     'those who saw me.'

FRCs that have singular heads and PRCs with a singular interpretation also seem formally identical, irrespective of whether they use the NSR strategy as in (11) or the SR strategy as in (12):[16]

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[15] Various analyses have been proposed for the syntax of Turkish FRCs, among which are Hankamer & Knecht (1976), Kornfilt (1984a), Kornfilt (1997), Csató (1985), Barker et al (1990), Özsoy (1994a) Özsoy (1994b), Haig (1997), Erkman-Akerson & Ozil (1998), Çağrı (2005), Ulutaş (2005). Here I shall not give an evaluation of these analyses. Testing these against the data provided here for PRCs might prove to favour one of them over the other, but such an undertaking is outside the scope of this paper.

[16] *-Ø* refers to cases where the lack of a plural suffix indicates singularity, evidence for which is given in section 6. This is not the only interpretation of forms without *-lAr*, among which are transnumeral, categorial and indefinite interpretations, these being relevant also to forms containing *-lAr*. Since what interests us here are the formal properties of pronominal participles, the various interpretations of either *-lAr* or the lack of it are not relevant to the issues discussed here.

(11) a. (ben-im) ___$_{i\,(OBJ)}$ *gör-dü-ğ-üm*   [konuk-Ø]$_i$ (FRC-NSR)
         I-GEN   see-T-NSR-1SG.POSS   guest-SG
         'the guest who I saw'

      b. (ben-im) ___$_{i\,(OBJ)}$ *gör-dü-ğ-Ø$_i$-üm*   (PRC-NSR)
         I-GEN   see-T-NSR-Ø-1SG.POSS
         'the one who I saw'

(12) a. ___$_{i\,(SUB)}$ ben-i *gör-en*   [konuk-Ø]$_i$ (FRC-SR)
                         I-ACC   see-SR   guest-SG
         'the guest who saw me'

      b. ___$_{i\,(SUB)}$ ben-i *gör-en-Ø$_i$*   (PRC-SR)
                         I-ACC   see-SR-Ø
         'the one who saw me'[17]

   Indeed, there is little difference between FRCs and PRCs in terms of the grammatical function of the relativised head in the former case, and what the pronoun is coindexed with in the case of a PRC. A head noun in an FRC can stand in a direct object, oblique object or adjunct relationship with the verb in the relative clause. It can also be the complement of a postposition in the relative clause. Hence the form in (13a) can have an interpretation where *-lAr* is coindexed with the direct object gap as in (13bii), or where it has an oblique object/adjunct relationship with the predicate (i.e. where it is coindexed with the oblique object or adjunct gap), as in (13cii):

(13) a. sor-du-k-lar-ımız
         ask-T-NSR-LAR-1PL.POSS

      b. *Direct object*
         (i) sor-du-k-lar-ımız
             ask-T-NSR-LAR-1PL.POSS
             'those that you ask'

         (ii) ___$_{i\,(OBJ)}$ sor-du-ğ-umuz   [soru-lar]$_i$
                       ask-T-NSR-1PL.POSS question-PL
             'the questions that we ask'

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[17] The head noun in FRCs (ia)-(iia) and the participles in PRCs (ib)-(iib) can also contain other markers (e.g. case suffixes and clitics).

	FRC	*PRC*
NSR		
(i)	a. (Ben-im) gör-dü-ğ-üm konuk-**lar-dan-dı-**Ø.	b. (Ben-im) gör-dü-k-**ler**-im-**den-di-**Ø.
	I-GEN see-T-NSR-1SG.POSS guest-PL-ABL-P.COP-3SG	I-GEN see-T-NSR-**lar**-1SG.POSS-ABL-P.COP-3SG
	'S/he was on of the guests whom I had seen.'	'S/he was one of the ones whom I had seen.'
SR		
(ii)	a. ben-i gör-en konuk-**lar-ın-sa**	b. ben-i gör-en-**ler-in-se**
	I-ACC see-SR guest-PL-GEN-CT	I-ACC see-SR-*LAR*-GEN-CT
	'as for the guests who see/saw/have seen me'	'as for those who see/saw/have seen me'

c. *Oblique object/adjunct*
  (i) (soru)   sor-du-k-lar-ımız
     (question)   ask-T-NSR-LAR-1PL.POSS
    'those whom we ask (questions)'

  (ii) ____$_{i\,(OBJ/ADJ)}$ (soru) sor-du-ğ-umuz [polis-ler]$_i$
                    ask-T-NSR-1PL.POSS   police.officer-PL
    'the police officers whom we ask (questions)'

Similarly, *-lAr* can be coindexed with the oblique object gap where the predicate is a psychological verb, as in (14):

(14) *Oblique object*
    a. ürk-tü-k-ler-imiz
       fear-T-NSR-LAR-1PL.POSS
       'those whom we fear'

    b. ürk-tü-ğ-ümüz   görevli-ler
       fear-T-NSR-1PL.POSS official-PL
       'the officials that we fear'

Only where *-lAr* refers to a place or temporal adverbial is a PRC marginal, indicating that there is a preference for LAR-POSS to refer to arguments in PRCs:

(15) a. (i) *? gör-ül-dü-k-ler-iniz
          see- PASS-T-NSR-LAR-2PL.POSS
          'those (places) at which you were seen'

      (ii) gör-ül-dü-ğ-ünüz   pastane-ler
          see-PASS-T-NSR-2PL.POSS pastry.shop-PL
          'the pastry shops at which you were seen'

   b. (i) *? çarşı-ya   git-ti-k-ler-iniz
          market-DAT   go-T-NSR-LAR-2PL.POSS
          'those (times) at which you went to the market'

      (ii)   çarşıya   git-ti-ğ-iniz   gün-ler
          market-DAT go-T-NSR-2PL.POSS day- PL
          'the days on which you went to the market'

    The assumption that PRCs are head-deleted versions of FRCs, however falls short of explaining certain properties of these constructions which ultimately set them apart from FRCs. The most important difference between the two is the function of the suffix *-lAr* (and *-Ø* which indicates singularity). For this reason, in the remainder of this

paper, the set *-lAr/Ø* which occurs in PRCs will be referred to as LAR to distinguish it from the set of the number suffixes *-lAr/Ø* in FRCs.[18]

3.   Why PRCs Are not FRCs with Deleted Lexical Heads

There are a number of reasons why it does not seem to be the case that PRCs are reduced versions of FRCs where the lexical head has been deleted. An obvious piece of evidence comes from ordering facts. If the plural suffix on the head noun were to attach to the participle, the ordering would have been POSS-*lAr*, rather than the order that is attested, which is LAR-POSS, as indicated in (16a). If, on the other hand, the plural marker and the possessive were directly attached to the participle, the ensuing construction would have been POSS-*lAr*-POSS, which is also ungrammatical. These are illustrated in (16a) and (16b) respectively:

(16) a. * ara-dı-ğ-ımız   ~~insan~~-lar
             call-T-NSR-1PL.POSS   ~~people~~-PL

      b. * ara-dı-ğ-ımız   ~~insan~~-lar-ımız
             call-T-NSR-1PL.POSS   ~~people~~-PL-1PL.POSS

        We return to the constructions in (16) in section 3.4. But first we shall look at additional evidence in favour of separating PRCs from FRCs. These are listed below and elaborated in sections 3.1-3.4:

i.   the nature of *-lAr/Ø* in FRCs as opposed to the properties of LAR in PRCs

ii.   the asymmetry between referents of *lAr/Ø* in FRCs and LAR in PRCs

iii.   the unavailability of a non-restrictive reading in PRCs

iv.   the unavailability of the presence of a genitive-marked NP in PRCs

3.1.   -lAr/Ø in FRCs vs. LAR in PRCs

One of the reasons why PRCs cannot be FRCs where the lexical head has been deleted has to do with the function of the seemingly identical suffixes *-lAr* and *-Ø* in these two types of clause. While in FRCs *-lAr/Ø* only marks number, in PRCs, this cannot be the sole function of LAR. Being a placeholder for the lexical head while at the same time indicating number, the members of LAR are more likely to be pronominal suffixes with number specification.[19] Hence I suggest that *-lAr* in PRCs is a 3rd person plural pronoun

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[18]   Hence *LAR* refers to the set of 3rd person pronominal suffixes, *-lAr* is the lexical form of *-ler* and *-lar* irrespective of their function, and *-ler* and *-lar* refer to the citation form of these.
[19]   This is the reverse of the function of *-lAr* as described by Kornfilt (1984a: 52) as a member of (one set of) the verbal agreement paradigm. There Kornfilt identifies *-lAr* as the marker for number and not person. Here we identify it as the marker of number and 3rd person. Although Kornfilt's remark is intended for the verbal paradigm whereas LAR here is taken as a member of the nominal paradigm as will

and -Ø is a 3rd person singular pronoun, rather than plural and singular number suffixes respectively. One indication of the pronominal nature of LAR has to do with its mutual exclusivity with a lexical head. In FRCs the participle cannot contain *-lAr* even where the lexical head is plural:

(17)   a. *gör-dü-k-ler-im   konuk(-lar)
             see-T-NSR-LAR-1SG.POSS guest(-PL)
             Int. interpretation: 'the guests whom I saw'

       b. *gör-en-ler   konuk(-lar)
             see-SR-LAR   guest(-PL)
             Int. interpretation: 'the guests who saw me'

       The observation that the members of LAR are pronominal suffixes specified for number is supported by other data. *-lAr* can attach to simple adjectives with the result being ambiguous between *number* specification as in (18ai) and *number+pronominal* as in (18aii). Further, the addition of a possessive suffix disambiguates these constructions as shown in (18b) which has only a number+pronominal interpretation. *-lAr* in forms such as (18b) does not quantify over events or states:

(18)   a. kırmızı-lar
             red-*lAr*
             (i) 'types/shades/varieties of (the colour) red
             (ii) 'the red ones'

       b. kırmızı-lar-ı
             red-*lAr*-3SG.POSS
             'the red ones [of…]'   (as in *bunların kırmızıları daha tatlı oluyor*
                                          'the red ones [of these] are sweeter)

Note that the sequence in (18b) is exactly what is found in PRCs and, as expected, these also have a single interpretation:

(19)   ara-dı-k-lar-ımız
        call-T-NSR-LAR-1PL.POSS
        (i) *'the one we called many times'
        (ii) 'the ones we called'

3.2.   *The Reference of lAr/Ø in FRCs and LAR in PRCs*

It was noted above in section 2.1 that the two strategies of relativisation, namely SR and NSR, converge when the head of the relative clause corresponds to a gap inside a sentential subject (see 8). The result of this convergence was that whichever strategy was used, the interpretation was the same. This does not carry over to PRCs and only the SR strategy in this case is grammatical:

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be discussed in section 5.3, below, whether these two claims can exist side by side is a matter for further research.

(20) a. [[biz-im ___i(OBJ) güven-eceğ-imiz]   şüpheli   ol]-**an**-lar$_i$
      we-GEN   trust-COMP-1PL.POSS   doubtful   be-SR-LAR
      'the ones that it is doubtful we will trust'

    b. *[[biz-im ___ (OBJ) güven-eceğ-imiz-in]   şüpheli   ol-du]-**k**-lar-ı
        we-GEN   trust-COMP-1PL.POSS-GEN doubtful be-T-NSR-LAR-3SG.POSS
        Int. interpretation: 'the ones that it is doubtful we will trust'

       If PRCs were FRCs without lexical heads there would be no reason for such an asymmetry. If it were the case that the suffix *-lAr* on the lexical head straightforwardly got realised on the participle, (20b) should have been grammatical on a par with (20a).

3.3.   *The Unavailability of a Non-restrictive Reading in PRCs*

Although non-restrictive relative clauses are not common in Turkish, FRCs can be ambiguous between a restrictive and a non-restrictive reading. PRCs, on the other hand, only allow a restrictive reading:

(21) a. ___i (OBJ)   çok   sev-di-ğ-im   [komedi-ler]$_i$ (FRC)
              much like-T-NSR-1SG.POSS comedy-PL
      (i)   'the comedies that I like very much'
      (ii)   'comedies, which I like very much'

    b. ___i (OBJ)   sev-di-k-ler$_i$-im   (PRC)
              like-T-NSR-LAR-1SG.POSS
      (i)   'the ones that I like'
      (ii)   *'these that I like'

(22) a. ___i (OBJ) hiç   kaçır-ma-dı-ğ-ım   [komedi-ler]$_i$ (FRC)
               never miss-NEG-T-NSR-1SG.POSS   comedy-PL
      (i)   'the comedies that I never miss'
      (ii)   'comedies, which I never miss'

    b. ___i (OBJ) hiç   kaçır-ma-dı-k-lar$_i$-ım   (PRC)
              never miss-NEG-T-NSR-LAR-1SG.POSS
      (i)   'the ones that I never miss'
      (ii)   *'these that I never miss'

Again, under the view that PRCs are head-deleted versions of FRCs, this is unexpected.

3.4.   *The Unavailability of Overt Genitive-marked NPs in PRCs*

FRCs and PRCs also differ in terms of the genitive NP functioning as the specifier in constructions that have possessive markers. Possessive markers are associated with genitive NPs and are considered to be their licensors. This is exemplified by an FRC

below where the genitive NP agrees with the possessive marker on the head of the relative clause. This construction contains two possessive markers, one on the lexical head which licenses the genitive NP, the other one on the participle, referring to the subject of the relative clause:[20]

(23) Tolstoy-**un** sık sık oku-du-ğ-**um** roman-lar-**ı**
Tolstoy-GEN often read-T-NSR-**1PL.POSS** novel-PL-**3SG.POSS**
(i) those of Tolstoy's novels that I often read
(ii) Tolstoy novels, which I often read

However, although genitive NPs occur in FRCs, they cannot be overtly expressed in PRCs:

(24) a. *Tolstoy'**un** sık sık oku-du-k-lar-**ım-ı**
Tolstoy-GEN often read-T-NSR-LAR-**1PL.POSS-3SG.POSS**
Int. interpretation: 'those of Tolstoy which I often read'

b. *Tolstoy'**un** sık sık oku-du-k-lar-**ım**
Tolstoy-GEN often read-T-NSR-LAR-1PL.POSS
Int. interpretation: 'those of Tolstoy which I often read'

As can be seen, (24a) which contains the same suffixes as (23) is ungrammatical. The ungrammaticality of this form can be explained on the grounds that the participle is not a well-formed word, a point we shall return to in section 5.2. (24b) has a morphologically well-formed participle, but the construction is still not well-formed as it does not have a possessive marker that licenses the genitive NP. So in PRCs, there is no possibility of expressing a genitive NP which is in agreement with the possessor of the denotation of the head noun. In other words, there is no possibility of construing the possessive on the participle as being copied from the lexical head. Hence, neither of the markers on the participle of the PRC corresponds to the markers on the head of the FRC.

These facts show that the participle in the PRC is not a combination of an FRC participle with the suffixes -*lAr* and POSS copied from the head noun.

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[20] It is interesting to note that the overt expression of two genitive NPs, one licensed by the possessive marker on the lexical head, the other by the possessive marker on the participle sounds rather contrived:

(i) ?Tolstoy-**un**$_i$ ben-**im**$_j$ sık sık oku-duğ-**um**$_j$ roman-lar-**ı**$_i$
Tolstoy-GEN I-GEN often read-NSR-**1PL.POSS** novel-PL-**3SG.POSS**
(a) those of his novels that I often read
(b) his novels, which I often read

This may be related to the topic status of pronominal genitive NPs, see Enç (1986) and Öztürk (1999), since corresponding constructions where the genitive NPs are omitted are grammatical, see (32).

4.   Person Marking in PRCs (SR Strategy)

A further difference between FRCs and PRCs manifests itself in the SR strategy of relativisation. It is a well-known property of the participles of FRCs that they cannot contain person markers when the SR strategy is used. The marker of the SR strategy, which is *-(y)An*, excludes the occurrence of a person marker in FRCs. It should be remembered that person marking is realised through possessive markers as a result of the nominal nature of participles.

(25) biz-i   gör-en(*-imiz)   kişi-ler   (FRC)
         we-ACC see-SR(*-1PL.POSS)   person-PL
         'the people who see us'

The unavailability of possessive marking in FRC participles does not carry over to PRCs. Participles of PRCs where the SR strategy has taken place *can* have possessive marking:

(26) gör-en-ler-imiz   (PRC)
         see-SR-LAR-1PL.POSS

As mentioned in section 1 above, these constructions are ambiguous where LAR and POSS can have the following interpretations:

(26')   LAR   POSS
     a. subject   non-subject
     b. part   whole (subject)
     c. part   whole (non-subject)

We shall now take each one of these in turn.

4.1.   LAR: Subject, POSS: Non-subject

The possibility of interpreting LAR as being coindexed with the gap in subject position and POSS as the non-subject is concomitant with the predicate of the relative clause receiving an individual-level interpretation. In (27) below, the verb *gör* 'see' denotes a permanent state of 'seeing/visiting' (e.g. as a habit), rather than the stage-level interpretation of 'seeing' as a temporary action:[21]

(27) ____$_i$ (SUB) ____$_j$ (OBJ)   gör-en-ler$_i$-imiz$_j$
                                                              see-SR-LAR-1PL.POSS
         'the ones who see us'

---

[21] See Diesing (1992) for the differences between these predicate types.

The fact that these predicates do not allow temporal specification further supports this point.[22] The non-subject in these constructions is usually a direct object, but oblique objects are also marginally acceptable.

4.2. LAR: Part, POSS: Whole (Subject)

In the second instance where the participle of a PRC contains a possessive suffix, it gives part of the information relating to the gap in the subject position of the relative clause:

(28) ___i (SUB) Amerika-yı   gör-en-[ler-imiz]i
           America-acc   see-SR-LAR-1PL.POSS
    '*those among us* who have seen America'

The full interpretation of the gap hinges on the presence of *-lAr* which selects a subset of this group of 1st, 2nd or 3rd persons. As such, it is still a plural pronoun referring to a group. Hence in (28) *-lAr* indicates a non-singleton subset of a set whose person specification is marked by the possessive marker. Thus, these two suffixes jointly define the identity of the gap that they are coindexed with. Note that (27) and (28) are distinguished from each other only by the absence of a direct object in the former.[23]

4.3. LAR: Part, POSS: Whole (Non-subject)

The third interpretation associated with (26) above is similar to the one in (28) in terms of the function of LAR. Again LAR denotes a subset, and the possessive marker gives the value of the group in terms of its person specification but this time LAR-POSS is coindexed with a gap that is the non-subject, rather than the subject. This is given in the first interpretation below. This interpretation is accepted only by some speakers and even then is possible only where a number of conditions are met. It occurs only with a handful of verbs denoting an aggressive action perpetrated by non-human agents, such as *ısır* 'bite', *sok* 'sting' and *tırmala* 'scratch' and is contingent on the presence of a bare NP subject which is categorial/generic:[24]

(29) ___i (OBJ) köpek   ısır-an-[lar-ımız]i
           dog   bite-SR-LAR-3PL.POSS
    '*those among us* who dogs bit'

---

[22] These constructions with the given reading are somewhat similar to deverbal nouns containing one of the deverbalizing suffixes *-(A/I)r* (as in *oku-r* 'reader') or *-(y)IcI* (as in *oku-yucu* 'reader'), which might seem suggestive of a lexical phenomenon. Attributing the phenomenon to the lexicon, however, does not change matters in terms of explaining the internal make-up of these participles.

[23] Examples such as (28) can contain a possessive-marked adjunct coreferential with LAR-POSS, see Göksel & Kerslake (2005: 283)

[24] See Öztürk (2005) for a recent analysis of such subjects as pseudo-incorporated NPs.

Note that (29) has a second and universally acceptable interpretation parallel to the one discussed in relation to (28) above, where LAR-POSS is coindexed with the subject gap.

The revised summary of the suffixes in pronominal participles in line with what has been discussed above is as follows:

(30) VERB -REL -LAR -POSS

	-K-	3rd p. non-subject pronoun	subject agreement/pronoun
	-(y)An	3rd p. subject pronoun	object agreement/pronoun
	-(y)An	pronoun denoting part	pronoun denoting whole (subject)
	-(y)An	pronoun denoting part	pronoun denoting whole (non-subject)

5. Morphological Aspects of the Structure of Pronominal Participles

What do the data discussed above tell us about the factors that underlie the structure of the participles of PRCs? First, from an empirical point of view, this is the only instance in Turkish where a verb form contains an affix that corresponds to a constituent other than the subject. Non-subject marking on a verbal form, finite or non-finite, is otherwise unattested in Turkish. As for the issue of whether pronominal markers exist in Turkish at all, the reader is referred to arguments put forth in Enç (1986) and Öztürk (1999) regarding the pronominal nature of the agreement morphemes in Turkish. A question to be raised at this point would be why LAR, the set of pronominal affixes, only contains 3rd person forms and not 1st and 2nd person forms, given that person paradigms in Turkish contain, with the exception of the imperative paradigm, forms for all persons. This will be discussed below in 5.3. But first we shall look at two factors that are crucial for an understanding of the effect of morphology as displayed by participles: the fixed order of affixes and the fixed amount of space allocated to affixation in a word.

5.1. Fixed Order

One point which is obvious from the data, yet has not been pointed out explicitly so far, is the fixed order of LAR and POSS. Any other order is ungrammatical:

(31) *gör-dü-ğ-üm-ler
            see-T-NSR-1SG.POSS-LAR
        Int. interpretation: 'the ones that I have seen'

The restrictions on the ordering of the plural morpheme *-lAr* with respect to the possessive markers are well-known (Lees 1962, Kornfilt 1984a, Kornfilt 1984b, Göksel 1988, Schroeder 1999). Not only does it have to occur before the possessive markers, it also cannot occur twice in the same word even if it is required for semantic reasons. It is also well-known that *-lAr* has various semantic functions whether it be in the verbal paradigm or the in nominal paradigm (Yükseker 1995, Ketrez undated, Göksel and Kerslake 2005). The observation here adds to the diversity of the functions of this morpheme. The fact that it is, in this case, a member of the pronominal set LAR does

not affect its positioning, even when it can correspond to various grammatical functions such as the subject, non-subject or a part of either of these. Similarly POSS, from its fixed position, can correspond to the subject, non-subject or the set from which the denotation of either of these is chosen. In addition, LAR and POSS can be coindexed with gaps separately as in (2a-b) or jointly, as in (2c-d). These are serious counterexamples to approaches where the morphological ordering of affixes has a one-to-one correspondence to syntactic operations as in Baker (1985), among many others.

5.2. Fixed Size

Another significant property of the participles of PRCs is that they can only have one POSS marker, although double person marking in FRCs is possible. By virtue of having an overt lexical head, FRCs have two locations on two separate words for expressing person marking. One of these positions, the one on the lexical head, denotes possession and the other one which is located on the participle itself denotes agreement with the subject of the relative clause:[25]

(32) a. gör-dü-ğ-**ün**   bütün   kitap-lar-**ım**
          see-T-NSR-**2SG.POSS** all   book-PL-**1SG.POSS**
          'all my books that you have seen'

The iteration of two possessive markers on the participle of a PRC is ungrammatical:[26]

(33) *gör-dü-k-ler-**im**-**in**
          see-T-NSR-LAR-**1SG.POSS-2SG.POSS**
          Int. interpretation: (i) 'all the ones of mine that you have seen'
                                (ii) 'all the ones of yours that I have seen'

Thus, it is not possible to express both of the functions associated with possessive marking on the same form concurrently.

As a result of the conditions requiring affixes to appear in a fixed order and within a fixed space (see also Göksel 1998, Göksel 2001), morphemes may be associated with various functions yet still appear in fixed positions. This in itself is an indication that syntactic requirements may not override formal conditions on word structure, a point which will be elaborated in section 8.

5.3. Nominal Paradigm Functioning as Verbal Paradigm

A final indication that morphological constraints override syntactic constraints has to do with the class membership of LAR. The suffix *-lAr* has a ubiquitous character and appears in more than one paradigm, given below:[27]

---

[25] As mentioned above, FRCs have possessive marking on the participle only in the NSR strategy.
[26] See also Kornfilt (1984b) and Inkelas & Orgun (1998).
[27] For the occurrence of *-lAr* in other paradigms see Göksel & Kerslake (2005). For the functions of *-lAr*, see Lewis (1968), Kirchner (2001), Ketrez (undated), among others. For the usage of possessive morphemes see Schroeder (1999).

(34)   (i) *nominal agreement*   (ii) *verbal agreement*   (iii) *number*
            paradigm   *paradigm*   *paradigm*
            (possessive markers)   *(participle group)*

                                                                           sg.   *-Ø*
                                                                           pl.   *-lAr*

    1sg   -(I)m   -(y)Im
    2sg   -(I)n   -sIn
    3sg   **-(s)I(n)**   **-Ø**
    1pl   -(I)mIz   -(y)Iz
    2pl   -(I)nIz   -sInIz
    3pl   **-lArI**   **-lAr**

Let us remind ourselves that participles are nominal constructions. It would therefore be expected for LAR to belong to the nominal agreement paradigm. However, it does not. The forms for third person in (i) (i.e. *-(s)I(n)* and *-lArI*) do not match the members of LAR (namely *-lAr* and **-Ø**). What about (ii)? Here there is a match between the members, however, two points would then be inexplicable. One of these is why, given that LAR has a pronominal function, we see only the forms *-lAR* and *-Ø* in PRCs and none of the other persons. Although rare in Turkish, heads of relative clauses can be 1st or 2nd person pronouns. In principle then, there would be no reason why a 1st or a 2nd person pronominal affix should not appear in a PRC. But, as mentioned in section 3 above, this does not happen:

(35) *gör-dü-ğ-ünüz-ümüz
        see-T-NSR-2PL.POSS.1PL.POSS
      Int. interpretation: (i) 'you (all) who we have seen'
                            (ii) 'we, who you (all) have seen'

It would also be unexpected to have verbal agreement suffixes attaching to a nominal stem, ruling out (ii) as the possible paradigm that LAR belongs to.

The only paradigm that is left as a possible option is thus (iii), the number paradigm. What is important to note is that this paradigm is selected for purely morphological reasons. The possible order of any type of inflection following a nominal stem is number-possessive:

(36) kitap-lar-ım
      book-PL-1SG.POSS
      'my books'

This is exactly what occurs on any type of nominal, including participles that we have been discussing.

The properties of PRCs discussed above show that they are subject to principles of morphological well-formedness overriding syntactic factors relating to the expression of grammatical functions. These points indicate that word structure is subject to independent principles of morphology. So far, syntax has had no say in the internal make-up of participles. Except that there are two instances where syntax does seem to play a role. One of these is the incremental nature in the ordering of the affixes with

respect to the relativisers *-K-* and *-(y)An*, and the other one is the behaviour of participles under suspended affixation, to which we now turn.

6.   Syntactic Effects in the Word Domain

Up to now we have looked at ways in which morphological constraints shape the structure of participles in PRCs in terms of defining the positions for the expression of grammatical functions. The area of the word covered by LAR-POSS seems to be opaque to syntactic operations. If we move one step to the left and include the relativiser into the picture, syntactic effects do seem to play a role.

There are two aspects of participial forms which point to the possibility of syntactic intervention. One of these has to do with the combinatorial properties of the relativisers and constitute examples of how syntactic mechanisms affect word structure. The other one, the behaviour of pronominal participles under suspended affixation does not give clear results with respect to how or whether syntax has access to word structure. We look at each one of these in turn.

6.1.   *Combinatorial Properties of the Relativisers*

There is a striking dissimilarity between the combinatorial properties of the relativisers and how they induce an interpretation on the following suffix. (30), repeated below, illustrates this point:

(37) VERB   -REL   -LAR   -POSS
  (i)   -K- 3rd p. non-subject pronoun   subject agreement/pronoun
  (ii)   -(y)An 3rd p. subject pronoun   object agreement/pronoun
  (iii)   -(y)An   pronoun denoting part   pronoun denoting whole (subject)
  (iv)   -(y)An   pronoun denoting part   pronoun denoting whole
                                                       (non-subject)

As shown in the table above, the suffix following the NSR relativiser *-K-* is interpreted as a non-subject. *-K-* which, by virtue of being a relativiser introduces an operator and a gap, requires that the value of this gap be assigned a partial interpretation (partial in the sense that it is a pronominal item) immediately.

However, there are two counterexamples to this generalisation and not all affixes that follow *-K-* are interpreted as objects. Firstly, FRC participles typically contain *-K-*-POSS sequences where POSS is obligatorily interpreted as the subject, as in (7) repeated below:

(7)   (Semra-nın)$_j$ ____$_{i\ (OBJ)}$ sev-di-ğ-i$_j$ çiçek-ler$_i$
        Semra-GEN   like-T-NSR-3SG.POSS flower-PL
        'the flowers that Semra likes'

Secondly, the interpretation of LAR-POSS is affected by the complexity of the clause. In multiple embeddings, LAR can be interpreted as the subject (38b) or as the direct object (39b) of a sentential complement:

(38) a. ben-im$_j$ [____$_{i(SUB)}$ kitab-ı   oku-du-ğ-un$_i$-u]   san-dı-ğ-ım$_j$ [adam-lar]$_i$[28]
I-GEN   book-ACC read-T-NSR-3SG.POSS think-T-NSR-1SG.POSS man-PL
'the men who I thought read the book'

b. ben-im$_j$ [____$_{i(SUB)}$ kitab-ı   oku-du-ğ-un$_i$-u]   san-dı-k-**lar**$_i$-ım$_j$
I-GEN   book-ACC read-T-NSR-3SG.POSS think-T-NSR-*LAR*-1SG.POSS
'the ones who I thought read the book'

(39) a. ben-im$_j$ [adam-ın____$_{i(OBJ)}$ oku-du-ğ-un$_i$-u]   san-dı-ğ-ım$_j$ [kitap-lar]$_i$
I-GEN   man-GEN   read-T-NSR-3SG.POSS think-T-NSR-1SG.POSS book-PL
'the books that I thought the man read'

b. ben-im$_j$ [adam-ın ____$_{i(OBJ)}$ oku-du-ğ-un$_i$-u]   san-dı-k-**lar**$_i$-ım$_j$
I-GEN   man-GEN   read-T-NSR-3SG.POSS think-T-NSR-*LAR*-1SG.POSS
'the ones that I thought the man read'

What LAR following an NSR participle cannot refer to is a constituent inside a sentential subject, witnessed by the ungrammaticality of (20b) above.[29] The NSR relativiser then does not automatically constrain the grammatical function of the affix that follows it. Rather, it is sensitive to the presence of *a pair of* affixes. This means that the grammatical function of a suffix that follows NSR is not predictable unless these affixes form some kind of a template.

The combinatorial properties of *-(y)An* are less obvious. The affix to the right of *-(y)An* is not interpreted as a non-subject under any circumstances. It is either interpreted as the subject, as in (37ii), or it is assigned an interpretation which has nothing to do with grammatical functions, as in (37iii-iv). Hence, *-(y)An* also seems to be sensitive to the presence of a pair of affixes, although it not in the same way as *-K-*. The difference is that the affix adjacent to *-(y)An* can never be identified as the non-subject. This can further be supported by a form such as (38), which can only be analysed as having a -Ø affix which occupies a position but is not phonologically overt. An analysis which does not posit a null affix would fall short of accounting for its plural counterpart in the interpretation where the understood subject is plural:

(40) a. sev-en-Ø-im
love-SR-Ø(=subject)-1SG.POSS(= object)
'the one who loves me'

b. sev-en-ler-im
love-SR-ler(=subject)-1SG.POSS(= object)
'those who love me'

These observations can be summarised as follows:

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[28] I would like to thank Cem Bozşahin for bringing this example to my attention.
[29] The asymmetry between extraction from a subject and object is discussed in Hankamer and Knecht (1976). The data here is in conformity with the analysis presented there.

(i)   The combinatorial properties of the relativisers constrain the interpretation of the suffixes that follow them in terms of what grammatical function they may fulfil, hence word-internal items must have access to syntactic information

(ii)   However such syntactic information is sensitive to whether the affixes that follow a relativiser appear as part of in a pair or not

These points indicate that the accessibility of PRC participles to syntactic information is contingent on the presence of a morphological template.

7.   Co-ordination under Suspended Affixation

The next piece of data, the co-ordination of word internal elements, give mixed results with respect to whether co-ordination, in so far as it is considered a syntactic phenomenon, is a reliable test for understanding the opacity of word structure to syntax.[30] In suspended affixation (Lewis 1968), identical suffixes on all but the last of consecutive co-ordinated constituents can be deleted in Turkish:[31]

(41)   dere   ve   ırmak-lar-da
        stream   and   river-PL-LOC
        'in streams and (in) river[s]'

        The relevant insight that suspended affixation can provide with respect to the data at hand is that constituents ending in *-(y)An* behave differently from those ending in *-K-*. This is elaborated below.

7.1.   The Constituent Ending in *-K-* Cannot Be 'Severed'

When a co-ordinator such as *ve* 'and' is used, SR participles can be co-ordinated by suspending LAR-POSS as in (40a) but not NSR participles:[32]

(42)   a. [sev-en   ve   anla-yan]-lar-ımız
           love-SR   and   understand-SR-LAR-1PL.POSS
           (i) 'those who love us and those who understand us'
           (ii) 'those who love and understand us'

---

[30] Bresnan and Mchombo (1995) take co-ordination as a test for the lexical integrity of words containing derivational morphemes. I It is not clear whether co-ordination can be applied as a reliable test for words containing inflectional morphemes, especially in view of the fact that inflection may create separate word domains (see Kabak and Vogel 2001). However, the asymmetry in pronominal participles with respect to co-ordination is an interesting phenomenon which may bring more light to the notion of word and issues relating to lexical integrity.

[31] Suspended affixation is subject to certain conditions (for various views see Lewis (1968), Orgun (1995), Kornfilt (1996), Inkelas & Orgun (1998), Kabak (2006)). As discussed in these works, the point of cut-off on the conjuncts is not arbitrary and is subject to certain conditions. We shall touch upon these below but will not provide a full rendition of the analyses in these works for reasons of space.

[32] Similar observations are made in Kornfilt (1984a:149) for sentential complements ending in *–K-* (*-DIK* in her terms) and conjoined with the co-ordinating clitic *-(y)lA*.

    b. *[sev-dik   ve   anla-dı-k]-lar-ımız
      love-NSR   and   understand-T-NSR-*LAR*-1PL.POSS
        Int. interpretation: 'those who we love and understand'

Constituents carrying NSR and SR can also be co-ordinated as long as the 'severed' constituent is an SR participle:

(43) [ben-i sev-en   ve   ben-im   gör-dük]-ler-im
       I-ACC love-SR and   I-GEN   see-NSR-LAR-1SG.POSS
       'those who love me and who I have seen'

If the severed constituent is an NSR participle, the construction is ungrammatical:

(44) *[ben-im gör-dük ve ben-i sev-en]-ler-im

This observation supports the analysis presented in Kabak (in press), namely that the main condition that applies to suspended affixation is that the severed form must be 'word' (see also Ido 2003 for relevant discussion).

7.2.   *Suspended Affixation is only Sensitive to the Formal Properties of Affixes*

The possibility of co-ordinating NSR and SR participles shows that suspended affixation is not sensitive to the identity of the grammatical functions of the suspended affixes, and is an operation which is only sensitive to the formal properties of affixes. The availability of co-ordination in SR and NSR participles above shows that the operation takes place irrespective of the functions of the affixes. The co-ordination of SR participles where LAR and POSS do not have unique functions further supports this claim.

(45) [orman-da gez-en   ve aslan ısır-an]-lar[33]
      forest-loc stroll-sr and lion   bite-sr-lar
      'those who were strolling through the forest and who lions bit'

In the example above, *-lar* is interpreted as the object in the second conjunct but the recovered interpretation for the first and severed conjunct is as the subject of the predicate.

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[33] I would like to thank İlhan Çağrı for bringing this example to my attention. This example is grammatical on the intended interpretation only for some speakers, see FN 3.

7.3. *Suspended Affixation can 'Skip' an Affix*

Another difference between SR and NSR constructions has to do with the inability of an NSR participle to be severed at the point where it ends in the suffix *–K-*, as mentioned above. This requirement forces the presence of other material on the participle for grammaticality. Interestingly, this can lead to forms where affixes are not suspended as groups. In NSR constructions individually suspended affixes can occur. One such example is *-lAr* below, which is sandwiched between two unsuspended affixes:

(46) [dil-in-i   bil-di-ğ-im   ve   anla-dı-k]-lar-ım
     language-3SG.POSS-ACC know-T-NSR-1SG.POSS and understand-T-NSR-LAR-1PL.POSS
     (i) 'those whose language I know and understand'
     (ii) 'the one whose language I know and those I understand'

Notice that *-lar* is missing from the first conjunct, yet the possibly more prominent interpretation of the construction is the one where it is interpreted as occurring there. The facts with SR participles are not the same. The SR construction parallel to (46) only has the interpretation where *-lAr* is *not* interpreted as part of the first conjunct.

(47) [aslan   ısır-an-ımız   ve   arı sok-an]-lar-ımız
     lion   bite-SR-1SG.POSS   and   bee-SR-LAR-1PL.POSS
     'the one lions/a lion bit and those who bees/a bee stung'

The accounts of suspended affixation do not account for the interpretation of suspended suffixes sandwiched between unsuspended ones. Firstly, the analysis whereby groups of affixes can either be suspended together or not at all does not apply to LAR and POSS, although it applies to other suffixes (contra. Orgun 1995, Inkelas & Orgun 1998).[34] It is also surprising that NSR participles cannot be co-ordinated using a free co-ordinator, although *-DIK* can occur word finally in lexicalised forms (as in e.g. *[tanıdık ve akadaş]larımız* 'our acquaintances and friends'): However, the data suggest that the condition put forth by Kabak (in press) regarding the presence of agreement suffixes as a condition for guaranteeing the well-formedness of the severed word seems to be supported by (46).

    The transparency of the combinatorial properties of the relativisers as discussed in section 6.1 indicates that syntax is accessible to word structure. The ability of parts of participles to be conjoined under suspended affixation as shown in section 7, on the other hand indicate that although co-ordination is generally thought to be a syntactic process, here too the formal properties of the words come into play. The split behaviour of conjoined participles further indicates that the factors intervening in word structure do not present a uniform picture.

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[34] As pointed out in Kabak (2006), these suffixes do not readily fall under an analysis of suspended affixation.

8.   Conclusion: The Interaction of Morphology and Syntax

It has been argued above that relative clauses with pronominal participles are structurally different from full-fledged relative clauses, leading to the observation that a unitary syntactic structure for both is unwarranted. Further, it was shown that pronominal participles have the following morphological structure:

i.   The grammatical functions of the suffixes following NSR and SR cannot be predicted by isolating them. The suffix following NSR can be coindexed with a subject (9a), an object (9b), an embedded subject (38b) and an embedded object (39b). The suffix following SR can be coindexed with the gap of a subject (27), a part of a subject (28) and that of an object (29).

ii.   The grammatical functions of the suffixes following NSR and SR are contingent on whether such suffixes occur in pairs or not.

iii.   PRC participles have a fixed ordering of affixes, irrespective of their syntactic function.

iv.   PRC participles have a fixed maximal size, irrespective of whether the expression of more functions is required syntactically.

v.   PRC participles use affixes from the nominal paradigm irrespective of the fact that these fulfil syntactic functions.

The following questions can be raised concerning the nature of the interaction of morphology and syntax in pronominal participles and how this relates to the *Lexical Integrity Hypothesis*:

1.   *What is the nature of the syntactic aspects of word structure?*

2.   *What is the nature of the morphological constraints that determine the formal properties of words (i.e. fixed order of affixes, fixed size, and the form-function mismatch)?*

3.   *How do the morphological constraints interact with syntactic constraints?*

The observations in (i) and (ii) relate to the first question above, the nature of syntactic intervention in word structure. The internal structure of PRCs show that the ordering of functional categories in a pronominal participle is only partially predictable and is sensitive to the difference between the occurrence of a single affix and a pair of affixes as discussed in section 6. Such a difference does not correspond to a property that can be conceptualised in terms of syntactic mechanisms. It therefore challenges hypotheses that posit an ordering constraint on affixes which is based on the ordering of syntactic operations. The prime example for such a hypothesis is the *Mirror Principle* (Baker 1985), but any analysis which incorporates head movement is likely to run into similar problems.

Turning to the first three points which have been elaborated in section 5, these taken together show that the formal properties of words are determined by mechanisms internal to morphology. What we mean by 'mechanisms internal to morphology' are the formal constraints on word structure imposed by neither of the phonological and syntactic components, nor by the lexicon. The fixed nature of the form of such words as pronominal participles indicates that there is a template which forms the basis for the expression of syntactic, lexical and phonological material, reminiscent of word structure that hosts position class affixes (cf. Stump 1992, Inkelas 1995).

Once these factors are taken into account, the interaction of morphology and syntax becomes clearer. Morphology as a separate system of rules (as suggested in Di Sciullo and Williams 1987, Ackema and Neeleman 2004, among others) is the source of providing the form of a word in terms of the space that is available. This space is then used for the expression of grammatical functions. If this is the case, word structure does seem to be transparent to processes external to morphology, but only after the morphological component provides the template in which these operations can take place. How the analysis of word structure in terms of a template fits in with morphophonological conceptions of the 'word' (cf. Kabak and Vogel 2001) is a research area yet to be explored.

The data thus show that the versions of the *Lexical Integrity Principle* (e.g. Bresnan and Mchombo 1995) where word structure is opaque to syntactic mechanisms is too strong. The partial transparency of word structure to the combinatorial specifications of its internal elements supports the weakening of this principle along the lines suggested in Booij (2005).

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