On clitics, ellipsis, and nominal structure crosslinguistically

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1. What is responsible for the availability of second position clitic systems crosslinguistically?
A variety of unrelated languages (altogether fifty-two languages with second position clitics), including Slavic, Romance, Uto-Aztecan, Pama-Nyungan, and Iranian languages, will be examined.

2. What is responsible for the availability of clitic doubling crosslinguistically?

3. What does this tell us about clitics, the nature of pro, P-stranding, ellipsis, and nominal structure?

On the relevance of articles

(1) The cats broke the window.

(2) Mačke razbiše prozor.
cats    broke    window
(Serbo-Croatian, SC)


(3) Selection of NP/DP generalizations (see Bošković 2008, 2012 and references therein)
1. Only languages without articles may allow left-branch extraction out of TNPs.
2. Only languages without articles may allow adjunct extraction from TNPs.
3. Only languages without articles may allow scrambling.
4. Multiple-wh fronting languages without articles do not show superiority effects.
5. Only languages with articles may allow clitic doubling.
6. Head-internal relatives display island sensitivity in languages without articles, but not in languages with articles.
7. Polysynthetic languages do not have articles.
8. Only languages with articles allow the majority reading of MOST.
9. Languages without articles disallow negative raising (i.e. strict clause-mate NPI licensing under negative raising); those with articles allow it.
11. Radical pro-drop may be possible only in languages without articles.
12. Elements undergoing focus movement are subject to a verb adjacency requirement only in languages with articles.
13. Possessors may induce an exhaustivity presupposition only in languages with articles.
14. The sequence of Tense phenomenon is found only in languages with articles.
15. Second position clitic systems are found only in languages without articles.
16. Obligatory numeral classifier systems are found only in languages without articles.
17. Only languages without articles may allow subject reflexives.

Left Branch Extraction

(4) *Expensive he saw [t, cars]

(5) Doroguju on videl [t, mašinu] (Russian)


(6) Only languages without articles may allow adjectival LBE examples like (5).

One way correlation, there are other factors involved (agreement, see Bošković 2009a, 2013)

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Bošković (2012): Bulgarian and Macedonian vs other Slavic languages
Latin vs Modern Romance.
Mohawk, Southern Tiwa, Gunwinjguan languages (see Baker 1996), Hindi, Angika, and Magahi also allow
LBE and lack articles.
Colloq. Finnish has developed an article; LBE allowed only in literary Finnish, no articles there (Franks 2007)

(7) a. Punaisen ostin auton. [literary Finnish, poetic style]
   red-acc buy-pst-1sg car-acc
b. ?*Punaisen ostin (sen) auton. [spoken Finnish]
   red-acc buy-pst-1sg the car-acc

History of Greek (Bošković 2012 based on Taylor 1990)
Homeric Greek (8th century BC, Iliad and Odyssey) was an article-less language, Koine Greek (1st century AD,
the New Testament corpus) was a full-blown article language.
Homeric Greek productively allowed LBE, Koine Greek did not.
There are also a number of arguments independent of the generalizations in (3). E.g. Bošković (2009c, 2013, in
press): the TNP internal word order is generally freer in NP than in DP languages because the richer structure of
DP languages imposes restrictions on word order that are not found in NP languages (e.g. Chinese allows any
order of adjectives/demonstratives/possessors)

(8) a. Wang-de hongsede paoche b. hongsede Wang-de paoche
   Wang’s red sport-car
c. na-bu hongsede paoche d. hongsede na-bu paoche
   that-CL red sport-car
e. na-bu Wangde paoche f. Wangde na-bu paoche
   that-CL Wang’s sport-car

What matters:
Definite articles (Slovenian, see Bošković 2009b)
The article is unique (a distinct form, occurs only once per TNP).
It roughly has the meaning of a iota-operator, yielding an element of type e (see Bošković and Hsieh in press).
Given Chierchia’s (1998) proposal that type shift from type <e,t> to type e is possible in a language only in the
absence a definite article, which means bare NPs can have definite interpretation only in NP languages, what is
considered to be a definite article must be present for definite interpretation in a DP language (and yield such
interpretation). Notice that bare NPs “cats” and “window” can have e-type interpretation in SC (2), which in
English requires the presence of the (1).

Clitic generalizations ((11) follows from (9) and (10)).

(9) Only languages with articles may allow clitic doubling.
(10) Second position clitic systems are found only in languages without articles.
(11) There is no clitic doubling with second position clitics.

Second position clitics
Languages typically have either verbal (i.e. V-adjacent) clitics or second position clitics.¹
Second position clitics in SC (the only possible placement of clitics in these examples)
(12) a. Mi/ Zašto smo mu je predstavili juče.
   we/why are him.dat her.acc introduced yesterday
   ‘We introduced her to him yesterday./Why did we introduce her to him yesterday?’
b. Ona tvrdi da smo mu je mi predstavili juče.
   she claims that are him.dat her.acc we introduced yesterday
   ‘She claims that we introduced her to him yesterday.’
d. Predstavili smo mu je juče.

¹These are not the only options. Note true second-position clitics are not simply enclitics, see Bošković (2001).
introduced are him.dat her.acc yesterday
‘We introduced her to him yesterday.’ (SC)

A preliminary list second position clitic languages, to be expanded later: a number of Slavic languages (SC, Czech, Slovak, Slovenian, Hucul Ukrainian, and Sorbian), Latin, Ancient Greek, Pashto, Tagalog\(^2\), Ngiyambaa, Warlpiri, Ossetic, Northern Talysh, Southern Tati, Comanche, Old English, Hittite, and Sanskrit.\(^3\) Restating (10):\(^4\)

(13) Second position clitic systems are found only in NP languages.

**Slavic:** while a number of Slavic languages have second-position clitic systems, Bulgarian and Macedonian, the only Slavic languages with articles, are glaring exceptions.

**Romance:** Latin had second-position clitics, while Modern Romance languages lack them.\(^5\)

**History of Greek:** Taylor (1990) shows that 90% of enclitics in the Homeric period, when Greek did not have articles, were in the second position; this simple second position cliticization system broke down in the later stages (i.e. article stages), like Koine Greek.

**Ossetic:** a Northeast Iranian language with two distinct main dialects (they are mutually barely intelligible, see Thordarson 1989), Iron (or East Ossetic or Tagauric) and Digor (or West Ossetic).

Abaev (1964): the two differ with respect to articles; Digor has definite article but Iron does not. Erscheler (2012): Iron is a strict second-position clitic language, Digor is not.

Illustration: both Iron and Digor are multiple wh-fronting languages, where non-D-linked wh-phrases cluster together in front of the verb. Importantly, clitics intervene even between fronted wh-phrases in Iron (but not in Digor) due to the second position requirement.

\(^2\)Tagalog –ang is not a definite article (Kroeger 1993, Rackowski 2002, Aldridge 2004, Rackowski and Richards 2005, Wurmbrand 2013). It is also not obligatory for definite interpretation; note the ambiguity of the object in (i).

(i) Sino an̄g b-um-li ng damit?
‘Who is the one who bought a/the dress?’ (Nakamura 1996:56)

\(^3\)Regarding less known cases, for Comanche see Steele (1977), Charney (1993), McDaniels (2008); for Ossetic, Abaev (1964), Erscheler (2012); for Northern Talysh, Cysouw (2003, 2005), Paul (2011); for Southern Tati, Yar-Shater (1969). The classification of Southern Tati is a bit tentative since the discussion in Yar-Shater (1969) is not comprehensive enough and glosses are not given. Some relevant examples from different dialects of Southern Tati, with glosses provided:

(i) azir-ö̞m ā̄s̆̄     bepat
‘Yesterday I cooked ā̄s̆̄’ (Chāli)

(ii) ay-im bind him-1sg saw
‘I saw him.’ (Xoznini)

(iii) Em amberāzz-ö̞m sanduq-u andās.
‘I found this dress in the trunk’ (Chāli)

(iv) dō berā-š da.
‘two he had two brothers’ (Xoznini)

(v) deraxt-i bāšī tree-2sg fell
‘You(sg.) felled the tree.’ (Xiārajī)

(vi) cemen-i orosiehā beduta me.GEN-2sg shoes poorly sewed
‘You have sewed my shoes poorly’ (Eshtehardi)

\(^4\) It's possible (10)/(13) will turn out to be strong tendencies, which would still call for an explanation. The deduction of (10)/(13) to be proposed leaves room for such a scenario (see also Bošković 2015 on Chamorro)

‘It's better if I continue doing what I'm doing now.’ (Saipan Tribune 1/16/01) (Chung 2003:553)

\(^5\) Old Spanish was not an exception, see Wanner (2001).
Who also = DAT.3PL what know.PRS.3SG this youth-DAT
‘Who knows what about them, about this youth?’ (Ajlarty 2002:13, apud Erchsler 2012:678)

**Pama-Nyungan languages**

The following languages have second position clitic systems (either strict second position clitic systems, or second position clitic systems with some exceptions; the sources are Cysouw 1993, Dench 1998, Meakins & Nordlinger 2013, Mushin 2005a,b;2006, McConvell 1996, Alpher 1991)

Yingkarta, Wajarri, Ngiyamba, Warlpiri, Warumungu, Bilinarra, Warmman, Nhanda (only subject clitics), Pitjantjatjara, Yir-Yoront, Gurindji, Djaru, Ngarinyman, Mudburra (undergoing a change), Wembawemba, Wergaia, Madimadi, Wathawurrung, and Woiwurrung.

Yukulta, Garrawa, and Wambaya, non-Pama-Nyungan Australian languages, also have second position clitics.


Some illustrations where bare NPs receive an e-type reading.

(15) mayu njinanja parnangka
child-ABS sit-PST ground-LOC
‘The child sat on the ground’ (Wajarri, Douglas 1981:230)

(16) Alaji buguwa-nguji darranggu-nguji.
boy:I(NOM) stick:IV:Abs-PROP:I(NOM) stick-PROP:I(NOM)
‘The boy has a big stick.’ (Wambaya, Nordlinger 1993:138)

(17) birrkailija-ngayu Waliju-yngi, winjawa nayi nganyi wulukanja Waliju-yudi
hungry=1sg meat-DAT, where here your father meat-PROP
‘I’m hungry for meat. Where’s your father with the meat?’ (Garrawa, Mushin 2005b:263)

(18) rtangka-ya=ka-rrri ngawu pala-tha
man-ERG=TR=PRES(R) dog(ABS) hit-IND
‘The man is hitting the dog. [ACTIVE]’ (Yukulta, Keen 1983:206)

(19) nyaru-nggu yawarda nha-‘i
woman-ERG good 1plNOM-DEF
‘We’re not good (well, happy), staying here.’ (Dench 1998:40)

(20) Billy-lu tjitji nya-ngu
Billy-erg child see-past
‘Billy saw the child.’ (Pitjantjatjara, Aissen 2003:452)

(21) Kuyi-ϕ ma-ma-ϕ-rPart-ϕ yinya parri-ϕ.
meat-NOM MR1-1S-3O-sgO-sgS gave boy-NOM
‘I gave meat to the boy.’ (Walamajjarri, Hudson 1978:222)

Only one case where a language from the above group was claimed to have a definite article: WALS classifies Yingkarta as a language with a definite affix (–ja), based on Dench (1998)

This classification is incorrect (see also Austin 1995, 2006, who treats Mantharta –thu, which Dench 1998 says is a cognate of –ja, as a topic marker).

–ja is not obligatory for definite interpretation, as shown by (22), where –ja is not present. Furthermore, (23)-(30) show that –ja can be used with pronouns (23)-(25), adverbs (26), adverbial wh-phrases (27), and verbs (28)-(30), which quite clearly shows that it is not a definite article.

(22) Thuthu-ngku jarti-lanyi mantu.
dog-erg eat-pres meat
‘The dog is eating the meat.’ (Dench 1998:22)

(23) Kurra-rtu mangu nyina-angkulpa nganhu-ja.
not-1plS good sit-IMPF 1plNOM-DEF
‘We’re not good (well, happy), staying here.’ (Dench 1998:40)

(24) Thuthi-lkarangu milyura, wirntirina-warangu, pika-piya-warangu nyinta-ja.
tread.on-APPR snake bite-APPR sick-INCH-APPR 2sgNOM-DEF
‘You might tread on a snake, (it) might bite (you), you would get sick.’ (Dench 1998:76)

(25) Kurra ngaka-ka ngathangu …, ngathangu-ja!
not touch-IMP 1sgGEN 1sgGEN-DEF
‘Don’t touch my…, that’s mine!’ (Dench 1998:48)

(26) Wanthapara-rtu nyina-angku, mangu-ja?
how-1plS sit-IMPF good-DEF
‘How will we be (after this wind stops), good?’ (Dench 1998:44)

when-DEF later-DEF not now-DEF
‘When (are you going)? Later, not now.’ (Dench 1998:70)

fear-PRES-DEF night-LOC go-PURP
‘(They’re) frightened to go at night.’ (JD) (Dench 1998:30)

that-DEF swim-PRES-DEF (river)-LOC run-RELds child
‘The children are swimming in the river which (while it) is flowing.’ (Dench 1998:72)

where go-IMPF-DEF kangaroo go-IMPF see-RELss 1sgNOM-1sgS
‘Where are (you) going? I’m going out looking for kangaroos.’ (Dench 1998:72)

Uto-Aztecán languages (with second position clitics)

(31) Northern Uto-Aztecán languages

Numic languages


Takic languages

Cupeño (second position subject clitics, second position aux clitics, Steele 1977, Hill 2005), Luiseño (second position subject clitics, aux clitics, negative and question markers, Steele 1977, 1995), Serrano (second position subject clitics, second position aux clitics, Steele 1977, Hill 2005), Gabriélino (second position subject clitics, Munro 2000)

Tubatulabal (second position subject clitics, second position auxiliary clitics, Steele 1977, Hill 2005)

Southern Uto-Aztecan languages

Tarahumitic languages

Mayo (second position subject clitics, Collard and Scott 1974), Tarahumara (second position subject clitics, Steele 1977), Yaqui (second position subject clitics, Steele 1977, Dedrick and Casad 1999)

Tepiman languages

Pima (second position subject clitics, Munro 2000), Tepehuan (Willet 1991), Tohono O’odham/Papago (second position subject clitics, second position auxiliary clitics, Steele 1977, Hill 2005)

Corachol languages

Cora (second position subject clitics, Steele 1977, Haugen 2007, Langacker 1984)
An illustration: Comanche (second position subject clitics). Steele (1977): there is a diachronic process regarding independent pronouns and subject clitics, the latter being derived from the former. When this happens they (the subject clitics) occur in the second position. (DM is a discourse marker (for topicalization)).

(32) a. tìasi-se nì tiìka
again-DM I eat
‘Again I ate.’

b. * nì tiìka

(i) nì-se tiìka
1-DM eat
‘I ate.’ (McDaniels 2008)
The subject is a clitic located in the second position, the verb can either precede it or follow it. It does not have to be V-adjacent (33), and either one word or a full phrase (VP in (34)b) can precede it (34).^7

(33) a. i-\(H/pu\)=u tih\(i\)ya kati-mi?-a-ti=
     here-\(pu\)=he horse sit(SG SUBJ)-go-GEN:ASP
     ‘He’s riding along on a horse, going this way. Or he’s going this way, riding along on a horse.’
  
 b. nah ut\(ii\)=hi=pe-\(H/tu\)=ni-wiHtu?i-ka=-tu?i
     just they when=\(H/tu\)=my-wait=for=someone-??-UR:ASP
     ‘They doubt if I will be ready.’
    (Charney 1993:83)

(34) a. tih\(ka\) n\(i\)
     eat I
     ‘I ate.’
     (McDaniels 2008)
  
 b. tahi-ta?o?-ai-\(k\)i=-i n\(ii\)
     us=DU=INCL-pound=meat=make-BEN=CMPL:ASP I
     ‘I made pound of meat for the two of us.’
  
 c. ke n\(ii\) toHtin-\(ka\)Htu=mi?-a-wai-tf
     NEG I name-toward go-wai-GEN:ASP
     ‘I will not go to Lawton.’
    (Charney 1993:147)

The DP/NP status of the Uto-Aztecan languages in question:
Most of them are clearly NP languages and in fact do not have definite article, e.g. Comanche.
The literature occasionally cites some of these languages (in particular, Southern Paiute, Cupeño, Tohono O’odham, Yaqui, and Cora) as having articles.
There is no form that only functions as definite article in Southern Paiute. The form that is sometimes considered to be a definite article, -\(u\)’, is a demonstrative (see Givón 2011). It is also not obligatory for definite interpretation (see Givón 2011, Shopen 2007).
The same holds for Cupeño pe’ (see Hill 2005) and Yaqui u (see Guerrero 2004 (e.g. p. 20), Guerrero and Belloro 2010 (e.g. p. 118 and 121), Dedrick and Casad 1999 (e.g. p. 68 and 193)).
Tohono O’odham: the form that is sometimes claimed to be a definite article, g, can be apparently used either as definite or indefinite article, it can be used without a noun, and is not required for definite interpretation (see Zepeda 1983). It is also not distinct from a demonstrative (see Mason 1950).
The same holds for Cora, which I will use to illustrate the issues. WALS reports Cora as having definite articles.
Forms that are sometimes translated as definite articles (see Casad 1984), like the element translated as ART below, are in fact demonstratives. They also do not obligatorily result in definite interpretation (compare the first and the second ART in (35)), and are not required for definite interpretation, as shown by (36).

(35) an-ká-cu’u-ta’i-ri’i
     on.top-down-break-burn-make-STAT ART spoon ART fire with
     ‘The edge of the head of the spoon is burned off by a fire.’
    (Casad 1984:191)

(36) ka-nù=r-\(å\h-\(c\)a’i
     ‘Help us!’
     (Charney 1993:101)

^Comanche has objects clitics. They appear in the first position of the verbal complex, and do not cluster with subject clitics
(i) n\(i\)hi-t\(i\) tu’?a
     us=DU=EXCL help
     ‘Help us!’
  
 (ii) tahi-ta?o?-ai-\(k\)i=-i n\(ii\)
     us=DU=INCL-pound=meat=make-BEN=CMPL:ASP I
     ‘I made pound of meat for the two of us.’
    (Charney 1993:101)

Accounting for (10)
(for an alternative based on Bošković’s 2012 suggestion that article-less languages lack TP, see Migdalski 2015)

The bare D account

Background assumptions

The DP/NP distinction extends beyond nouns--it also holds for pronouns. Strong pronouns are Ds taking NP complements in DP languages, they are NPs in NP languages (for arguments for such a categorial difference, see Bošković 2008, 2012, Despić 2011, 2013a, Fukui 1988, Runić 2014, in press; Runić shows clitic pronouns show the same categorial difference.) Chomsky (1995), Bošković (2002): Clitics are ambiguous phrases/heads, which means they are non-branching. Clitics are bare NPs (non-branching Ns) in NP languages, and DPs, i.e. non-branching Ds (ambiguous D/DP in the bare phrase structure framework) in DP languages (see Runić 2014 for evidence; for relevant discussion from a different perspective, see also Nash and Rouveret 2002). Bošković (2001): while Bulgarian/Macedonian clitics are adjoined to the V+T complex, they are located in separate projections in SC. Each pronominal clitic is located in the Spec of a separate AgrP.

(37) Aux-clitic IO-clitic DO-clitic

Bošković (2001), Stjepanović (1998), Franks (1998): Clitics in SC (37) can be split by a variety of operations: ellipsis can do it (38); it's possible to climb only one clitic (39); even clause-mate clitics can be split if the intervening material is a full intonational phrase so that each clitic is second in its own intonational phrase (40). Adverb placement: (41) shows the auxiliary and the ethical dative clitic can occur above sentential adverbs, which is not possible with argumental clitics, indicating they do not all occur in the same position.

(38) a. Mi smo mu ga dali, a i vi ste (mu) (takodje).
  we are him.dat it.acc given and also you are him.dat too
  ‘We gave it to him, and you did too.’
  b. *Mi smo mu ga dali, a i vi ste ga (takodje).

(39) a. Marija želi da mu ga predstavi.
  Marija wants that him.dat him.acc introduces
  ‘Marija wants to introduce him to him.’
  d. *Marija ga želi da mu predstavi.

(40) a. Ti si me, kao što sam već rekla, lišio ih juče.
  you are me as am already said deprive them yesterday
  ‘?You, as I already said, deprived me of them.’/*You, as I already said, deprived them of me.’

(41) a. Oni su ti pravilno odgovorili Mileni. (ti=ethical dative)
  they are you.dat correctly answered Milena.dat
  ‘They did the right thing in answering Milena.’/‘They gave Milena a correct answer.’
  b. Oni su joj pravilno odgovorili.
  they are her.dat correctly answered
  ‘*They did the right thing in answering her.’/‘They gave her a correct answer.’
None of this is possible in Bulgarian/Macedonian, where the clitic cluster is inseparable (it also cannot be separated from the verb by non-clitics; see Bošković 2001).

(42) a.*Nie sme mu go dali, i vie ste mu go dali (sŭšto).
weit are him.dat it.acc given and you are him.dat it.acc given too
‘We gave it to him, and you did too.’
b.*Nie sme mu go dali, i vie ste mu go dali (sŭšto).
c.*Te sa, kako ti kazax, predstavili se na Petūr.
they are as you.dat told introduced self.acc to Peter
‘They have, as I told you, introduced themselves to Peter.’

Bošković (2001): SC clitics are located in separate projections, i.e. they do not all cluster in the same head position, which is the case in Bulgarian.

**Account**

(43) *Stranded D

I take this to mean that D requires a Spec or a complement. If it does not have any, it cannot be free-standing; it has to be part of a head-adjunction configuration.

Because of (43), D-clitics check Case by incorporation (to the V/T complex).

If there are aux clitics, there is preference to treat them like pronominal clitics for uniformity (but see later).

Generalizing (43):

(44) *Stranded functional heads.

A functional head requires a Spec or a complement (or a head-adjunction configuration).

This ban is preferable since it is more general, but since it is not D-specific, Case cannot be the only way to get around it (independent feature-checking motivation for aux to move to V/T)

Bošković (2002): auxiliary (and negative) clitics are base-generated as Specs (this must be the case if clitics are non-branching), hence stranded for the purpose of (44) in the base position (Bošković 2002 also shows the clitics-as-specs analysis is required if the order of Bulgarian clitics is to be derived with leftward, not rightward adjunction, conforming with the LCA; instead of the verb right adjoining to the clitics, as often assumed, each clitic then left-adjoints to the verb as soon as the verb moves above it).

(45) a. Neg-clitic-Aux-clitic+IO-clitic+DO-clitic+V

    b. Ti ne si mu gi dal.
you neg are him.dat them.acc given
‘You have not given them to him.’

c. [NegP ne [Neg’ [VP si [V’ [AGRdoP [AGRdoP [VP mu [V’ dal gi]]]]]]

    d. [nego+[si_m+[mu_k+[gi+dal]]_m]_n] [NegP t_o [Neg’ [VP t_m [V’ t_l [AGRdoP [AGRdoP [VP t_k t_j t_i]]]]]

Link with +/- P-stranding (see Baker 2003)

(44) may deduce the Lobeck (1990)/Saito and Murasugi (1990) generalization in (46).

(46) Functional heads can license ellipsis of their complement only when they undergo Spec-Head agreement.

(47) shows that tensed INFL, ‘s, and +wh-C, which undergo Spec-Head agreement, license ellipsis, whereas the non-agreeing functional categories the and that do not.

(47) a. John liked Mary and [IP Peteri [T did la like Mary]] too.
b. John’s talk about the economy was interesting but [IP Bill[’s talk about the economy]] was boring
c. *A single student came to the class because [IP [T the student]] thought that it was important.
d. John met someone but I don’t know [CP whoi [C C John met t_i]].
e. *John remarked C/that Peter met someone but I didn’t remark [CP[C/that Peter met someone]]
Given that functional elements are subject to (44), ellipsis of the complement of a functional head will leave the functional head stranded, unless the head has a Specifier. (44) then deduces (46). While (44) forces clitics to undergo adjunction, in principle head-adjoined clitics could still be parsed in phonology as second position clitics, or more generally enclitics, without forming a prosodic constituent with the verbal element they are left-adjoined to. There is a preference for straightforward syntax-prosody mapping, where a head adjunction configuration is parsed as one prosodic word (i.e. there is a preference for a prosodic word to correspond to a syntactic constituent, see also Migdalski 2015).

(48) head adjunction configuration → one prosodic word

A clitic adjoined to a verb is then parsed as a prosodic constituent with the verb, not the preceding element; we get a verbal clitic this way. (48) is only a preference. Bulgarian clitics are verbal in that they cannot be separated from the verb. Prosodically, they are parsed as enclitics (they are not second position clitics, see Bošković 2001). A syntax-phonology “mismatch”: clitics are V-adjacent because they undergo V-adjunction, but they are still prosodically parsed with the preceding word. A rare situation that goes against the tendency in question. This also makes it unstable. Bulgarian clitics are in fact undergoing a change to being proclitics on the following verb (see Bošković 2001), which is what happened in Macedonian.

The pro identification account
As before, pronouns in DP languages are D+NP; in NP languages just NPs. A different treatment of clitics (not assuming clitics are non-branching elements)
Clitics in NP languages are NPs.
pro needs to be licensed: the licensing is done by V/T through verbal morphology (as with subject pro in Spanish). I.e., the presence of pro requires the presence of appropriate morphology on the verb. D(clitic) in D+pro must move to V+T (or is generated there) for pro-identification (or the whole thing can move).
The clitic provides the verbal morphology that is necessary for pro-licensing. As before, there is a preference to prosodically parse a clitic together with the element it is adjoined to in the syntax. This is all happening because in DP languages, the clitic cannot be NP, or take an NP complement (which is what non-clitic pronouns do); it has to co-occur with pro (cf. (43)), and pro must be licensed by verbal morphology in DP languages.
Note radical pro-drop (i.e. pro-drop in the absence of rich verbal agreement) is irrelevant here since, as Bošković 2012 shows ((3).11), radical pro-drop occurs only in NP languages (Japanese, Chinese, Korean, Kokota, Turkish, Hindi, Wichita, Malayalam, Thai, Burmese, Indonesian; Bošković 2012 takes this as another argument that pronouns are NPs in NP languages and DPs in DP languages).

Clitic doubling
Allowed only in two Slavic languages, Bulgarian and Macedonian, which also have articles.

(49) a. Ivo go napisa pismoto. (Bulgarian/Macedonian)
   Ivo it wrote letter-the
   ‘Ivo wrote the letter.’
b. *Ivan (*ga) napisa pismo. (SC)
   Ivan it wrote letter

(50) Only languages with articles may allow clitic doubling (CD)

Bošković (2008, 2012): CD is found in Albanian, Macedonian, Bulgarian, Greek, Somali, Spanish, French (some dialects), Catalan, Romanian, Hebrew, Dutch (some dialects), all of which have articles. (49)a illustrates the defining characteristics of what is considered to be CD for the purpose of (50): doubling with a full NP that remains in situ, it is not right-dislocated; a definiteness/specificity effect.
Marušič and Žaucer (2010): Clitic doubling only with pronouns in Gorica Slovenian (GS)
(51) Ma to me mene ne briga.
   but this me.CL GEN me.GEN not cares
   ‘But I don’t care about this.’

Runcić (2014): due to language contact, GS has developed a D feature, which can be added to pronouns during the derivation (the feature is not yet lexicalized).
Conflicting requirements: modification (only with N-pronouns) and clitic doubling (only with D-pronouns)

(52) a. Včerajšnji on ni bil podoben običajnemu njemu. [GS]
   yesterday’s he not was similar usual’s him.DAT
   ‘Yesterday’s him was not similar to his usual’s him.’
   b. *Ali si ga včerajšnega njega vprašal zakaj je čuden?
   but AUX .2SG him.CL.ACC yesterday’s him.ACC asked why is strange
   ‘But did you ask yesterday’s him why he was strange.’

GS confirms CD requires DP (D-feature checking). Runcić shows Prizren-Timok Serbian (PTS) patterns with GS
Runcić (2014, in press): The strict/sloppy readings generalization

(53) a. Nikola je vidio film, a vidio ga je i Danilo [SC]
    Nikola is seen film and saw it.CL.ACC is even Danilo
    ‘Nikola saw a movie and Danilo saw it/one too.’
   b. Nikola vide (eden) film, a i Danilo go vide. [Macedonian]
    Viktor saw a film and Dimitar it.CL.ACC saw
    ‘Nikola saw a movie and Danilo saw it/*one too.’

Context: Nikola and Danilo are best friends. They have many interests in common except their taste for movies is completely different. Specifically, Nikola likes comedies, whereas Danilo likes horror movies. In their town, a movie festival of all film genres takes place every summer. A comedy and a horror movie played at the same time in two different buildings. Given their very different tastes, Nikola and Danilo saw two different movies.

(54) a. Nikola je pozvao (svoju) djevojku na slavu, a pozvao j u je i Danilo. [SC]
    Nikola is invited his girlfriend on slava and invited her is even Danilo
    ‘Nikola invited his girlfriend to the slava and Daniel invited her too.’
   b. Nikola ja povika devojka si na slava, a Daniel ja povika isto [Mac]
    Nikola her.CL.ACC invited girl him.CL.DAT.REFL at slava and Daniel her.CL.ACC invited same
    ‘Nikola invited his girlfriend to the slava and Daniel invited Nikola’s/*Daniel girlfriend too.’

Nikola and Danilo are brothers and their family celebrates St. Nicholas, the patron saint’s feast day in Orthodox tradition that is celebrated annually on December 19. It is a common practice among Serbs to invite a boyfriend/girlfriend to a family celebration. Both Nikola and Danilo have a girlfriend (thus, in this context, there are two girlfriends) and they invited their girlfriends to their family celebration.

Based on Slavic and Romance, Runcić (2014, in press) establishes (55).

(55) Clitics may have sloppy readings only in NP languages.


(56) a. Taroo-wa sannin-no sensei-o sonkeisiteiru.
   Taro-Top three-Gen teacher-Acc respects
   ‘Taro respects three teachers.’
   b. Hanako-mo e sonkeisiteiru.
    Hanako-also respects
    ‘(Lit.) Hanako respects e, too.’

   (Japanese, Şener and Takahashi 2010)
(57)  a. John respects three teachers.
b. Mary respects them, too.
c. Mary does, too.
d. Mary respects three teachers.

Sloppy reading (Hanako’s child) possible in (58)b. Such a reading is not possible with a pronoun

(58)  a. Taro-wa [zibun-no kodomo-ga eigo-o sitteiru to] itta
   Taro-top self-gen child-nom English-acc know that said
   ‘Taro said that his child knew English’
b. Hanako-wa [e furansugo-o sitteiru to] itta
   Hanako-top French-acc know that said
   ‘Hanako said that e knew French’

(Şener and Takahashi 2010)

Proposal: The possibility of sloppy readings indicates SC clitics co-occur with an elided NP, i.e. we are dealing here with clitic+argument ellipsis. The argument ellipsis NP is the source of sloppy readings, SC and Macedonian clitics do not differ in this respect (see Runić 2014 for an alternative).
The argument ellipsis derivation should not be available for DP languages.

(59)  Only languages without articles may allow argument ellipsis (Cheng 2013)

Two possibilities for ellipsis (in the case of argument ellipsis): PF deletion and LF copying.
Under the PF deletion analysis, a difficult question arises: why does the relevant NP have to be elided in NP languages?
Under the LF copying analysis we have an easy explanation why the NP in question does not surface phonologically: it is created only in LF.
Evidence that argument ellipsis should be implemented through LF copying, not PF deletion (for additional arguments to this effect, see Saito 2007 and Sakamoto 2015)

(59) is a one-way correlation, not all NP languages allow argument ellipsis. SC in fact does not allow it
Only strict reading (Peter’s child) is possible in (60)b, sloppy reading (Jovan’s child) is not

(60)  a. Petar je rekao da njegovo dijete zna engleski.
   Petar  is said    that his child knows English
   ‘Peter said that his child knew English’
b. Jovan je rekao da e zna francuski.
   Jovan is said    that   knows French
   ‘Jovan said that e knew French.’

We then need to block argument ellipsis in (60) but allow it in (53)-(54). Agreement matters

(61)  Agreement blocks argument ellipsis (Saito 2007)

For Saito, T/v cannot undergo agreement with an argument ellipsis TNP. Since in SC, T/v normally undergo agreement with the subject/object, argument ellipsis is blocked (it is actually not completely clear whether object argument ellipsis is available in SC).
However, in the clitic case, the clitic undergoes agreement with v, the argument ellipsis TNP that co-occurs with it does not, hence argument ellipsis is not blocked here.
Although a clitic co-occurs with a TNP in the cases under consideration, this is not true clitic doubling; the “associate” is in fact created only in LF.
The D feature checking requirement is “strong”, i.e. it requires overt syntax checking (this may be a requirement on merging the clitic and the double in approaches where the two are generated together, as in Boeckx 2003, Cecchetto 2000, a.o). Hence, it has no relevance for clitics+argument ellipsis.
Can the argument “ellipsis” associate ever surface overtly in NP languages? Since this is not true clitic doubling, if it does we would expect that there should be no definiteness/specificity requirement and that the associate will be an NP (which can be tested with left-branch extraction).
Runić (2014): clitic “doubling” in PTS has these properties; the “double” can be a full TNP for some speakers, there is no definiteness/specificity effect then and LBE is possible.

(62)  a. Imagine that you are at a wedding party eating roast meet. However, the waiter forgot to bring napkins. You will ask the waiter: Izvin’te. Imate (gu) salvetu? [PTS]
       sorry have.2SG it.CL.ACC napkin
       ‘Excuse me. Do you have a napkin?’

b. There is a considerable number of old and sick people in the village. However, there is no doctor in the village.

Opština (ga) novog lekara traži. [PTS]
       municipality it.ACC.CL. new doctor look for.3.SG
       ‘The municipality is looking for a new doctor.’

(63) Debelu, si gu je taj [NP t, vezu] imao. [PTS]
       thick REFL it.CL.ACC is he connection had
       ‘He had good connections.’

This could be something similar to noun doubling (where an incorporated noun is doubled) that is found in a number of Iroquoian, Gunwinjguan, and Caddoan languages (see Baker 1988, Heath 1984, Evans 1993, Mithun 1984, a.o); see in fact Runić (2014).

**Persian**

Ganjavi (2007): only RA-marked objects (which are always specific) can co-occur with clitics. Inanimate RA-marked nominals cannot be doubled even when specific.

(64) a. (unhâ) saddâm hossein-o did-an-esh
       they Saddam Hossein-RÂ saw-3PL-3SG
       ‘They saw-him Saddam Hossein’

b. (unhâ) un mard-a-ro did-an-esh
       they that man-DEF-RÂ saw-3PL-3SG
       ‘They saw-him that man’

(65) a  * borj-e ifel-o did-am-esh
       tower-EZ Eiffel-RÂ saw-1SG-3SG
       ‘I saw-it the Eiffel Tower’

b. * mâ (un) gitâr-a-ro did-im-esh
       we that guitar-DEF-RÂ saw-3PL-3SG
       ‘We saw-it that guitar’

Possibilities: RA is a D-feature which is added during the derivation, as with GS/PTS pronouns, but here it is added to animate TNPs.

More plausibly: Karimi (1989/1990) claims that RA is a specificity marker. Although it is not D, it can then do the job of D for clitic doubling.

The animacy requirement indicates we are dealing here with a type of differential object marking/ DOM (the clitic here is more like a of Spanish DOM; note DOM can involve marking on the verb).

But my informant (Fereshteh Modaresi) accepts (65). In fact, she accepts “doubling” even with non-specific indefinites like the one in (66).

(66)          ali (yek)  mashin-i     xarid-ø.
       Ali a/one  car-INDEF  bought-3SG
       ‘Ali bought some car or other’

No definiteness/specificity restriction then; more like PTS (62) than Bulgarian (49), irrelevant for (50).

**Warlpiri**

What looks like “clitic doubling” in Warlpiri is quite different from Romance/Bulgarian & Macedonian clitic doubling. E.g. it is not subject to a definiteness/specificity effect (see Simpson 1991)

(67) Kapri-ri-jarra-jana panu wawirri panti-rni
       FUT-1des-3po many kangaroo spear-NPST
       ‘We two are going to spear many kangaroos.’

**Bantu languages**

The DP/NP status of Bantu languages is unclear, it is also unclear whether object markers should be treated like clitics. Taraldsen (2010) gives a Xhosa example where the “double” can be indefinite. However, it unclear
whether “doubling” is ever possible with a non-dislocated NP (in Zulu, Northern Soto, and Lubukusu
dislocation is necessary; see Buell, Reidel, and van der Wal 2011, Zerbian 2007, Diercks 2011; Buell et al note
dislocation is not required in Sambaa but no data is given.
Independent fieldwork indicates Sesotho, Zulu, Chewa, Shona, Zulu, !Xosa also require dislocation.

(68) a-ndi-ba-boni a-ba-fundi not-1sg-2OC-see 2-student
   ‘I don’t see the/some students.’

What exactly is argument ellipsis, and why is it possible only in NP languages?
Simplifying, argument TNPs are of type <e> in DP languages and of type <e, t> in NP languages (extending
in NP languages this is accomplished via type shifting.
Argument ellipsis: Only <e, t> can be copied (the copying still applies in the syntax (LF), hence before type
shifting). This is tantamount to saying that argument ellipsis is actually predicate ellipsis.
Predicate TNP ellipsis may in fact be possible in DP languages too.

(69) They are fools, and we are fools too

Maybe this is the same process as argument ellipsis of NP languages (<e, t> ellipsis then would not be in
principle restricted to NP languages; on ellipsis and type-shifting, see also Bošković 2013a).

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