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)

Bošković (2008,2012)**:** There is a fundamental syntactic difference in the traditional NP (TNP) of English and languages like SC, which can be captured if DP isn't even present in the TNPs in (2) (see e.g.Fukui 1988, Corver 1992, Zlatić 1997, Chierchia 1998, Cheng & Sybesma 1999, Lyons 1999, Willim 2000, Baker 2003, Trenkić 2004, Despić 2011, 2013b, Marelj 2011, Takahashi 2011, Jiang 2012, Talić 2013, in press, Cheng 2013, Runić 2014,in press, Kang 2014, Bošković & Şener 2014, Zanon 2015, Bošković & Hsieh in press for no-DP analyses)

(3)   **<u>Selection of NP/DP generalizations</u>** (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_i cars]
(5)   Doroguju on videl [t_i mašinu]   (Russian)
      expensive he   saw   car

Uriagereka (1988), Corver (1992), Bošković (2005, 2008, 2012) establish (6).

(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)

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.

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[1]These 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.
(14) či=ma=šən   sə   žonə   asə   fešivad-ɐn?

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[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 ang   b-um-ili   ng damit?
    who ANG Nom.asp.-buy CS dress
    '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-**öm**   ãš bepat
   yesterday-1sg ãš   cooked
    'Yesterday I cooked ãš'
(ii) ay-**im**   bind
   him-1sg   saw
    'I saw him.'
 (iii) Em amberãzz-**öm**   sanduq-u andās.
    this dress-1sg   trunk-in   found
    'I found this dress in the trunk'   (Chāli)
(iv) dö berā-**š**   da.
   two brother-3sg had
    'he had two brothers'   (Xoznini)
(v) deraxt-**i** bāši
   tree-2sg fell
    'You(sg.) felled the tree.'   (Xiāraji)
(vi) cemen-**i**   orosiehā bad   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)
 (i)   Maolek-ña   yänggin [*sum*aga] *yu*' manu   nai   [gaigi] *yu*' pa'gu.
      AGR.good-COMPAR if   AGR.stay I   where? COMP AGR.be I   now
       '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, Warnman, Nhanda (only subject clitics), Pitjantjatjara, Yir-Yoront, Gurindji, Djaru, Ngarinyman, Mudburra (undergoing a change), Wembawemba, Wergaia, Madimadi, Wathawurrung, and Woiwurrung.
Yukulta, Garrwa, and Wambaya, non-Pama-Nyungan Australian languages, also have second position clitics.

All these languages lack definite articles and allow NPs without demonstratives (or obviously articles) to receive e-type interpretation (the sources relied on here are Dixon 2002, Dench 1998, Douglas 1981, Nordlinger 1990, 1993, McConvell, 1983, 1996, Meakins and Nordlinger to appear, Mushin 2005b, Keen 1983, Blevins 2001, Terrill 1993, 1998, Norman 1973, Smith and Johnson 2000, Nichols 1992, Hercus 1986, Blake 1991, Matthews 1904, Tsunoda 1981, forthcoming, Honeyman 2005, Schultze-Berndt 2002, Hudson 1978, Schweiger 2007, Mushin and Simpson 2008, Alpher 1991).
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) birrkalijba=ngayu   waliji-nyi, winjawa nayi   nganyi   wulukanja waliji-yudi
    hungry=1sg   meat-DAT,   where   here   your   father   meat-PROP
  'I'm hungry for meat. Where's your father with the meat?" (Garrwa, Mushin 2005b:263)
(18)   rtangka-ya=<u>ka-rri</u>   ngawu   pala-tha
    man-ERG=TR=PRES(R)   dog(ABS)   hit-IND
      'The man is hitting the dog. [ACTIVE]'   (Yukulta, Keen 1983:206)
(19)   nyarlu-nggu   yawarda   nha-'i
    woman-ERG   kangaroo.ABS   see-PAST
      'The woman saw the kangaroo.'   (Nhanda, Blevins 2001:48)
(20)   Billy-lu tjitji nya-ngu
    Billy-erg child see-past
      'Billy saw the child.'   (Pitjantjatjara, Aissen 2003:452)
(21) Kuyi-ɸ   ma-rna- ɸ-rla- ɸ   yinya parri- ɸ.
    meat-NOM   MR1-1S-3O-sgO-sgS   gave   boy-NOM
      'I gave meat to the boy.'   (Walmajarri, 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)

(27) Nhalaparta-ja?   Warlamayi-ja, kurra   kuwarti-ja.
     when-DEF   later-DEF   not   now-DEF
     'When (are you going)? Later, not now.'   (Dench 1998:70)

(28) Ngurlupiya-nyi-ja   maru-ngka   yana-wara.
     fear-PRES-DEF   night-LOC   go-PURP
     '(They're) frightened to go at night.' (JD)   (Dench 1998:30)

(29) Kartanha-ja kulyirri-nyi-ja   pukata-la   pilipinya-tha,   mayu.
     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)

(30) Wanthawu yana-npa-ja?   Marlu   yana-npa nhanya-nhuru ngatha-rna.
     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-Aztecan languages (with second position clitics)
(31) **Northern Uto-Aztecan languages**
Numic languages
<u>Comanche</u> (second position subject clitics, Steele 1977, Charney 1993, McDaniels 2008), <u>Chemehuevi</u> (second position subject clitics, some second position sentential markers, Steele 1977, Press 1979), <u>Southern Paiute/Ute</u> (second position subject clitics, Steele 1977, Givón 1983,2011; not clear on aux clitics, Sapir 1930 vs Hill 2005)
Takic languages
<u>Cupeño</u> (second position subject clitics, second position aux clitics, Steele 1977, Hill 2005), <u>Luiseño</u> (second position subject clitics, aux clitics, negative and question markers, Steele 1977, 1995), <u>Serrano</u> (second position subject clitics, second position aux clitics, Steele 1977, Hill 2005), <u>Gabrielino</u> (second position subject clitics, Munro 2000)
Tubatulabal (second position subject clitics, second position auxiliary clitics, Steele 1977, Hill 2005)
Southern Uto-Aztecan languages
Taracahitic languages
<u>Mayo</u> (second position subject clitics, Collard and Scott 1974), <u>Tarahumara</u> (second position subject clitics, Steele 1977), <u>Yaqui</u> (second position subject clitics, Steele 1977, Dedrick and Casad 1999)
Tepiman languages
<u>Pima</u> (second position subject clitics, Munro 2000), <u>Tepehuan</u> (Willet 1991), <u>Tohono O'odham/Papago</u> (second position subject clitics, second position auxiliary clitics, Steele 1977, Hill 2005)
Corachol languages
<u>Cora</u> (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)).[6]

(32) a. tɨasi-se   **nɨ**   tɨhka
      again-DM I   eat
      'Again I ate.'
   b. * **nɨ**   tɨɨka

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[6] (i) involves a topicalized strong pronoun, as indicated by the presence of the discourse marker –*se*.

(i) **nɨ-**se   tɨhka
  I-DM   eat
  'I ate.'   (McDaniels 2008)

    I   eat

    'I ate.'

  c. tɨhka **nɨ**

    eat   I

    '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**   tɨhɨya kati-miʔa-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   **utɨɨ**=hi=pe-H/tu=nɨ-wiHtuʔi-ka=-tuʔi

    just   they when=H/tu=my-wait=for=someone-??-UR:ASP

    'They doubt if I will be ready.'   (Charney 1993:83)

(34) a. tɨhka **nɨ**

    eat   I

    'I ate.'   (McDaniels 2008)

  b. tahi-taʔo-ʔai-kɨ=-i   **nɨɨ**

    us=DU=INCL-pound=meat=make-BEN=CMPL:ASP I

    'I made pound of meat for the two of us.'

  c. ke   **nɨɨ**   toHtin-kaHtu=miʔa-wai-tɬ

    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   ɨ   itʸa'ɨh ɨ   táih   kɨme'e

    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-nú=r-áh-ča'ɨ   sápun

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[7]Comanche has objects clitics. They appear in the first position of the verbal complex, and do not cluster with subject clitics

(i)   nihi-tɨɨtuʔa

       us=DU=EXCL help

       'Help us!'

(ii)   tahi-taʔo-ʔai-kɨ=-i   **nɨɨ**

       us=DU=INCL-pound=meat=make-BEN=CMPL:ASP   I

       'I made pound of meat for the two of us.'   (Charney 1993:101)

NEG-I=DISTR:SG-(?)-have   soap
'I don't have the soap.'   (Casad 1984: 188)

Uto-Aztecan languages do not provide any counter examples to (13), they in fact strongly confirm it.

Conclusion: among the following fifty-two languages with second position clitics there are no counterexamples to (10)/(13): Serbo-Croatian, Czech, Slovak, Slovenian, Hucul Ukrainian, Sorbian, Latin, Ancient Greek, Old English, Hittite, Sanskrit, Ossetic, Northern Talysh, Southern Tati, Pashto, Tagalog, Yingkarta, Wajarri, Ngiyamba, Warlpiri, Warumungu, Wambaya, Garrwa, Pitjantjatjara, Yir-Yoront, Yukulta, Nhanda, Gurindji, Djaru, Ngarinyman, Mudburra, Wembawemba, Wergaia, Madimadi, Wathawurrung, Woiwurrung, Bilinarra, Warnman, Comanche, Chemehuevi, Southern Paiute/Ute, Cupeño, Luiseño, Serrano, Gabrielino, Tubatulabal, Mayo, Yakui, Pima, Tepehuan, Tohono O'odham/Papago, and Cora.

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.'
    b. ?Marija **mu ga** želi da predstavi.
    c. ?Marija **mu** želi da **ga** predstavi.
    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).
      we 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**, kakto **ti** kazax, predstavili **se** na Petŭr.
     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-adjoins 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* $[_{V'}$ $[_{AGRioP}[_{AGRdoP}$ $[_{VP}$ mu $[_{V'}$ dal gi$]]]]]]$
   d. $[ne_o+[si_m+[mu_k+[gi_i+dal]_j]_l]_n]$ $[_{NegP}$ t_o $[_{Neg'}$ t_n $[_{VP}$ t_m $[_{V'}$ t_l $[_{AGRioP}$ $[_{AGRio'}$ t_l $[_{AGRdoP}$ $[_{AGRdo'}$ t_l $[_{VP}$ 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 $[_{IP}$ Peter$_i$ $[_{I'}$ did ~~t_i like Mary~~$]]$ too.
 b. John's talk about the economy was interesting but $[_{DP}$ Bill$[_{D'}$'s ~~talk about the economy~~$]]$ was boring
 c. *A single student came to the class because $[_{DP}$ $[_{D'}$ the ~~student~~$]]$ thought that it was important.
 d. John met someone but I don't know $[_{CP}$ who$_i$ $[_{C'}$ C ~~John met t_i~~$]]$.
 e.*John remarked C/that Peter met someone but I didn't remark $[_{CP}[_{C'}$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 DP languages: D(clitic)+*pro* (for analyses assuming *pro*, see Jaeggli 1986, Uriagereka 1995, Sportiche 1996, Bleam 1999, Franco 2000; note I do not assume D+*pro* only for clitic doubling languages).

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.'

Runić (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**   **včerajšnjega 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). Runić shows Prizren-Timok Serbian (PTS) patterns with GS
Runić (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 **ju** 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 Danilo invited **his (Danilo's/Nikola's) girlfriend** 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, Runić (2014, in press) establishes (55).

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

Argument ellipsis (languages allowing argument ellipsis: Japanese, Korean, Turkish, Chinese, ASL, Malayalam, Mongolian, Javanese; see Oku 1998, Saito 2004, 2007, Şener & Takahashi 2010, D. Takahashi 2008, Koulidobrova 2012, Takita 2011, Simpson et al 2013, Cheng 2013, Sato 2015, Sakamoto in press).
The defining characteristic of argument ellipsis is the possibility of sloppy readings. (56)b allows the reading on which Hanako respects different teachers from Taro, unlike the pronoun in (57)b.

(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**ᵢ si   **gu**   je taj [NP **t**ᵢ **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)   Kapi-rli-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 all 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   [Xhosa, Taraldsen 2010]
        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 Chierchia's 1998 treatment of Russian, cf. Bošković & Hsieh in press). D turns <e, t> to <e> in DP languages; 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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