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\*[P clitic]! – Why?

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All comments welcome!

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**\*[P clitic]! – Why? \***

In most languages there is a ban against using a clitic pronoun as the complement of a preposition (P).<sup>1</sup> Descriptively, this is captured by the filter in (1), illustrated by the Serbo Croatian (SC) example (2). (2) contrasts minimally with (3) in that (2) contains a clitic pronoun where (3) contains a full pronoun. Examples (4) through (8) illustrate the same fact for some other languages.

- |     |   |   |                              |                 |                  |  |
|-----|---|---|------------------------------|-----------------|------------------|--|
| (1) | * | [P clitic]                                      |                              |                 | (4)              | Spanish (Luisa Martí, p.c.)                            |
| (2) | * | Prema <i>joj</i>                                | trče.                        |                 |                  | Sobre { * <i>la</i> ; ✓ <i>ella</i> } habló Pedro.     |
|     |   | Toward <i>her<sub>cl</sub></i>                  | run                          |                 |                  | about <i>her<sub>cl</sub></i> her talked Pedro         |
|     |   | <i>They are running towards her.</i>            |                              |                 |                  | <i>Pedro talked about her.</i>                         |
| (3) | ✓ | Prema <i>njoj</i>                               | trče.                        |                 | (5)              | Greek (Arhonto Terzi, p.c.)                            |
|     |   | Toward <i>her<sub>pronoun</sub></i>             | run                          |                 |                  | Gia { * <i>ton</i> ; ✓ <i>afton</i> } milise o Petros. |
|     |   | <i>They are running towards her.</i>            |                              |                 |                  | about <i>him<sub>cl</sub></i> him talked the-P         |
|     |   |   |                              |                 |                  | <i>Petros talked about him.</i>                        |
| (6) |   | Bulgarian (Mariana Lambova, p.c.)               |                              |                 |                  |  |
|     |   | Sred { * <i>gi</i> ;                            | * <i>im</i> ;                | ✓ <i>tjax</i> } | <i>imaše</i>     | <i>bolni.</i>  |
|     |   | Among <i>them<sub>cl.Acc</sub></i>              | <i>them<sub>cl.Dat</sub></i> | <i>them</i>     | <i>there-are</i> | <i>sick</i>  |
|     |   | <i>There are sick ones among them.</i>          |                              |                 |                  |  |
| (7) |   | German  |                              |                 |                  |  |
|     |   | Ich habe mich auf { * <i>n</i> ; ✓ <i>ihn</i> } | <i>verlassen.</i>            |                 |                  |  |
|     |   | I have myself on <i>him<sub>cl</sub></i>        | <i>him</i> relied            |                 |                  |  |
|     |   | <i>I have relied on him.</i>                    |                              |                 |                  |  |
| (8) |   | Hausa (Tuller 1986:280, 356 ex. 260)            |                              |                 |                  |  |
|     |   | Sun zoo da { * <i>shi</i> ; ✓ <i>shii</i> }.    |                              |                 |                  |  |
|     |   | 3p come with <i>him<sub>cl</sub></i>            | <i>him<sub>pronoun</sub></i> |                 |                  |  |
|     |   | <i>They came with him.</i>                      |                              |                 |                  |  |

The aim of this paper is to investigate the nature of the ban in (1). The thesis is that the filter follows from two independent properties of the grammar: (i) the general ban against preposition stranding (for illustration from SC see (26) below) and (ii) the requirement that clitics must move even where other DPs can remain in situ.

This paper does not address the question why clitics move (cf. several papers in Riemsdijk 1999 especially Cardinaletti and Starke 1999). However, it does address the question what the nature of the ban against P-stranding is. SC is particularly interesting because of the combination of properties it has: SC has clitic pronouns, does not allow P-stranding, and allows left branch extraction.

On the basis of the theory developed here the novel typological correlation (9) is predicted.

- (9) All and only languages that allow P-stranding allow clitics as complements of P.

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<sup>1</sup> The observation that clitics cannot appear as the complements of prepositions is not new at all. A lot of the literature on clitics in various languages makes the observation in passing without attempting to give an account.

A full discussion of all the cross-linguistic data bearing on (9) would go well beyond the scope of this paper, but it is shown that (9) holds over an interesting range.

The rest of the paper is organized as follows. The first part shows that filter (1) is responsible for the contrast between (2) and (3). Its effects are not predicted by the second position requirement of SC clitics alone. The second section argues that (1) should be unified with the ban against P-stranding. The third section then probes into the nature of the ban against P-stranding and reduces it to general properties of syntax: successive cyclicity and economy.

### 1 *Should the fact that \*[P clitic] holds in SC surprise us?*

Pronominal clitics in SC are infamous for their second position requirement (2PR). For descriptions and references see Franks (1998), Franks and King (2000), and Bošković (2001). Given the 2PR, it is not obvious that filter (1) is necessary. It might be that the 2PR and it alone (!) is responsible for the contrast between (2) and (3). I will call this position the 2PR Hypothesis.<sup>2</sup> I argue that the 2PR Hypothesis is insufficient by showing how various theories of second position clitics in SC fail to predict the contrast between (2) and (3).

The answer to the question posed in the heading of this section is then obvious: yes, we should be surprised that (1) holds in SC, since this is not predicted by the 2PR Hypothesis.

#### 1.1 *The 2PR as a syntactic requirement*

Along the lines of a fairly popular theory, we might suggest that the 2PR is syntactic and amounts to the requirement that all clitics must be in  $C^\circ$  at SpellOut. An alternative version of this theory says that all clitics must be in the highest functional head of their clause at SpellOut. Theories along these lines are pursued in Franks 1998; King 1996; Progovac 1996; Schütze 1994; Tomic 1996; Wilder and Cavar 1994 among many others. For critiques see Bošković 1995, 2001a; Franks 1998; Radanović-Kocić 1988; Stjepanović 1998 and others.

Assume the first version, though nothing hinges on this choice: all clitics must be in  $C^\circ$  at Spell Out. On this assumption, (2) is expected to be ungrammatical given structure (10). The clitic violates the theoretical reconstruction of the 2PR since it is not located in  $C^\circ$ .

(10) [<sub>CP</sub>[<sub>PP</sub> prema joj] [ $C^\circ$  [trče <sub>TP</sub>]]]

However, there is an alternative structure for (2) in which the clitic is in fact located in  $C^\circ$ . This structure is given in (11). In (11) the clitic has moved out of the PP, which is later remnant moved to the beginning of the clause.<sup>3</sup> PPs can in principle host clitics as shown in (12). Movement of the clitic to  $C^\circ$  also does not obviously violate any other condition, because, according to the theory of 2PR under discussion, this movement characterizes clitics.

(11) [<sub>CP</sub>[<sub>PP</sub> prema t<sub>joj</sub>] [joj+ $C^\circ$  [trče <sub>TP</sub>]]]

<sup>2</sup> The line of reasoning whereby all the contrasts in (2) through (8) are blamed on special requirements of the clitics does not extend very well beyond SC since in many of these languages the pronominal clitics do not have special requirements; however, it is important to rule out 2PR as the sole source of the contrast in (2) because SC will be used as a probe into the nature of P-stranding later on.

<sup>3</sup> Most authors now assume that remnant movement is allowed (Epstein 2001; Kayne 1994; Koopman and Szabolcsi 2000; Müller 1998). Remnant movement is movement of a category containing a trace to a position where the trace is not c-commanded by its antecedent. Such movements violate Fiengo's (1974, 1977) 'representational' Proper Binding Condition (PBC). For critical discussion see Abels in press-b; Boeckx to appear; Hiraiwa 2002. Notice that the issue under discussion is actually orthogonal to the PBC. Even if (11) were ruled out by the PBC, nothing would rule out (i).

(i) \* Jovan i Milan joj trče prema.  
       J<sub>Nom</sub> and M<sub>Nom</sub> her<sub>cl</sub> run [towards t<sub>joj</sub>]

In (i) the PBC and the 2PR are controlled for. Nothing short of the ban against P-stranding rules it out.

- (12) ✓ Prema Mileni su trčali.  
 Toward Milena<sub>dat</sub> are-cl ran  
*Toward Milena, Milan and Jovan ran.*

Nothing then rules out example (2) on the structure in (11). An additional condition with the effect of banning clitics as the complements of P must be appealed to. Given (11) and example (i) ft. (3), this condition is plausibly identified with the ban against P-stranding.

### 1.2 Clitics as heads of functional projections

A second option is that clitics are not arguments but are base generated as the heads of higher functional projections. For concreteness assume clitics to be Agr<sup>o</sup>s. These clitic Agr<sup>o</sup>s must be associated with null pronouns *pro* in argument position. (Note that this view is very implausible for SC since SC does not allow clitic doubling. It is discussed only for completeness.)

Can this theory by itself explain the contrast between (2) and (3)? The null assumption about Agr<sup>o</sup> is that it is the same for all categories (cf. Chomsky's 1995b claim that Agr<sub>S</sub> and Agr<sub>O</sub> are merely mnemonic for Agr). P should be associated with the same Agr (cf. Watanabe 1993).<sup>4</sup> To explain why (2) is out, the assumption might be invoked that Case assignment in the verbal domain proceeds via Spec-Head agreement with Agr<sup>o</sup>, but in the prepositional domain it does not, i.e. there is no Agr<sub>P</sub>. P assigns Case directly. Notice that this direct Case assignment by P is not the same as inherent/lexical case. Many verbs assign inherent case, e.g. dative, yet they allow appropriate clitics. Thus what bans [P clitic] must be the stipulated distinction between 'verbal' and 'prepositional' Case. Clearly an ad hoc move crucially introducing an assumption specific to prepositions!

Alternatively one might claim that prepositions never take *pro* as their complement. Given that SC has *pro* in object position by assumption, a property specific to prepositions must be invoked to explain why *pro* is ungrammatical as the object of prepositions. Might it be a general property of *pro* not to be licensed as the complement of a preposition?

No. To see this consider French. French, does not generally allow P-stranding. It does, however, allow 'orphan prepositions' (cf. Tuller 1986; Zribi-Hertz 1984 among others). One of the main distinctions between P-stranding and constructions with orphan prepositions is that the P-stranding involves movement, but orphan prepositions are a base generated phenomenon. Evidence for this claim comes from the fact that constructions with orphan prepositions are insensitive to certain island conditions and that orphan prepositions (unlike stranded English prepositions) are grammatical in contexts not involving movement at all. This suggests that orphan prepositions take *pro* as their complement (Tuller 1986:376). Thus the ban against prepositions taking *pro* invoked above must be language specific.

We are then left with the language and category specific claim that prepositions in SC do not license *pro* as their complement on this view. Not an improvement on the statement \*[P clitic]! In fact it is worse, because the ban (1) against clitics as the complement of P holds across languages, but the putative new condition does not.

### 1.3 The 2PR is prosodic

Finally, let's consider prosodic theories of the 2PR. There are several current versions (for contrasting views cf. Bošković 2001a; Embick and Noyer 2001; Franks 1998 and references

<sup>4</sup> Advocates of this position might argue that example (2) is irrelevant if prepositional Agr<sup>o</sup> is above P (Rouveret 1991; Watanabe 1993). The relevant example is then (i), not (2). Crucially, (i) is completely ungrammatical.

(i) \* Jovan i Milan [Agr<sub>P</sub>]oj [PP prema] trče  
 J<sub>Nom</sub> and M<sub>Nom</sub> her<sub>cl</sub> towards run

cited there). Despite their substantial differences, prosodic approaches to the 2PR have certain things in common. They characterize the 2PR roughly as follows: Every second position clitic in SC must appear after an intonational phrase boundary and separated from it by exactly one prosodic word or exactly one prosodic phrase.

The contrast between (2) and (3) could be explained on the prosodic theory of the 2PR only if the preposition used in the example did not project its own prosodic word. The clitic in example (2) would simply lack an appropriate host. However, the sentence does not improve by introducing a host for the clitic in sentence initial position. For example, the complementizer *da* – ‘that’ can host second position clitics (13); however, embedding (2) under *da* (14) does not improve the example (cf. also Bošković 2001a:161 for related discussion).

- (13) ✓      Ona    tvrdi    da    smo    mu        je        mi    predstavili    juče.  
               She    claims    that    are<sub>cl</sub>    him<sub>cl, dat</sub>    her<sub>cl, acc</sub>    we    introduced    yesterday  
               *She claims that we introduced her to him yesterday.*      (Bošković 2001a:8)
- (14) \*      ...      da      prema    joj      trče.  
               that    toward her<sub>cl</sub>    run

It is plausible that monosyllabic prepositions in SC (e.g. *na* – ‘on’) are not phonological words by themselves. Monosyllabic prepositions might themselves be clitics—though without the 2PR. These prepositions do not host clitics either, no matter if an additional preceding host is present or not (15).

- (15) \*      (da)    na      ga                    je      ljut  
               that    on      him<sub>cl, acc</sub>      is<sub>cl</sub>      angry  
               *He is angry with him.*      (Bošković 2001a:161)<sup>5</sup>

The prosodic theory of the 2PR alone cannot account for the fact that example (2) is ungrammatical; *prema* in (2) and *da na* in (15) should make good hosts for clitics.

We conclude that none of the three theories of the 2PR alone account for the contrast between (2) and (3). The source of the ungrammaticality of (2) must be sought elsewhere.

## 2 Why should we unify \*[P clitic] with P-stranding?

As we saw, examples (2) and (3) illustrate a restriction which holds across languages: Clitics cannot be the complements of prepositions. Is (1) a universal, hardwired into UG?

No. There are languages that allow clitics as the complements of prepositions: English (16), Swedish (17), Icelandic (19), Norwegian (20), and Gbadi (21).

<sup>5</sup> The example is taken from a discussion where Bošković claims that *nj* – ‘him’, which appears as the complement of prepositions, *is* a clitic – just not a second position clitic. He gives (i) which differs minimally from (15).

- (i) ✓      (da)    na      nj                    je      ljut      (Bošković 2001a:161)  
               that    on      him    is      angry  
               *(that) he is angry with him*

If the analysis to be proposed here is correct, *nj* cannot be a clitic synchronically. *Nj* is not a clitic historically either, although it is morphologically derived from one. The modern form *nj* stems from the Old Church Slavonic (OCS) accusative clitic *i* (\**jb*). However, *i* never surfaces as the complement of P in OCS. “After prepositions an *n* is prefixed to the stem: [...] *na njb* [emphasis added, K.A.] (acc. sg. masc.) etc.” Lunt (1959:53). Just as in modern SC, pronominal clitics in OCS simply could not be the complement of P. Hence the ban against *i* as the complement of P. It will become clear later why inserting an extra morpheme helps (cf. ft. 13).

OCS is not isolated in adding a morpheme between a clitic and P and preventing a violation of filter (1) that way. Welsh prepositions do not accept clitics as is; a morpheme is inserted; thus, *am* – ‘about’ becomes *amdan* when taking the clitic *o* – ‘him’ as its complement (Rouveret 1991). Similarly, in the single example in Tuller 1986 (p. 281), where a Hausa preposition takes a clitic/weak pronoun as its complement, a morpheme is inserted; *ga* – ‘to/by’ surfaces as *garee* when followed by a clitic/weak pronominal like *mù* – ‘you’.

Reduced pronouns in English are syntactically clitics (Bošković 1997 and others). Swedish *na* is a clitic in the relevant dialect.<sup>6</sup> (18), which shows that object shift is obligatory with *na*, illustrates its clitic behavior. For the claim that Icelandic *'ana* and Norwegian *'a* are clitics and for further discussion of Swedish *na*, see Hellan and Platzack 1999. Finally in Gbadi (21) the pronominal clitic *É* has moved out of its P(ostpositional)P across the question marker *ḃO* and has merged with the perfective auxiliary. English, Swedish, Icelandic, and Norwegian violate (1) on the surface while Gbadi does so at an earlier stage of the derivation.

(16) ✓ We talked about 'im for quite some time.

(17) Swedish

✓ Han trodde på na.  
He believed on her

*He believed in her.* (Swedish)

(18) Han möter \*(na)alltid \*(na) snabbt \*(na) på lördagar fore lunch.  
He meets (her) always (\*her) quickly (\*her) on Saturdays before lunch

*He always meets her on Saturday before lunch.* (Swedish)

(19) Icelandic (Hellan and Platzack 1999:128 ex. 115a)

✓ Ég hugsaði um 'ana.  
I thought about her<sub>cl</sub>

*I thought about her.*

(20) Norwegian (Hellan and Platzack 1999:128 ex. 115b)

✓ Den lå under 'a.  
it lay under her<sub>cl</sub>

*It lay under her.*

(21) Gbadi (Koopman, 1984:54 ex. 27d)

✓ wa y- É – ḃO kIÚ jIĒĒ  
they PERF-A- it<sub>cl</sub>- Q [PP t<sub>cl</sub> on] put-Q

*Have they put food on it?*

All these languages have one important (and rare) property in common: they allow P-stranding. The relevant Gbadi facts are reproduced from Koopman (1984:54 ex. 27a-c) here.

(22a) [táblĒ kIÚ]<sub>i</sub> yĪ wá kÉ – IÒ lĪĒ [e]<sub>i</sub> jIĒ  
Table on WH they FUT-A-Foc food put  
*It is on the table they will put the food.*

(b) P-stranding under *wh*-movement:

táblĒ<sub>i</sub> yĪ wá kÉ – IÒ lĪĒ [e]<sub>i</sub> kIÚ jIĒ  
Table WH they FUT-A-Foc food on put

*It is the table they will put the food on.*

(c) P-stranding under NP movement

táblĒ<sub>i</sub> kÉ lĪĒ [e]<sub>i</sub> kIÚ jIĒ IÒ  
table Fut-A food on put-PAS

*The food will be put on the table.*

It is now glaringly obvious that the languages in (2) through (8), which were used to exemplify filter (1), all disallow P-stranding.<sup>7</sup> On the basis of this, it is reasonable to suggest that filter (1) holds in all and only the languages that do not allow P-stranding (23).<sup>8</sup>

<sup>6</sup> The examples in the text were kindly provided by Anna-Lena Wiklund.

<sup>7</sup> For a defense of the claim that German disallows P-stranding cf. Oppenrieder 1991.

<sup>8</sup> I am aware of one counterexample: Arabic (Brian Joseph, p.c. and Yakov Testelets, p.c.). I leave the question whether Arabic is a true problem or whether it is amenable to a treatment along the lines of ft. 5 for future work.

(23a) If a language allows P-stranding it allows [P clitic], i.e. it disobeys (1).

(23b) If a language does not allow P-stranding it disallows [P clitic], i.e. it obeys (1).

(23) expresses a novel observation. This observation is the first important result of the present paper. We can now ask why (23) should hold.

There is an obvious connection between the syntax of pronominal clitics and P-stranding: Clitics always occur in derived positions, i.e. clitics must undergo movements that other pronouns and full DPs are exempt from. Since pronominal clitics move obligatorily, it is easy to imagine a reason for this correlation. It is in fact surprising that it has gone unnoticed so far. I will assume that pronominal clitics are structurally deficient (see Cardinaletti and Starke 1999, Chomsky 1995a, Bošković 2001a). If morphology corresponds to syntactic structure, clitics are syntactically less complex than pronouns: <joj, njoj> in SC, <la, ella> in Spanish, etc. (cf. also ft. 5). Following Chomsky's and Bošković's lead, I assume that pronominal clitics unlike all other NPs and DPs have no internal syntactic structure: they are bare heads, syntactic atoms. The structural deficiency of clitics is often assumed to drive their movements (Cardinaletti and Starke 1999, Franks 1998, Bošković 2001a, Stjepanovic 1999 for different versions).

The question arises whether clitics must always move overtly or whether they must move overtly only if possible. The first option implies that the clitics in examples (16) to (20) are in PP internal derived positions, positions which are, presumably, unavailable in non-P-stranding languages.<sup>9</sup> One would then have to explain why the availability of these PP internal positions correlates with the possibility of P-stranding in a language. The analysis of P-stranding developed below predicts this correlation.

Yet, it does not seem quite satisfactory to say that clitics always move overtly. For if they did, how could we explain the fact that the Swedish pronominal clitic *na* undergoes object shift only if object shift is independently possible? This is illustrated in (24). Example (24) is an embedded clause. The verb stays in situ; hence, object shift is blocked and the clitic must stay put. Yet the sentence is grammatical.

(24) Swedish (Anna-Lena Wiklund, p.c.)  
 ...att han (\*na) inte såg (✓na)  
 ...that he (\*her<sub>cl</sub>)not saw (her<sub>cl</sub>)  
 ...that he didn't see her.

We conclude that clitics move overtly only if possible. If not, they move covertly. (16) through (20) are less mysterious from this angle: the clitics cannot move overtly but they do covertly.<sup>10</sup> This view has an important consequence. If clitics may stay in situ overtly, we can explain the data from non-P-stranding languages (2) through (8) only if clitics in these languages can leave PP neither overtly nor covertly. This, too, is a consequence of the theory of P-stranding developed below.

We have shown so far that all and only the languages that allow P-stranding allow clitics as the complement of P. Since there is little evidence that clitics strand prepositions overtly (except in Gbadi (21)), either (25a) or (25b) must hold.

(25a) Clitics can move and satisfy their needs PP-internally in P-stranding languages.

The relevant positions are not available in non-P-stranding languages.

The lack of these positions explains why these languages do not allow P-stranding.

<sup>9</sup> Alternatively one might try to reconcile the facts in (16) through (20) with the assumption that clitics move overtly by assuming that they move out of the PP in overt syntax but that a lower copy is pronounced along the lines of the Pronounce a Copy analysis of the second position effect (Bošković 2001a; Franks 1998).

<sup>10</sup> Why overt movement of the clitics is blocked must remain an open question here.

- (25b) Clitics move overtly whenever overt movement is independently possible.  
 Clitics can move covertly if overt movement is blocked.  
 The ban against P-stranding holds in overt and in covert syntax in non-P-stranding languages.

As mentioned above, both options are compatible with the theory of P-stranding developed here. Further research will have to show which of the two options is correct.

### 3 *On the nature of the ban against P-stranding*

SC will take center stage again in this part of the paper. The nature of the ban against P-stranding will be investigated (for discussion cf. Hornstein and Weinberg 1981; Kayne 1984; King and Roberge 1990; Maling 1978; Maling and Zaenen 1990; Riemsdijk 1978; Roberge 1998; Roberge and Rosen 1999; Takami 1988, 1992 among many others). First, three ideas on P-stranding will be rejected. The ban against P-stranding is not a filter of the form \*[P silence], PPs are not PF-islands in the sense of Merchant 1999, and in fact PPs are not islands at all. It will be argued that the ban against P-stranding is actually the ban against moving the complement of P away from under P.

#### 3.1 *What the ban against P-Stranding is and is not*

SC does not in general allow P-stranding as (26) shows.

- (26a) \* Kim je govorila Ana sa? (Merchant 1999:114)  
 who is spoken Ana with
- (26b) ✓ Sa kim je govorila Ana?  
 with who is spoken Ana  
*Who did Ana talk to?*

It might be assumed that the ban against P-stranding is a PF filter of the form: \*[P silence]. This cannot be true, however, since there are grammatical examples like (27) and (28) that violate it. Examples (27) and (28) are cases of Right Node Raising (modeled on McCloskey 1986). The conclusion to draw from such examples is (i) that the putative filter is wrong and (ii) that Right Node Raising does not involve movement (cf. e.g. Bošković no year).

Given the filter \*[P silence], examples where PP is deleted in PF ought to be good even if they involve P-stranding syntactically. This is false, as (29) shows. (29) is an example of sluicing. Since the stranded preposition is deleted in PF (on Merchant's 1999 theory of sluicing) or not present at all in the PF (on Chung, Ladusaw and McCloskey's 1994 theory of sluicing), the filter ought to be obviated, but it isn't. The putative filter is thus completely irrelevant.

- (27) ✓ Vozovi se krec'u na dva nivoa - iznad i ispod zemlje.  
 trains self move on two levels above and beneath ground  
*The trains move on two levels - above and below the ground.* (Bošković, p.c.)
- (28) ✓ Jovan je ostavio čekić ispod, a Petar ispred, Mrijinih kola  
 Jovan is put hammerbelow and Petar in-front-of Mary's car  
*Jovan put the hammer below, and Petar in front of, Mary's car.* (Bošković, p.c.)
- (29) Ana je govorila sa nekim, ali ne znam \*(sa) kim.  
 Ana is spoken with someone but not I.know with who  
*Ana talked to someone, but I don't know who.* (Merchant 1999:114)



from the point of view of locality theory: a longer movement—extractions out of the complement of P—is grammatical, but a shorter one—extraction of the complement itself—is not.

### 3.2 Deriving the Ban against P-stranding

We have arrived at a provisional understanding of the ban against P-stranding. It is not an island condition but rather a property of syntactic derivations themselves. The ban against P-stranding is not the only case that looks paradoxical from the point of view of locality, i.e. where short movement is impossible, but long movement is fine. It is well known that IPs cannot move stranding C°. This crosslinguistically very robust fact is illustrated by the paradigm in (33).

- (33a) German  
 ✓Dass Peter liest, habe ich nicht gesagt.  
 That Peter reads, have I not said
- (33b) \*Peter liest, habe ich nicht gesagt, dass.  
 Peter reads have I not said that
- (33c) ✓Ich habe nicht gesagt, dass Peter liest.  
 I have not said that Peter reads.  
*I didn't say that Peter was reading.*

Movement from within IP is of course possible. (34) captures the generalization.<sup>14</sup>

(34) C-stranding generalization

- (a) \*[C trace] (b) ✓[C [ ... trace ... ]]

A similar filter arguably holds for the light verb *v*. Huang (1993) argues for the *v*P-internal subject hypothesis on the basis of examples like (36). Unlike in (35), *himself* in (36) cannot be bound by *John*. Huang suggests that (36) necessarily has the structure shown in (37), where the closest binder for the anaphor is the trace of *Bill*. In other words, the structure in (38) must systematically be ungrammatical. On the assumption that the subject is introduced as the specifier of *v*: XP in (37) is *v*P. Moving its immediate complement VP as in (38) must be out.

- (35) John<sub>i</sub> wonders which pictures of himself<sub>i/j</sub> Bill<sub>j</sub> likes.  
 (36) John<sub>i</sub> said that wash himself<sub>\*i/j</sub> Bill<sub>j</sub> certainly would.  
 (37) John said that [<sub>XP</sub> t<sub>Bill</sub> wash himself] Bill certainly would t<sub>XP</sub>.  
 (38) \*John said that [<sub>VP</sub> wash himself] Bill certainly would [<sub>VP</sub> t<sub>Bill</sub> v° t<sub>VP</sub>]

Movement from within the complement of *v*P is possible, of course. We arrive at (39).

(39) *v*-stranding generalization

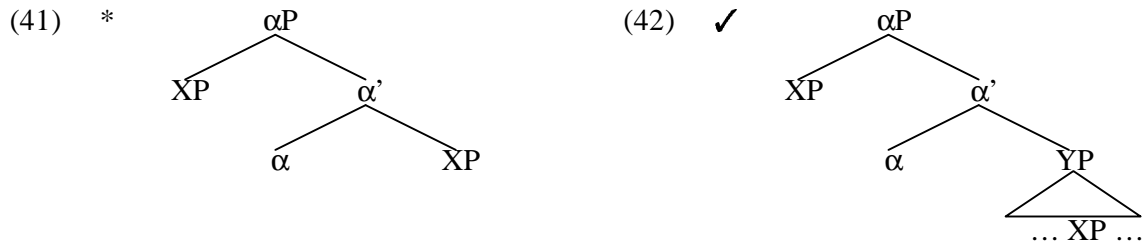
- (a) \*[v trace] (b) ✓[v [ ... trace ... ]]

According to Chomsky (1999, 2000, 2001) *v* and C head phases. Among other things, phases play the role of cyclic nodes in earlier versions of the theory. Riemsdijk (1978) had argued that PPs are cyclic nodes. The claim that Ps head phases is a natural terminological update (cf. Matsubara 2000 for PP as a phase). (32), (34), and (39) then generalize to (40).

- (40) \*[α trace], where α is the head of a phase.

<sup>14</sup> These generalizations are incompatible with the LCA. We must reject the Kaynean view (Kayne 1994) that all languages have underlying head-complement order. If we were to follow Kayne, every postpositional phrase and every language with complementizers at the right edge of the clause would violate (32a) and (34a) respectively.

Suppose, as is standard, that in order to escape from the domain of a phase head, an item must first move to the edge of that phase, i.e. it must be in a specifier position. The cases prohibited by (40) have the general form in (41), while the allowable cases have that in (42).



If we conceive of movement as a last resort operation driven by the need to establish a more local relation between two elements, then movement from complement to specifier position is too short. The complement XP in (41) is already in the most local relation with  $\alpha$  before movement: Sisterhood. Moving XP to Spec $\alpha$ P does not bring XP one bit closer to  $\alpha$ . Thus movement from complement to specifier of the same head is systematically ruled out (for similar considerations and more cases of such anti-locality cf. Bošković 1997; Grohmann 2000 especially chapter 2; Pesetsky and Torrego 2001; Saito and Murasugi 1999).<sup>15</sup>

Here is where we stand: \*[P clitic] is a special case of the ban against P-stranding, properly captured by (32). (32) itself is a special case of (40). (40) is derived from the assumptions that movement is a last resort operation and proceeds in successive cyclic steps.

### 3.3 Loose Ends: Towards an understanding of P-stranding

We can now ask how to rule in P-stranding in the few languages that allow it.

One possibility is to assume that P-stranding languages obey generalization (32). This entails that the actual complement of P is never extracted. In other words, P-stranding languages and only those have (strandable) abstract structure between P and its apparent complement. On this view all cases of P-stranding are apparent. They must be reanalyzed as involving structures like (42). This view fits in well with the theory of clitic movement sketched above in (25a): clitics move overtly but PP internally in languages like English, Swedish, Norwegian, and Icelandic. All their needs are satisfied internally to the PP.

To test this hypothesis, Željko Bošković (p.c.) suggests the following line of reasoning: Quantifiers are floated under movement, but they are never left in  $\theta$ -positions (Bošković 2001b). If quantifiers could be floated PP internally, this would count as evidence that there is PP internal movement. The converse is not true, however. The absence of PP internal Q-float does not establish the fact that there is no PP internal movement. Bošković's theory of Q-float may illustrate this. For Q-float to be possible, at least two movement operations need to take place. For P-stranding however, it is enough if there is one PP internal position that DP can move to.

Despite the clear logic of the situation, evidence that Q-float is in fact possible within PP is hard to come by. For A-movement the data are clear: Attempting to float a quantifier in a prepositional passive leads to sharp ungrammaticality (44). As discussed, this result does not suffice to establish a point one way or the other. For A'-movement the data are not particularly clear at this point: Only certain dialects of English allow Q-float under *wh*-movement to

<sup>15</sup> As it stands, the reason why (40) holds is a bit superficial. In a framework where the complement and the specifier are not distinguished geometrically, i.e. in a flatter phrase structure (Abels in press-a; Brody 1997, 2000), (40) can be made to follow from considerably deeper considerations.

begin with (e.g. West Ulster English McCloskey 2000). Trying to float a quantifier within PP in this dialect gives mixed results as (45) through (47), all from McCloskey (2000:66), show.

- (43) \* They have been seen all. (44) \* They have been talked about all.  
 (45) ? Who was he laughing at all?  
 (46) Who (✓all) were you sitting beside (?\*all)?  
 (47) Where (all) did you move the books to (\*all)?

Finally with clitic pronouns finally, it is not clear what counts as Q-float in the first place. Bošković 2001b explicitly claims that examples like (48) and (49) involve Q-float. Evidence for this claim comes from contrasts between these examples and (50) and (51). In (50) and (51) the order ‘DP Q’ is impossible with strong pronouns and full DPs in exactly those positions where it was possible in (48) and (49). Bošković explains this contrast by assuming that clitics but not strong pronouns or full DPs undergo a special movement stranding the quantifier: cliticization.<sup>16</sup>

- (48) ✓ I have seen them all/both. (50) \* I have talked to THEM all.  
 (49) ✓ I have talked to them all/both. (51) \*I’ve talked to Ian and Mary both.

The examples find a different explanation once we consider the structural differences between a clitic pronoun and a strong pronoun or a full DP. Clitics have no internal syntactic structure. Quantifiers do. When a quantifier is attached to a clitic the resulting structure is as in (52), but when a quantifier is attached to a full DP, the structure is as in (53) - order irrelevant.

- (52) [cl [QP H<sub>1</sub> [ H<sub>2</sub> ...]]] (53) [[DP D...[NP N...]] [QP [H<sub>1</sub> [H<sub>2</sub> ...]]]

In (52) the clitic asymmetrically c-commands all the terminals in the QP (H<sub>1</sub> and H<sub>2</sub>). QP behaves for linearization like a complement of the clitic and complements follow their heads in English. The situation is very different in (53) where QP will behave either as an adjunct or a specifier and precede. In other words, the acceptability of the order ‘pronoun quantifier’ does not furnish an argument for movement. Given all this, I have to leave the question whether P-stranding languages have additional abstract structure for future work.

The other possible way of allowing P-stranding is to parameterize the status of P as a phase head. This goes back to the idea that the choice of bounding nodes is subject to parametric variation (Rizzi 1980). On this view, languages that allow P-stranding flatly contradict (32a)—but not (40)! If P is not the head of a phase, nothing forces movement to go through SpecPP, hence P-stranding is again allowed without generating structures of the type in (41). Movement from complement to specifier position of the same head is never allowed! In a sense this view is the mirror image of Riemsdijk’s (1978) view, according to which PPs provide SpecPP as an escape hatch only in the P-stranding languages. The present claim is that even non-P-stranding languages have this escape hatch, but in P-stranding languages it is not necessary to move through SpecPP, since P is not the head of a phase. This view forces us to adopt (25b) for clitic movement: clitics can move covertly if overt movement is barred. Exactly what bars overt clitic movement out of PP must remain an open question at this point.

There is some preliminary evidence that this view of P-stranding might be on the right track. Elements like *straight* occupy the specifier of PP (Jackendoff 1973; Rooryck 1996). If this SpecPP position is unique and serves as escape hatch, then movement out of PP should be

<sup>16</sup> If this line of argument were correct, then all languages that allow PP internal ‘Q-float’ ought to allow P-stranding. German immediately falsifies this conjecture (i). This should make us suspicious.

(i) ✓ Ich habe über sie alle gelacht.  
 I have about them all laughed  
*I laughed about them all.*

blocked just in case the specifier is occupied. This prediction is borne out for SC. Remember that we analyzed cases like (54) as involving movement of the noun *sobu* out of the PP followed by remnant movement of the PP. When SpecPP is occupied by *pravo* as in (55) movement through SpecPP is blocked. The ungrammaticality of (56) is thus predicted.

- (54) ✓ U veliku on udje sobu. (55) On udje pravo u veliku sobu.  
 [PP<sub>tNP</sub> in big he entered room t<sub>PP</sub> He entered straight in big room  
*He entered the big room.* (56) \*Pravo u veliku on udje sobu.

On the theory under consideration, a filled SpecPP should not block movement out of PP in a P-stranding language. P is not the head of a phase in these languages; hence, movement does not have to go through SpecPP; hence, an occupied specifier of PP should not interfere with movement out of PP. This prediction is borne out as (57) indicates.

- (57) ✓ What did John look straight at.

The evidence skimmed here appears to slightly favor the view that P-stranding languages violate (32a): P does not head a phase in these languages.<sup>17</sup>

#### 4 Conclusion

In this paper, the novel observation was made that all and only languages that allow P-stranding allow clitics as the complements of P. I claimed that the ban against P-stranding is not an island effect but arises as an anti-locality effect from the joint operation of the condition that movement must be successive cyclic and the condition that movement is a last resort operation. Movement that would be too short, i.e. movement from complement to specifier position, is banned since it does not achieve anything. However, precisely this kind of movement is forced by the cyclicity condition. This view of P-stranding is a fairly radical departure from standard assumptions, but we have seen its empirical merits throughout. Theoretically this view is compelling because of its simplicity.

The present paper is programmatic in the sense that many questions touched upon superficially here need to be investigated more thoroughly. Some of them were noted along the way. Importantly the present paper affords a new perspective on a number of old questions. What is the precise nature of clitic movement? What is the abstract internal structure of PPs? What is the precise nature of the anti-locality effect? Does it only ban movement from complement to specifier of the same head? Or is it a more general, less local, condition as suggested for example in Grohmann 2000? Can this anti-locality line of reasoning be extended to account for Comp-trace effects? etc. I hope to take up many of these questions in future work. Hopefully, this paper has produced some interest in the perspective taken here.

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<sup>17</sup> We can explain the fact that P-stranding never happens from a moved position by making P optionally the head of a phase. P is stranded when it is not a phase head (final position in (i)) and then, by economy, the smallest possible movable item will be moved from the start. Otherwise, if P heads a phase, the complement of P is locked inside it by (40) and the PP is pied-piped (initial position in (i)). P in medial position cannot be generated, because the first step of movement is only licit if P heads a phase, but then *what* is locked within PP.

(i) (✓ about) What did he say (\*about) that you talked (✓ about)?

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