Chapter 6

What moves where? A typological-syntactic approach to multiple *wh*-questions

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This paper presents a new syntactic analysis for multiple *wh*-constructions. Adopting Richards (1997), I assume that there are two types of languages concerning *wh*-movement: such which A-move their *wh*-words (A-languages) and such which A'-move them (A'-languages). I expand this account by assuming that in both types, *wh*-movement targets the CP. This is done via A'-movement, as well as via A-movement. Building on recent work on cross-clausal A-dependencies (CCA; mainly Wurmbrand 2018), I adopt the idea of [A]-features inside CP. Based on Rizzi (1997), I propose a split CP domain whose different parts (ForceP, FocusP, TopicP) can either have A'- or A-quality. *Wh*-movement targets ForceP and FocusP, CCA-elements move to TopicP. The CP heads are ordered in an implicational hierarchical way, and their feature make-up entails the properties of the embedded and higher-ordered heads. Within this ordering, there is a threshold where A'-qualities shift to A-qualities. I assume that certain CP-heads are able to contain A-properties and by that, the CP domain contains A'- as well as A-properties. The option of having A-quality is restricted by embedding options: An A-CP-part cannot embed an A'-CP-part within the same domain (CP). I claim that languages pattern into three types, depending how high in the CP the A'/A-shift is located. This assumption predicts that there is a correlation between A-*wh*-movement and CCA-phenomena. This is indeed the case and will be summarised as a novel typological generalisation: "Whenever a language A-moves its *wh*-words, it allows CCA (but not the other way around)." This generalisation reflects that A-*wh*-movement entails CCA, as expected by my analysis of the CP domain. My account ties together CCA-phenomena and A-*wh*-movement in a syntactically novel way and might shed new light on the universal composition of the CP-domain.

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1 *Wh*-movement as A-movement

When it comes to multiple *wh*-questions, languages show three different kinds of behaviour. First, there are languages which raise one *wh*-word to sentence-initial position and leave all others in-situ (e.g. English, German, Greek, Brazilian Portuguese). I will call them "single-raising."

(1) English (Bošković 2002: 351)
What did John give to whom?

Then, there are "multiple-fronting" languages like Bulgarian, Polish, Romanian, Hungarian, Bosnian, Croatian and Serbian, which move several *wh*-words to sentence-initial position.

(2) Bulgarian (Bošković 2002: 351)
Na kogo kakvo dade Ivan?
to whom what give.3SG Ivan
'What did Ivan give to whom?'

Finally, there are languages which leave all of their *wh*-words in their base-generated position (such as Japanese, Chinese, Korean or Turkish), called "*wh*-in-situ languages".

(3) Japanese (Richards 1997: 31)
John-ga nani-o naze katta no?
John.NOM what.ACC why bought Q
'What did John buy why?'

Throughout linguistic history, there have been several syntactic explanations for each of the three. One of those accounts stands out because of its unconventionality: the ideas proposed in Richards (1997). He suggests that languages do not divide into three classes depending on what is moved on the surface, but only into two classes. Based on Huang (1982), he assumes that in all languages, all *wh*-words move to sentence-initial position at LF due to interpretability.[1] What happens on the surface is determined by other factors. Supposing

[1]This statement is probably not universally applicable. Another wide-spread analysis for wh-in situ constructions is quantificational inverse linking (see for example May 1978, Larson 1985, May & Keyser 1985, Chang 1997, Pollard & Yoo 1998, Cooper 2013, May & Bale 2017). Furthermore, it is more difficult to test the A'/A-movement distinction in wh-in-situ languages. Since the length of this paper is restricted and for the sake of the argument, I adopt the claim in Huang (1982) that *wh*-words move on LF, and the argument in Richards (1997) regarding

that all *wh*-words move, Richards (1997) claims that there are only two types of languages: IP-absorption languages and CP-absorption languages. The difference between them is not the PF-quantity of moved *wh*-words but rather the LF-quality of their movement. According to him, languages can either A'-move their *wh*-words (CP-absorption languages; from here on A'-languages) or A-move them (IP-absorption languages, from here on A-languages). This sheds a completely new light onto the discussion of multiple *wh*-questions. So far, *wh*-movement has always been assumed to be pure A'-movement. However, Richards (1997) lists some criteria which show that the quality of *wh*-movement does not seem to be uniform within syntax. It appears that whether *wh*-movement has A- or A'-qualities is more important than how many *wh*-words move on the surface. The difference between A'-*wh*-movement and A-movement is bound to distinctive behaviour in the following aspects: A-languages do not obey Superiority between the *wh*-words, they usually allow A-scrambling of items other than *wh*-words and do not show WCO-effects in local *wh*-questions. A'-languages behave inversely to that; they do obey Superiority between their *wh*-words, do not allow A-scrambling in general and do show WCO-effects in local *wh*-questions. These observations are true for languages of all three surface classes. This means that each surface language type (multiple fronting, single fronting or in-situ) contains languages which A-move their *wh*-words as well as such which A'-move them. To put it differently: whether a language A- or A'-moves its *wh*-words is independent of how many *wh*-words are raised on the surface. The exact typology can be seen in Table 1 (adapted from Richards 1997). Each language type splits into two classes. Multiple-fronting languages for example divide into Bulgarian-like languages and Bo-, Cr-, and Se-like languages.[2] Bulgarian-like languages obey Superiority (4), show WCO-effects (5) and do not allow A-Scrambling and therefore A'-move their *wh*-words.

(4) Superiority in Bulgarian (Richards 1997: 30)

a. Koj kogo vižda?
who whom sees
'Who sees whom?'

b. * Kogo koj vižda?
whom who sees

why and how in-situ languages part into A'- and A-languages and refer to his dissertation for a more detailed description of the supporting data. I am aware that *wh*-in-situ languages posit an important question for further research.

[2]For reasons of simplicity, I cannot present all the supporting data for all languages here. It can be found in great detail in Richards (1997).

Table 1: A- versus A'-movement of *wh*-words

		Superiority	WCO	A-SCR
Multiple fronting	Bulgarian-like	✓	✓	✗
Wh-in-situ	Chinese-like	✓	✓	✗
Single fronting	English-like	✓	✓	✗
Multiple fronting	Bo, Cr, Se[a]-like	✗	✗	✓
Wh-in-situ	Korean-like	✗	✗	✓
Single fronting	German-like	✗	✗	✓

[a]In the literature, Bosnian, Croatian and Serbian are summarized as "Serbocroatian" or "B/C/S". The three languages are similar but not the same and therefore, I refer to them as "Bo, Cr, Se". Since they do not seem to behave crucially different to each other concerning *wh*-movement (they all A-move their *wh*-words and are multiple fronting), I group them together in this paper.

(5) WCO in Bulgarian (Richards 1997: 32)
* Kogo$_i$ običa majka si$_i$?
who$_i$ loves mother his$_i$
'Whom$_i$ does his$_i$ mother love?'

Opposed to that, Bo,Cr,Se-like languages do not show Superiority effects (6), omit WCO effects (7) and have local A-scrambling. Therefore, they A-move their *wh*-words.[3]

(6) Superiority in Bo, Cr, Se (Richards 1997: 30)
a. Ko je koga vidjeo?
who AUX whom seen
'Who saw whom?'
b. Koga je ko vidjeo?
whom AUX who seen

(7) WCO in Bo, Cr, Se (Richards 1997: 33)
Koga$_i$ voli njegova$_i$ majka?
who$_i$ loves his$_i$-NOM mother-NOM
'Whom$_i$ does his$_i$ mother love?'

[3]A reviewer noted that a crucial property of A-movement is that it is restricted to nominals. This predicts that properties like Superiority and WCO might arise in A-movement languages when a non-nominal is moved. This is a very interesting clue and is in need of proper examination. I have no answer to this question yet since providing a well-founded one includes fieldwork in different languages and a lot more literature research. Hence, I leave this question open to further investigation.

In the following pages, I will propose a new account for A-*wh*-movement by linking *wh*-movement to the concept of an A-position inside CP. The ingredients for my analysis have their origin in different, so far unrelated grammatical phenomena and their corresponding theories: First, Richards's (1997) proposal that in some languages, *wh*-movement has A-quality. Then, cross-clausal A-phenomena (as discussed, among many others, in Wurmbrand 2018), i.e. the ability of certain languages to allow A-relations into embedded CP domains or A-movement out of them. And finally, an extended CP domain, consisting of multiple CP-parts (as proposed in Rizzi 1997). By combining these three, I will present a novel analysis of the CP domain, rendering new derivational positions for *wh*-movement. I will substantiate my claim with typological observations and a universal generalisation.

2 An A-position inside CP

In the recent literature, the claim for an A-position inside CP (Tanaka 2002, Şener 2008, Takeuchi 2010, Alboiu & Hill 2011, Bondarenko 2017, Zyman 2017, Zyman 2018, Wurmbrand 2018, Fong 2019), respectively the dissolving of strictly separated A- and A'-positions (Obata & Epstein 2011, van Urk 2015) grew stronger. This idea is mainly used to explain cross-clausal A-dependencies (CCA) like Hyperraising, Hyper-ECM or Hyperagreement. CCA include A-dependencies (Case Assignment, Raising or Agreement) operating across a CP-boundary. Take Hyper-ECM as an example: It behaves like regular Exceptional Case-Marking (ECM), the only difference being that the embedded clause (containing the targeted DP) is a full CP. Mongolian, for example, shows this phenomenon: the embedded subject *Dulmaa* receives accusative case from the matrix verb *say*. The embedded clause, however, is a full CP and thus case assignment crosses a clause boundary.

(8) Mongolian (Fong 2019: 2)
Bat [margaash Dulmaa-g nom unsh-n gej] khel-sen.
Bat [tomorrow Dulmaa.ACC book read.N.PST COMP] say.PST
'Bat said that Dulmaa will read a book tomorrow.'

Hyper-ECM appears in several non-related languages, such as in Korean (Yoon 2007), Japanese (Horn 2008), Turkish (Şener & Şener 2011) or Uyghur (Shklovsky & Sudo 2014). Wurmbrand (2018) and others deny that Hyper-ECM is an instance of Object Raising, Binding, Prolepsis or deficient CPs and argues that the embedded clause is a fully functional CP, that the accusative case comes from the matrix

clause and targets the embedded subject and that the targeted DP remains within the embedded CP. Wurmbrand (2018) brings forward several arguments for this claim (such as idiomatic reading, impossibility of embedded overt pronominal subjects, embedded negation, matrix predicate scope, clefts, Proper Binding Condition violations, island sensitivity or shifted indexicals).[4] I adopt her analysis of CCA and apply it to *wh*-constructions: she claims that languages allowing CCA contain an A-position inside CP which can be targeted by A-relations from the matrix and embedded clause. This A-position is made possible by an [A]-feature on C. Based on a composite probe approach by van Urk (2015), stating that C-heads may have mixed [A] and [A']-features, Wurmbrand (2018) proposes that in CCA-cases, C-heads can have [A]-features additionally to their [A']-features. If a C-head has [A]-features, a DP agreeing with it inherits these [A]-features. Then, A-movement from a mixed A/A'-position is possible as well as an A-relation targeting it. Languages differ in whether they have [A]-features on their C-head or not. Languages allowing CCA do have [A]-features on C, languages disallowing CCA do not. Figure 1 shows the general idea (adapted from Wurmbrand 2018: 15).

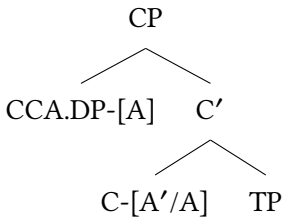

Figure 1: Embedded CP in CCA configurations

I will adapt the idea of a potential A-position in CP in order to derive a new account for multiple *wh*-questions typologically. This means that I will use the approach that CP is not a pure A'-domain and extend it to another phenomenon of grammar, namely *wh*-movement. *Wh*-movement has been the stereotypical instance of A'-movement for a long time. Assuming that this grammatical transformation might be A-movement (based on Richards 1997) sheds new light onto a very old discussion. What is new about my proposal is the idea that *wh*-movement has A-quality but still targets the CP-domain. In the following section, I combine and extend the accounts on CCA and multiple *wh*-questions.

[4]For detailed typological data and similar approaches see Bondarenko (2017), Bruening (2001), Deal (2017), Halpert (2015), Halpert & Zeller (2015), Podobryaev (2014), Polinsky & Potsdam (2001), Shklovsky & Sudo (2014), Şener & Şener (2011), Zyman (2017). While I cannot present the full analysis of CCA in these works due to the limited extent of this paper, I only use languages from works on CCA which clearly show that the A-dependencies are made possible via an A-position in CP and not other mechanisms such as prolepsis, etc.

3 *Wh*-movement as A-movement to CP

A-languages (like Bo, Cr, Se) remain a mystery for most accounts on multiple *wh*-constructions. In A-languages, *wh*-movement resembles A-movement in that it shows neither WCO-effects nor Superiority. However, so far, the usual landing site for *wh*-words has been the CP-domain, a pure A'-domain. Thus, all *wh*-movement targeting it has to be A'-movement. A-languages constitute a problem for this assumption: their *wh*-words do move but their movement does not have A'-quality. The question arises: if CP is an A'-domain, where do the *wh*-words move to? Several authors tried to find a position high enough to be close to CP and interpretable but simultaneously low enough as not to actually enter CP. Citko (1998) for example proposes an additional functional phrase between CP and TP, Bošković (2002) claims that *wh*-movement in A-languages is Focus-movement to a very high TP-position and Rudin (1988) and Richards (1997) use TP-adjunction as a target position for *wh*-movement in A-languages. This means they all face the same problem: there are apparently two kinds of languages: A'-languages (Bulgarian, Chinese, English...) in which all *wh*-words A'-move to CP, and A-languages in which only one or no *wh*-word A'-moves to CP. All others A-move to some very high functional position below CP but above TP. For the latter class, it seems to be difficult to find a proper landing-site and proper motivation to move at all. My idea is built on this struggle to find a destination for A-moved *wh*-words. I do not assume that these *wh*-words remain in TP or some inbetween functional projection between CP and TP. I claim that they target CP. This proposition is based on the ideas and data in Wurmbrand (2018) and related literature on CCA (Tanaka 2002, Şener 2008, Takeuchi 2010, Alboiu & Hill 2011, Obata & Epstein 2011, van Urk 2015, Bondarenko 2017, Zyman 2017, Zyman 2018, Wurmbrand 2018, Fong 2019). I adopt their claim that CP is not a pure A'-domain but may involve [A]-features and thus A-positions and apply it to *wh*-movement. This assumption has one advantage over several others proposed earlier: A-languages and A'-languages do not differ any longer by the domains they move to but only by the quality of movement. This means that all *wh*-movement targets CP where it can be interpreted. The only difference is the feature make-up of the CP-part to whose specifier a *wh*-phrase moves: if it has A-features, the movement is A-movement, if not, it is A'-movement. The following explains the theoretical part of the analysis in detail. Section 4 then presents an empirical cross-linguistic correlation between CCA and A-*wh*-movement, supporting my claims.

I adopt Richards's (1997) analysis that there are two types of languages: those which move all of their *wh*-words via A'-movement and those which move their

wh-words by A-movement. I also adopt the idea that all *wh*-words are moved at LF, independently from what is moved or not on the surface (Huang 1982). However, contrary to Richards (1997) (and Bošković 2002, Citko 1998, or Rudin 1988), I claim that all of these movement-operations target the CP-domain instead of only adjoining to TP. In order to do so, I assume a split CP domain, as proposed in Rizzi (1997). Note that this proposal is still in a developmental stage and some parts of the analysis might not yet be fully fledged out. I aim to present a sketch that captures the typological correlation between CCA and multiple wh configurations but am aware that there is still space for theoretical improvement.

3.1 A'-languages

My analysis for A'-languages (Bulgarian-like, Chinese-like, English-like), is based on assumptions in Richards (1997) and Rudin (1988); I claim that all *wh*-words A'-move to CP. Whether this movement targets separate A'-SpecCPs or whether the *wh*-words form a cluster is irrelevant for the moment. What is important is that the part of CP responsible for *wh*-movement has pure A'-quality in these cases. Assuming an extended left periphery, respectively a split CP (based on Rizzi 1997), this A'-movement presumably targets the highest part of CP, ForceP. A'-*wh*-movement is triggered by a [wh] feature on C and all *wh*-words. [Wh] is an A'-feature.

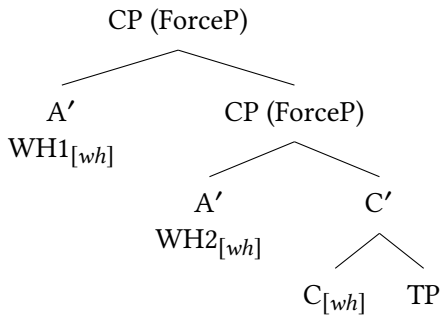

Figure 2: The left periphery in A'-languages

All *wh*-words are attracted by the same C-head via Multiple Agreement (see Hiraiwa 2001). This means that the *wh*-probe on C does not stop probing after it found a goal but continues to search. It finds the highest *wh*-word first and raises it to SpecCP (*Attract Closest*). Then, it finds the next *wh*-word and tucks it in below the first SpecCP (*Shortest Move*), see Figure 2. By that, Superiority arises: The *wh*-word from the highest base-generated position becomes the highest in

the movement-structure. Since all *wh*-words undergo A'-movement, the moved *wh*-words leave their binding domain and WCO-effects arise.

3.2 A-languages

The more interesting phenomenon are A-languages (Bo, Cr, Se-like, Japanese-like and German-like). Richards (1997) and Bošković (2002) propose that all *wh*-words first adjoin to TP via Focus-movement and then one of them A'-moves up to CP to satisfy the [wh]-feature on C. The other *wh*-words remain adjoined to TP. Contrary to that, I sketch an analysis where no *wh*-word remains in TP. I propose that in A-languages, all *wh*-words A-move to a Focus-phrase (FocusP) within the CP domain. The idea that *wh*-movement in A-languages has focus qualities comes from Bošković (1997a,b, 2002). The FocusP (FocP) constitutes a part of the split CP domain and is located below ForceP but above TopicP. I claim that its head Foc has [focus] features and that in A-languages all *wh*-words have [focus] features as well. By that, they are attracted by Foc and moved to its specifiers. I assume that [focus] features have A-quality and that in A-languages movement to FocP is A-movement. One *wh*-word has a [wh] feature additionally to its [focus] feature and in a further step is probed by Force and A'-moved to ForceP, see Figure 3.

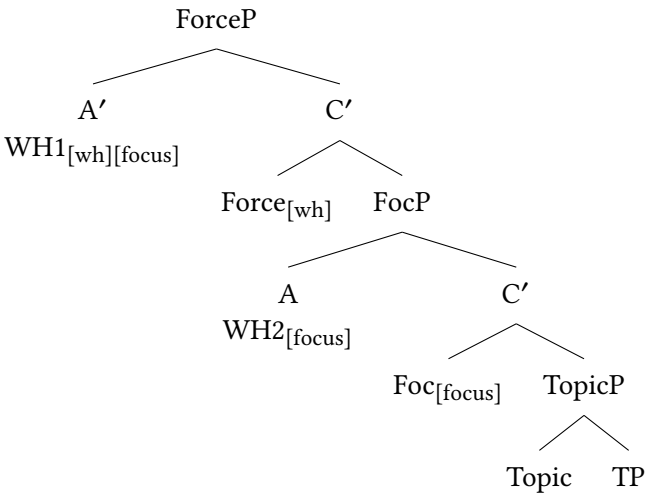

Figure 3: The left periphery in A-languages

The exact derivation looks like this: all *wh*-words bear a [focus] feature and one of them has an additonal [wh] as well. This is the main difference to A'-languages where all *wh*-words carry a [wh]-feature and none of them has a [focus]-feature. Foc is a multiply agreeing [focus] probe and attracts all *wh*-words. Recall that [focus] is an A-feature. Attracted by [focus] on Foc, all *wh*-words A-move and attach to specifiers of FocP.[5] Then, the one of them carrying a [wh] feature is attracted by the A'-probe [wh] on the higher-up Force and A'-moves to the ForceP specifier. Thereby only one *wh*-word A'-moves in A-languages whereas in A'-languages, all *wh*-words carry a [wh] and by that have to undergo A'-movement. A-languages lack Superiority due to the fact that only one *wh*-word bears an additional [wh]-feature whereas all others only have [focus] features.

The lack of WCO-effects in A-languages results from the intial Focus-movement of *wh*-words. In A-languages, all *wh*-words have a [focus] feature. Even in a non-multiple *wh*-construction, i.e. a construction with only one *wh*-word, this *wh*-word bears both [wh] and [focus]. Thus, it first A-moves to FocP (triggered by [focus]) and then A'-moves to ForceP (triggered by [wh]). (I assume that ForceP always has to be filled in order to derive interrogative semantics.) The moved *wh*-word leaves a trace in FocP which is able to bind an anaphor and WCO-effects are omitted. Figure 4 provides an example for an external argument bearing [wh]. The underlined features are the satisfied ones whereas the blank ones are those which still need to be valued.

In this framework, A-languages differ from A'-languages in the following way: in A'-languages, all *wh*-words carry an A'-[wh] feature. They are all attracted by an A'-head in CP (here Force) and A'-move directly to the the highest part of CP. The [wh]-attracting head probes multiply for [wh]. In A-languages, on the other hand, all *wh*-words carry a [focus]-feature and only one of them has an additional [wh]-feature. They are all attracted by a Focus-head in CP and A-move to FocP. Then, one of them, namely the one carrying the [wh]-feature, is attracted by [wh] on Force and A'-moves up to ForceP, the higher part of CP. This shows that CP has a higher-layered A'-part and a lower A-part. Important for my analysis is that both of them are constituent parts of the CP domain and that there are projections of CP below them too, enabling other processes such as CCA. I will come back to this assumption in §4. But first, there is one observation left that needs to be included into the framework: long-distance questions.

[5]Rizzi (1997) claims that FocP cannot be multiply filled. However, his claim is based on Italian focalized elements. As a matter of fact, Italian does not allow multiple *wh*-questions at all. Hence, the restriction on multiple focalized elements probably is language-specific.

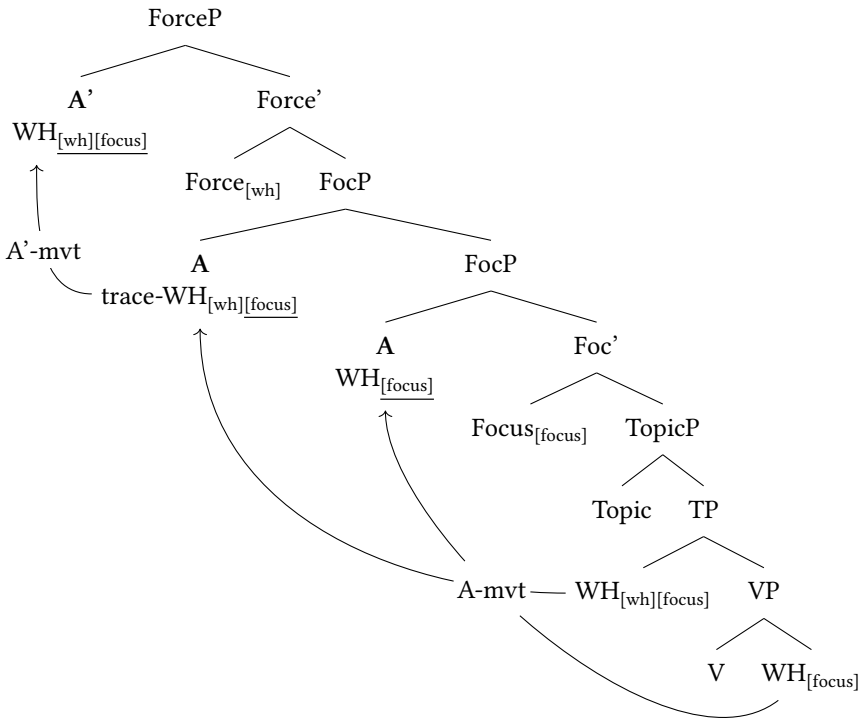

Figure 4: *Wh*-movement of an external argument through FocP

3.3 Long-distance questions

Long-distance questions show very peculiar behaviour in A-languages. As soon as *wh*-words are moved over a CP-border into another clause, A-languages adopt the qualities of A'-languages: Superiority between the *wh*-words arises (9a) and WCO-effects occur (9b).

(9) a. Superiority in Bo, Cr, Se (Richards 1997: 51)
* Koga si ko tvrdio da je istukao?
whom AUX who claimed that AUX beaten
'Who did you claim beat whom?'

b. WCO in Bo, Cr, Se (Richards 1997: 33)
* Koga$_i$ njegova$_i$ majka misli da Marija voli?
who$_i$ his$_i$-NOM mother-NOM thinks that Maria loves
'Who$_i$ does his$_i$ mother think that Mary loves?'

All *wh*-movement seems to be A'-movement as soon as it crosses a clause boundary. In my framework, these facts can be accounted for the following way: In

A-languages, all *wh*-words first focus-move since they have focus-qualities (A-qualities). I claim that focus-movement is clause-bound and that the FocusP does not represent a phase-edge. This means an embedded interrogative CP cannot be truncated to FocusP but needs a ForceP (probably due to semantic/selectional reasons, see Section 4.4.3 for an exact elaboration). Thus, whatever element wants to move out of an embedded interrogative clause has to move through ForceP. Since ForceP is always an A' domain (and that is a stipulation one has to make), long-distance movement has to be A'-movement. For A-languages, this means that they have to shift and act like A'-languages if their CP is embedded and they want to move *wh*-words out of this embedded clause.

4 Typological predictions

So far, I brought forward the idea that *wh*-movement has A-qualities and targets CP at the same time. This is a unification of two accounts. One the one hand, I agree with Richards (1997) and Bošković (2002) that wh-movement is A- and/or focus movement. On the other hand, I agree with Wurmbrand (2018) and other accounts on CCA that CP can host A-positions or [A]-features. I will now go a step further: if we assume that the possibility of allowing an A-position inside CP is a language-specific parametric option, then there should be two kinds of languages: such that allow A-moved elements within CP and thereby CCA and A-*wh*-movement and such which do not. This prediction is borne out: there seems to be a (unidirectional) typological correlation between the allowance of CCA and A-properties of *wh*-movement, stated in (10).

(10) Whenever a language A-moves its *wh*-words, it allows CCA (but not the other way around).[6]

For the examined languages, I tested whether they allow some instance of CCA (based on the criteria brought forward in the literature on CCA) and if their *wh*-words move via A-movement or A'-movement (based on Superiority and WCO-effects). There are four possible combinations resulting from this: languages allowing both CCA and A-*wh*-movement, languages allowing neither, languages allowing only CCA and languages allowing only A-*wh*-movement. Crucially,

[6]This generalisation is based upon a small set of languages and I do not claim its universal applicability. I looked at 10 languages from 6 different language families altogether. However, within those, the proposed generalisation appears to be plausible. Most of the languages are taken from current works on CCA.

there do not seem to be any languages in my sample allowing A-*wh*-movement but not CCA. The results I received are presented in Table 2.[7]

Table 2: Correlation between CCA and A-*wh*-movement

✓ A-*wh*-mvt ✓ CCA	✓ A-*wh*-mvt ✗ CCA	✗ A-*wh*-mvt ✓ CCA	✗ A-*wh*-mvt ✗ CCA
Turkish		Korean	English
Japanese		Brazilian Portuguese	Bulgarian
Greek		Romanian	
Hungarian		Mandarin Chinese	

One class is not attested, namely A-*wh*-movement without the possibility of CCA is not attested. This renders the unidirectional implication plausible between CCA and A-*wh*-movement in (10). I will shortly exemplify each attested class and then give a formal explanation for the correlation.

4.1 A-*wh*-movement and CCA

The expected outcome of combining A-*wh*-movement with allowance of CCA is a class of languages exhibiting both of these phenomena. Those are languages like Turkish, Japanese, Greek or Hungarian. Take Turkish as an example. It behaves like an A-language concerning *wh*-movement in that it does not show Superiority between the *wh*-words:

(11) a. Kim Kim-e ne-yi sat-miş?
who who.DAT what.ACC sell.REP
'Who has sold what to whom?'

b. Kim-e kim ne-yi sat-miş?

c. Ne-yi kim kim-e sat-miş?
(Özsoy 1996: 4)

[7]Language data taken from: Turkish: Özsoy (1996), Şener & Şener (2011); Japanese: Richards (1997), Hiraiwa (2001), Watanabe (1992); Greek: P.c. Christos Christopoulos, Sinopoulou (2008), Joseph (1976), Alexiadou & Anagnostopoulou (1999); Hungarian: Brody (1995), Richards (1997), Horvath (1998), Den Dikken (2017); Korean: Jeong (2003), Kim & Goodall (2016), Yoon (2007); Braz. Portuguese: P.c. Ingrid Cisneiro Facchim, Nunes (2009); Romanian: Rudin (1988), Rivero (1991); Mandarin Chinese: Cheng (1997), Richards (1997); English: P.c. Sean Anstiss, Richards (1997), Ross (1967); Bulgarian: P.c. Marchela Oleinikova, Aline Panajotov, Rudin (1986, 1988), Richards (1997).

Additionally, Turkish allows Hyper-ECM, an instance of CCA:

(12) (Şener & Şener 2011: 5)
Pelin [dün Mert-i sinav-a gir-di diye] bil-iyor.
Pelin.NOM [yesterday Mert.ACC exam.DAT enter.PAST C] know.PRES
'Pelin thinks that yesterday, Mert took an exam.'

4.2 No A-*wh*-movement, no CCA

Languages allowing neither A-*wh*-movement nor CCA are equally present. English and Bulgarian behave like that. Bulgarian shows Superiority between its *wh*-words as well as WCO-effects (see (4) and (5) from above). Therefore, its *wh*-movement has A'-quality. In addition to that, there are no CCA phenomena in Bulgarian. ECM is not possible, either into non-finite clauses (introduced by the particle *da*) or into finite clauses. Neither are there instances of Hyperraising.

(13) (Rudin 1986: 192)
Njama koj / *kogo da otide.
isn't who.NOM / *whom.ACC to go
'There isn't anyone to go.'

Bulgarian thus neither has A-*wh*-movement nor does it allow CCA. In conclusion its CP-domain is a pure A'-domain.

4.3 No A-*wh*-movement but CCA

Finally and most interestingly, there are several languages which do not A-move their *wh*-words but do exhibit CCA phenomena. This means that CCA cannot be directly dependent on A-*wh*-movement. Amongst these languages are Korean, Brazilian Portuguese, Romanian and Mandarin Chinese. I take a closer look at Korean here. It behaves like an A'-language when it comes to *wh*-movement. It does, for example, show Superiority effects:

(14) (Jeong 2003: 131)
a. Mwues-ul wae ne-nun sa-ess-ni?
what.ACC why you.TOP buy.PAST.Q
'Why did you buy what?'
b. * Wae mwues-ul ne-nun sa-ess-ni?
why what.ACC you.TOP buy.PAST.Q

Korean does also allow CCA, namely Hyper-ECM.

(15) (Yoon 2007: 630)
Cheli-nun wonswungi-ka banana-lul cal meknunta-ko sayngkakhanta.
Cheli.TOP monkey.ACC banana.ACC well eat.COMP think.3.SG
'Cheli thinks monkeys love to eat banana.'

This means that its ability for CCA is not dependent on the quality of its *wh*-movement. However, the absence of the inverse configuration, a language allowing A-*wh*-movement but not CCA, indicates that the character of *wh*-movement determines CCA but not the other way around.

4.4 Generalisation

As has been shown in section 4 so far, there are some languages allowing both A-*wh*-movement and CCA, and others allowing neither. Additionally, there are languages which allow CCA but not A-*wh*-movement but no languages that allow A-*wh*-movement but not CCA. This renders the unidirectional generalisation given in (10), repeated below.

(16) Whenever a language A-moves its *wh*-words, it allows CCA (but not the other way around).

In this last subsection, I will give a syntactic analysis on how the correlation between A-*wh*-movement and CCA could be explained. As noted above, both of them involve an A-position inside CP and thus derive from the same grammatical source: allowance of [A]-features inside the CP-domain.

4.4.1 A split hierarchical CP domain

I assume that within a single CP-domain, A'-positions and A-positions are allowed. However, they stand in a hierarchical relation to each other: A'-projections can embed A-projections but not the other way around. My analysis is built upon a split CP domain, adopting Rizzi (1997). I assume the following structure for CP:[8]

(17) [ForceP [FocusP [TopicP]]]

[8] Rizzi (1997) claims that there are at least an additonal FinP and another FocusP below TopicP. These projections are irrelevant for me at the moment, hence I do not include them in my schematic structures.

I assume that ForceP always has A'-qualities, sustaining the traditional assumption of CP having A'-quality. It hosts one (or more) A'-specifiers which can be targeted by A'-*wh*-movement and serve as a left-edge to escape an embedded interrogative clause. Embedded in ForceP is FocusP, which can have A-properties. In A-languages, A-*wh*-movement targets ForceP and A-moves its *wh*-words to that phrase. (Presumably, FocusP can have A'-qualities instead of A-qualities in other languages.) Embedded into ocusP is TopicP. I claim that elements participating in CCA relations (like the accusative DP in Hyper-ECM or the embedded element in Long-Distance Agreement) move to TopicP which, in languages allowing CCA, has A-properties. This assumption is based on Şener (2008) and comes from the fact that very often, CCA is restricted to topicalized elements (as it is the case in Tsez and Turkish). Tsez Long-Distance Agreement (LDA) becomes obligatory when the embedded element ('bread' in (18)) is topic-marked (particle *-(go)n*).

(18) Tsez (Polinsky & Potsdam 2001: 610)

a. Eni-r [už-ā magalu-**(go)n** b-āc'ru-łi]
mother-DAT [boy-ERG bread.**III**.ABS-**TOP** **III**-eat-PST.PRT.NMLZ]
b-iy-xo.
III-know-PRES
('The mother knows the boy ate the bread.')
'The mother knows that the bread, the boy ate.'

b. * Eni-r [už-ā magalu-**(go)n** b-āc'ru-łi]
mother-DAT [boy-ERG bread.**III**.ABS-**TOP** **III**-eat-PST.PRT.NMLZ]
r-iy-xo.
IV-know-PRES
'The mother knows the boy ate the bread.'

Turkish Hyper-ECM is restricted to topicalized elements. Assuming that the object NPI *anybody* cannot be topicalized predicts that it is excluded from undergoing Hyper-ECM. This prediction is borne out:

(19) Turkish (Şener 2008: 14)

* [Kimse-**yi** gel-di] san-ma-dı-m.
pro [anybody-ACC come-PAST] believe-NEG-PAST-1SG
'I didn't think anybody came late.'

Taking these facts into consideration and based on the analysis in Şener (2008), I claim that the element undergoing CCA moves to or is located in TopicP. This yields the structure in Figure 5 for the CP-domain.

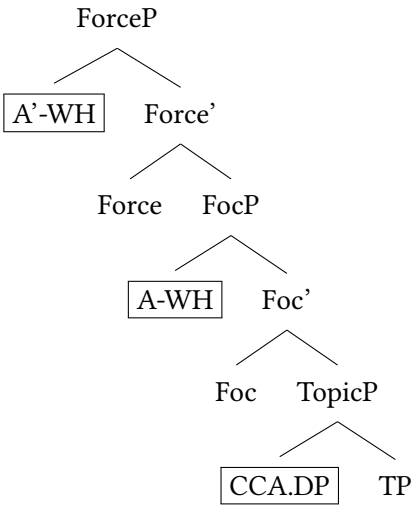

Figure 5: A'/A threshold between ForceP and FocusP

Table 3: A'/A threshold options

[ForceP	[FocusP	[TopicP]]]
A'	A'	A'
A'	A'	A
A'	A	A

4.4.2 The A'/A shift

This leads to a genereal conclusion about the CP-domain: I assume that all parts of CP lower than ForceP (i.e. FocusP and TopicP) can either have A'- or A-quality. Let us assume that within one domain (and I claim that CP still forms a single domain, consisting of multiple phrases), an A'-position can embed an A-position but not the other way around. This means that an A'-ForceP can embed an A-FocusP but an A-FocusP cannot embed an A'-TopicP, only an A-TopicP. At some point, there is an A'/A-threshold within CP. All projections above this threshold have A'-quality, all projections underneath it have A-quality.[9] In Table 3 the relevant CP-projections with their embedding options are presented.

Languages part into different groups regarding this threshold. There are languages where the shift from A' to A lies between ForceP and FocusP, there are languages where it lies between FocusP and TopicP and then there are languages where it lies even lower, below TopicP.[10] As explained above, I assume that A-*wh*-movement requires a FocusP with A-qualities and CCA requires a TopicP

[9] A reviewer noted that a similar assumption could be modeled in the framework by Williams (2002) and subsequent works like Keine & Poole (2018).

[10] David Pesetsky, p.c., pointed out to me that this threshold could be even lower, somewhere inside TP. This could explain "regular" ECM-phenomena, such as English ECM and I leave the idea open for further research.

with A-qualities. I assume that there is a language-specific shifting threshold. Depending on the language type, the locus of the A'/A-shift varies. This assumption provides an explanation for the A-*wh*-movement + CCA combinations presented in Table 2. Take for example the group of languages allowing both A-*wh*-movement and CCA as shown in (20): the A'/A-shift lies between ForceP and FocusP, as in Figure 5. This results in an A-FocusP (enabling A-*wh*-movement) and an A-TopicP (enabling CCA). The exact shifting location for each (im)possible language type is given below (the shift is indicated as "→").

(20) a. ✓A-*wh*-mvt, ✓CCA languages shift between ForceP and FocusP
b. [$_{\boxed{A'}}$ ForceP →[$_{\boxed{A}}$ FocusP [$_{\boxed{A}}$ TopicP]]]

(21) a. ✗A-*wh*-mvt, ✓CCA languages shift between FocusP and TopicP
b. [$_{\boxed{A'}}$ ForceP [$_{\boxed{A'}}$ FocusP →[$_{\boxed{A}}$ TopicP]]]

(22) a. ✗A-*wh*-mvt, ✗CCA languages shift below TopicP
b. [$_{\boxed{A'}}$ ForceP [$_{\boxed{A'}}$ FocusP [$_{\boxed{A'}}$ TopicP →[$_{\boxed{A}}$]]]]

(23) a. ✓A-*wh*-mvt, ✗CCA languages are excludeed because they would require two shifts: One from A' to A between ForceP and FocusP and (a syntactically excluded) one from A to A' between FocusP and TopicP.
b. * [$_{\boxed{A'}}$ ForceP →[$_{\boxed{A}}$ FocusP →[$_{\boxed{A'}}$ TopicP]]]

4.4.3 Embedded clauses

It lies in the nature of CCA that they involve embedded clauses. I noted above that interrogative embedded clauses necessarily have to project a ForceP in order to explain the A'-behaviour of long-distance *wh*-movement in A-languages. This probably is the case due to selectional requirements: the embedded clause has to be typed as interrogative, which can only be done in ForceP. I claim that no such restriction is posited onto embedded CCA clauses. They are truncated down to TopicP, or only project a TopicP. This is based on the assumption that functional heads only project when there is a reason to do so (Bošković 1997b). The embedded CP in a CCA construction does neither have a ForceP nor a FocusP. By that, the specifier of TopicP becomes the left-edge of the embedded clause (see Şener 2008 for a similar claim). TopicP has A-qualities in CCA-languages and therefore,

the left-edge position is an A-position. This enables A-relations into the embedded clause and A-movement out of it to a higher clause. It also predicts that if both *wh*-movement and CCA occur together, *wh*-movement should block CCA. This should be the case since *wh*-movement requires an (A'-)ForceP and CCA requires the absence of a ForceP. The prediction is illustrated in Zyman (2018) for Janitzio P'urhepecha.

(24) Janitzio P'urhepecha (Zyman 2018: 114)
* ¿Ambe=ri ueka-sïn-∅-gi Alicia-ni eska kusta-a-∅-ka?
what=2sS want-HAB-PRS-INT Alice-ACC that play-FUT-PRS-SJV
Int.: 'What do you want Alice to play?'

5 Summary

I examined a typological correlation between *wh*-constructions exhibiting A-quality and CCA-phenomena. A new syntactic analysis for multiple *wh*-questions is presented which makes the right predictions about A-*wh*-questions and CCA-dependencies. I adopt the account in Richards (1997) who divides languages into two classes regarding their LF: those which A-move their *wh*-words and those which A'-move them. I extend Richards' claim in that I propose that all *wh*-movement targets the CP domain. Assuming a split CP-domain (Rizzi 1997), I propose an analysis in which A'-*wh*-movement, A-*wh*-movement as well as CCA-elements target different CP-projections. A'-*wh*-movement uses ForceP as a landing site, A-*wh*-movement FocusP and CCA TopicP. Given the hierarchical embedding structure of CP-projections such as ForceP, FocusP and TopicP, an implicational relation between A'-*wh*-mvt, A-*wh*-mvt and CCA arises. I bring forward an A'/A-shifting threshold inside CP which varies in height, depending on the language type. This means that the CP-domain has an A'-part and an A-part. At which exact point A'-positions end and A-positions begin is defined by a shifting threshold. This threshold varies language-specifically and can either be located between ForceP and FocusP, between FocusP and TopicP or below TopicP. Languages can be divided into classes depending on the location of their A'/A-shift. This assumption renders the right predictions concerning the observed typological generalisation "whenever a language A-moves its *wh*-words, it allows CCA (but not the other way around)". Additionally, I propose that embedded *wh*-constructions require an (A'-)ForceP, assigning all long-distance *wh*-movement A'-quality. CCA-constructions, on the other hand, have a truncated embedded CP, consisting solely of an (A-)TopicP, rendering their left-edge CP position an A-position.

There are still several open issues remaining. Above all, a more detailed derivation of the CP-domain. Furthermore, in order to deploy a valid typological generalisation, a larger set of languages has to be examined. *Wh*-in-situ languages should be investigated more carefully since, for the moment, I simply adopt Richards's (1997) and Huang's (1982) claims about their LF. Then, there are several languages posing fundamental problems like German which is hard to categorise into an A'- or A-language at all (see Wiltschko 1997 for an exact analysis). A closer look will have to be taken on D-linked *wh*-words, since they behave very different from regular *wh*-words (see for example Pesetsky 1987, Krapova 1999). Finally, there might be a possbile correlation with the ICH proposed in Wurmbrand & Lohninger (2019), regarding the type of matrix predicate and the behaviour of long-distance *wh*-questions.

Abbreviations

ACC	Accusative Case	NOM	Nominative Case
CCA	Cross-clausal A-dependencies	WCO	Weak Cross-over
ECM	Exceptional Case Marking		

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