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The syntax of relative clauses

Free Relatives

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1 Intro

(1) *FRCs in English*:¹

- a. You should return [what you have finished reading] to the library.
- b. [Whoever leaves last] turns off the light.

- Central property of FRCs: they have no overt head, neither externally nor internally

CENTRAL QUESTIONS:

- What is the category of FRCs?
- Is there a covert head or no head at all?
- Where is the *wh*-phrase? In the main clause or within the FRC?
- Do FRCs pattern with headed RCs (HRCs) or with embedded *wh*-CPs?
- How does the *wh*-phrase reach its surface position?

2 Category of FRCs/external distribution

- At first sight, FRCs look like embedded questions and thus should be CPs
- However, they have the external distribution of DPs: *return* only takes DP complements, no CP-complements, but it is compatible with FRCs:

- (2)
- a. *You should return [_{CP} whether you have finished your book] to the library.
 - b. *You should return [_{CP} that you like it].
 - c. You should return [_{DP} War and Peace] to the library.
 - d. You should return [_{FRC} what you have finished reading].

- *with* takes DP-complements, but not CPs, but is compatible with FRCs:

- (3)
- a. *I am going to swat this fly with [_{CP} whether you have finished your book].
 - b. *I am going to swat this fly with [_{CP} that you like it].
 - c. I am going to swat this fly with [_{DP} War and Peace].
 - d. I am going to swat this fly with [_{FRC} what you have finished reading].

- These predicates are not compatible with propositional complements, they require individuals <e>, which correspond to DPs

→ FRCs are not bare CPs; there is a D-layer somewhere

¹abbreviations: FRC = free relative clause; HRC = headed relative clause; RC = relative clause; MC = matrix clause.

- extraposition in German is limited to CPs, barred with DPs; but FRCs can be extraposed – contradiction? – No, just the CP is extraposed, the D-layer is stranded, as with headed RCs:

(4) *extraposition in German: ✓ DP, *CP*

- a. Ich habe ___₁ erzählt, [_{CP} dass er das Geld gestohlen hat]₁.
I have told that he the money stolen has
'I said that he had stolen the money.'
- b. *Ich habe ___₁ erzählt [_{DP} eine Geschichte]₁.
I have told a story
'I told a story.'

(5) *extraposition of RRCs: stranding of the D/N-layer*

- a. Der Hans hat [_{DP} das Geld, [_{CP} das er gestohlen hat]], zurückgegeben.
the John has the money which he stolen has returned
'John returned the money that he had stolen.'
- b. *Der Hans hat ___₁ zurückgegeben, [_{DP} das Geld, das er gestohlen hat]₁.
The John has returned the money which he stolen has
- c. Der Hans hat [_{DP} das Geld ___₁] zurückgegeben, [_{CP} das er gestohlen hat]₁.
the John has the money returned which he stolen has

(6) *German: extraposition of an FRC*

- a. Der Hans hat ___₁ zurückgegeben, [_{FRC} was er gestohlen hat]₁.
the John has returned what he stolen has
'John returned what he had stolen.'
- b. Der Hans hat [_{DP} D ___₁] zurückgegeben, [_{CP} was er gestohlen hat]₁.
the John has returned what he stolen has

3 Internal structure

- Analyses of FRCs differ w.r.t.
 - the surface position of the *wh*-element:
 - i SpecCP of the FRC (Comp account)
 - ii in the matrix clause (Head account)
 - their derivational history: Movement or base-generation in its surface position?

(7) OVERVIEW OF THEORIES OF FRCs (GRAČANIN-YUKSEK 2008):

	position of WH	derivational history of WH
	base-generation	movement
CP-external	a. [WH _{FR} [_{CP} ...]] external-head account	b. [WH _{FR} [_{CP} ... WH _{FR} ...]] derived-head account
CP-internal	c. [_{CP} WH _{FR} ...] –	d. [_{CP} WH _{FR} ... WH _{FR} ...] Comp account

- external-head account: Bresnan and Grimshaw (1978), Larson (1987), Citko (2002)
- derived-head account: Hirschbuhler (1976), Bury and Neeleman (1999), Iatridou et al. (2001)
- Comp account: Groos and Riemsdijk (1981), Harbert (1983*b*), Grosu and Landman (1998)

3.1 Base-generation or movement

3.1.1 Locality

- external head account: the theta-position of the *wh*-phrase is occupied by a pronoun which is deleted under identity with the *wh*-element
- FRCs show signs of movement → the deletion rule would be sensitive to locality, which is unexpected

(8) *I eat [whatever John knows the cook who prepares ___]

3.1.2 Reconstruction in Croatian: Gračanin-Yuksek (2008)

- the possessive anaphor *svoj* 'self's' must be bound by a clause-mate subject:

(9) a. Roditelji_i vole svoju_{i/*j} djecu.
 parents love self's children
 'Parents_i love their_{i/*j} children.'
 b. Vid_i tvrdi da Dan_j voli svoju_{j/*i} djecu.
 Vid claims that Dan loves self's children
 'Vid_i claims that Dan_j loves his_{j/*i} children.'

- the non-reflexive possessive pronoun can only be bound non-locally:

(10) a. Roditelji_i vole njihovu_{j/*i} djecu.
 parents love their children
 'Parents_i love their_{i/*j} children.'
 b. Vid_i tvrdi da Dan_j voli njegovu_{i/k/*j} djecu.
 Vid claims that Dan loves his children
 'Vid_i claims that Dan_j loves his_{i/k/*j} children.'

- *svoj* in FRCs must be bound by the FRC-internal subject and not by the matrix subject → the *wh*-phrase reconstructs:

(11) Vid_i će nagraditi [_{FR} [_{DP} koje god svoje_{j/*i} dijete] Dan_j preporučí ___].
 Vid will reward which ever self's child Dan recommends
 'Vid_i will reward whichever of his_{j/*i} children Dan_j recommends.'

- the possessive pronoun, however, cannot be bound by the RC-internal subject:

(12) Vid_i će nagraditi [_{FR} [_{DP} koje god njegovo_{i/k/*j} dijete] Dan_j preporučí ___].
 Vid will reward which ever his child Dan recommends
 'Vid_i will reward whichever of his_{i/k/*j} children Dan_i recommends.'

- if the *wh*-phrase is the subject of the FRC, it cannot contain an anaphor but only the pronoun

(13) Hana_i će prodati [_{FR} [_{CP} koje god njezine_{i/j/*} svoje slike] ___ postignu najbolju
 Hana will sell which ever her/self's pictures reach best
 cijenu].
 price
 'Hana_i will sell whichever of her_{i/j} pictures fetch(es) the best price.'

- if the *wh*-phrase contains an R-expression co-indexed with the subject of the FRC, a Condition C effect obtains:

(14) *Vid će nagraditi [_{FR} [_{DP} koju god Danovu_j djecu] on_j preporučī ____].
 Vid will reward which ever Dan's children he recommends
 'Vid will reward whichever of Dan's_j children he_j recommends.'

- variable binding: a variable within the *wh*-phrase of the FRC can be bound by the embedded quantified subject inside the FRC → QR is not an option to derive this reading as it is clause-bound:

(15) Vid će nagraditi [_{FR} [_{DP} koje god njezino_{i/k} dijete] Dan misli [_{CP} da nijedna majka_i ne vjeruje [_{CP} da treba nagraditi ____]]].
 Vid will reward which ever her child Dan thinks that none mother NEG believes that should reward
 'Vid will reward whichever of her_{i/k} children Dan thinks no mother_i believes should be rewarded.'

- the *wh*-phrase of the FRC can contain idiomatic material that is interpreted together with material lower down:

(16) Vida će se dojmīti [_{CP} [_{DP} kakav god bostan] Dan obere ____].
 Vid will REFL impress what.kind ever melon.field Dan picks
 'Vid will be impressed by however severe punishment Dan receives.'

→ reconstruction shows that the *wh*-phrase is moved from a lower position to its surface position. This argues against analyses a and c in (7).

- headed RCs pattern very differently w.r.t. reconstruction:
 - *svoj* within the external head can only be bound by the matrix subject, not by the RC-internal one:

(17) Vid_i će nagraditi ono svoje_{i/*j} dijete [_{RC} koje Dan_j preporučī].
 Vid will reward that self's child which Dan recommends
 'Vid_i will reward the one of his_{i/*j} children that Dan recommends.'

- a pronoun inside the head of the RC can be coreferent with the subject of the RC but not with the matrix subject (Principle B):

(18) Vid_i će nagraditi ono njegovo_{j/k/*i} dijete [_{RC} koje Dan_j preporučī].
 Vid will reward that his child which Dan recommends
 'Vid_i will reward the one of his_{j/k/*i} children that Dan_j recommends.'

- no Principle C effect obtains if an R-expression inside the external head is coreferential with a pronoun inside the RC:

(19) Vid_i će nagraditi [_{NP} onu Danovu_j djecu [_{CP} koju on_j preporučī]].
 Vid will reward those Dan's children which he recommends
 'Vid_i will reward those of Dan's_j children that he_j recommends.'

- variable binding: a variable within the HN cannot be bound by a quantified SU inside the RC:

(20) Vid će odabrati ono njezino_{j/*i} dijete [RC koje nijedna majka_i ne misli da treba odabrati].
 Vid will choose that her child which none mother NEG thinks that should choose
 ‘Vid will choose the one of her_{j/*i} children that no mother_i thinks should be chosen.’

- an idiomatic NP inside the HN does not reconstruct:

(21) Vida će se dojmiti bostan [RC kakav Dan obere].
 Vid will REFL impress melon.field what.kind Dan picks
 ‘Vid will be impressed by the kind of melon field that Dan picks.’
 #‘Vid will be impressed by the severe punishment Dan receives.’

→ There is no reconstruction of the external head of HRCs into the RC, it is only interpreted in its surface position in the matrix clause

- *wh*-questions behave like FRCs: the *wh*-phrase reconstructs, see Gračanin-Yuksek (2008)
- the fact that the *wh*-XP of FRCs behaves like *wh*-phrases but unlike the HN of HRCs and thus not like an element within the matrix clause argues for the Comp-account

→ locality and reconstruction argue for the raising/movement analysis

→ we can rule out options (a) and (c) in (7)

3.2 Surface position of the *wh*-element

3.2.1 Extraposition

- German: the head of a HRC cannot be extraposed, recall (5), only the RC itself
- FRC: *wh*-phrase cannot be stranded → must be CP-internal, can't be the D-head of the FRC

(22) a. Der Hans hat ___₁ zurückgegeben, [CP was er gestohlen hat]₁
 the John has returned what he stolen has
 ‘John returned what he had stolen.’
 b. *Der Hans hat [DP was ___₁] zurückgegeben, [CP er gestohlen hat]₁.
 the John has what returned he stolen has

3.2.2 Realization of C within the FRC

- if the *wh*-phrase were the external head of the FRC, one would expect that the left periphery of FRCs should be realized as in HRCs
- but the patterns are not identical: the FRC-pattern follows from the Double Filled Comp-Filter if the *wh*-element is in SpecCP, but not if it is outside of CP:

(23) *subject- and object relativization in HRCs and FRCs:*

- I put [the pie] [which/*which that/that/∅ you prepared] in the refrigerator.
OBJ-rel. in HRC
- I put what [*which/*which that/*that/∅ you prepared] in the refrigerator.
OBJ-rel. in FRC
- [The pie] [which/*which that/that/*∅ was in the refrigerator] tasted bad.
SU-rel. in HRC
- [What] [*which/*which that/*that/∅ was in the refrigerator] tasted bad.
SU-rel. in FRC

- the *wh*-phrase can only co-occur with \emptyset , which follows given the DFC if it is in SpecCP
- in SU-FRCs, if it were outside the CP, the left periphery would be completely silent, which is not possible in standard English

- similar things hold for other languages, e.g., Catalan, see Hirschbühler and Rivero (1980)

3.2.3 Clitic-placement in Croatian Gračanin-Yuksek (2008)

- clitics are 2nd-position elements (Wackernagel position), they always follow the first element in a certain domain
- domain = minimal CP with tense, in which the clitic is base-generated – clitics cannot move out of (finite)CPs
- clitic movement is thus a diagnostic for CP-boundaries

- (24) a. Hana misli [_{CP} da *će ga* Dan udariti].
 Hana thinks that will him.ACC Dan hit
 ‘Hana thinks that Dan will hit him.’
- b. *Hana *će₁ ga₂* misli [_{CP} da $_1$ $_2$ Dan udariti].
 Hana will him.ACC thinks that Dan hit
 ‘Hana thinks that Dan will hit him.’

- clitics in FRCs can occur after [*wh*-XP+ever] or after [*wh*-XP+ever+NP], but not further down:

- (25) a. Vid kupuje [_{FR} [_{DP} koji god *mu je* sat] Dan preporučio].
 Vid buys which ever him.DAT AUX watch Dan recommended
 ‘Vid buys whichever watch Dan recommended to him.’
- b. Vid kupuje [_{FR} [_{DP} koji god sat] *mu je* Dan preporučio].
 Vid buys which ever watch him.DAT AUX Dan recommended
 ‘Vid buys whichever watch Dan recommended to him.’
- c. *Vid kupuje [_{FR} [_{DP} koji god sat] Dan *mu je* preporučio].
 Vid buys which ever watch Dan him.DAT AUX recommended
 ‘Vid buys whichever watch Dan recommended to him.’

→ The *wh*-element is within the domain where clitics have to come 2nd, i.e., *within* CP

- clitics in an HRC can follow the rel-pronoun, but not the nominal head → the head NP thus occupies a different position than the *wh*-phrase of FRCs, which pattern with the rel-pronoun instead (and also the *wh*-operator of indirect questions):

- (26) a. Vid kupuje [_{NP} Sonyjev sat [_{CP} koji *mu je* Dan preporučio]].
 Vid buys Sony’s watch which him.DAT AUX Dan recommended
 ‘Vid buys the Sony watch that Dan recommended to him.’
- b. *Vid kupuje [_{NP} Sonyjev sat *mu je* [_{CP} koji Dan preporučio]].
 Vid buys Sony’s watch him.DAT AUX which Dan recommended
 ‘Vid buys the Sony watch that Dan recommended to him.’

- Gračanin-Yuksek (2008): FRCs in matrix subject position are impenetrable for matrix clitics, the clitics follow the entire FRC while with HRCs, the clitics can follow the HN:

- (27) a. [_{CP} [_{FRC} *wh*-XP *clitic] ✓clitic ...]
 b. [_{CP} [_{NP} HN ✓clitic RC] ✓clitic ...]

3.2.4 Reconstruction

- The *wh*-phrase in FRCs patterns like *wh*-XPs of embedded *wh*-questions but crucially not like the HN of HRCs in Croatian in that it reconstructs
- for English, the opposite claim has been made, see Citko (2002):

- (28)
- | | | |
|----|---|---------------|
| a. | *I wonder [CP [DP which picture of Peter _i] he _i recommends __] | <i>wh</i> -CP |
| b. | ?I will buy [FRC [DP whatever picture of Peter _i] he _i recommends __]. | FRC |
| c. | ?I will buy [DP the picture of Peter _i [CP which he _i recommends __]]. | HRC |

3.2.5 Locality

- extraction from an FRC is as impossible (b) as from HRCs (c) unless it takes place from the *wh*-phrase (d), see Rooryck (1994: 197), for German data, see Assmann (2013: 207f.):

- (29)
- | | |
|----|--|
| a. | I will eat [FR whatever the chef recommends to that person] |
| b. | *This is the person to whom ₁ I will eat [FR whatever the chef recommends __ ₁] |
| c. | *This is the person to whom ₁ I will eat every dish [RC which the chef recommends __ ₁]. |
| d. | This is the author of whom ₁ I buy [FR [DP whatever books __ ₁]] the NYT recommends to its readers] |
| e. | ??These are the readers to whom ₁ I know [CP what books the New York Times recommends __ ₁]. |

- the fact that extraction is worse (b) than from *wh*-islands (e) additionally suggests that FRCs are more complex than bare CPs

→ felicity of (d) argues in favor of the head-account

4 Matching effects

- the *wh*-phrase seems to satisfy requirements of both the matrix verb and the embedded verb with respect to
 - categorial selection
 - case
- the *wh*-phrase somehow seems to belong to both the main clause and the FRC → again the question about the pivot function!
- since the *wh*-phrase is accessible to the matrix predicate for selection it behaves like the head of the DP, i.e. like an argument of the matrix clause
- given the strong evidence that the *wh*-phrase is in SpecCP, we are confronted with a paradox
- languages which tolerate case-mismatches, however, favor the Comp-account

4.1 Category matching

- The *wh*-element in SpecCP can be of different categories:

- (30)
- | | | |
|----|---|------|
| a. | The police arrested [FRC [DP who] the witness identified. | (DP) |
| b. | We should talk to [FRC [DP who] he dates]. | (DP) |
| c. | They tend to live [FRC [PP in whatever town] their parents used to live]. | (PP) |
| d. | She will make you [FRC [AP however happy] your ex made you]. | (AP) |
| e. | I'll play my music [FRC [AP however loudly] you play yours]. | (AP) |

- Matching effect: the category of the *wh*-phrase inside the FRC must satisfy both the selectional restrictions of the FRC-internal verb and the matrix verb:

- (31) a. *The police arrested [who] the witness pointed. MC: ✓ FRC: *
 b. *We should talk to [with whom] he goes out MC: * FRC: ✓
 c. *The witness pointed [who] the police had arrested. MC: * FRC: ✓
 d. *I'll play my music [however loudly] you listen to. MC: ✓ FRC: *
 e. *I'll play my music [whatever rock opera] you are listening to. MC: * FRC: ✓

- exceptions to category matching are rare, but do occur, compare English with Romanian where a PP-FRC can occur in subject position:

- (32) a. *[On whatever mattress I sleep] gives me a terrible back ache.
 b. [Whatever mattress I sleep on] gives me a terrible back ache.

- (33) [Cu cine iese Maria] e de obicei un om de nimic.
 with whom goes.out Mary is usually a man of nothing
 'Who Mary goes out with is usually a no-good.'

Romanian

– such sentences are often degraded and are subject to additional restrictions

1. Non-matching: mostly restricted to ungoverned (adjunct-)/weakly governed (SU-) positions
2. the *wh*-word must not be too deeply embedded within CP:

- (34) ??[Con la foto de quien Maria se fué] es muy simpático.
 with the picture of who Mary self went is very pleasant
 '(The person) with whom Mary went away is very pleasant.'

Spanish

3. non-matching is most acceptable with proverbs:

- (35) [A qui l' adulació halaga], si la pren la paga.
 to whom the flattery pleases if he takes her pays
 'He who likes flattery, if he accepts it he pays for it.'

Catalan

- PP-/AP-FRCs additionally require identical predicates in matrix clause and FRC:

- (36) a. ?Why don't you ever dance [_{FRC} [_{PP} with whomever] I come to parties]?
 b. ?She always dotes [_{FRC} [_{PP} on whomever] you can't count].
 c. ?I'll keep my bedroom [_{FRC} [_{AP} however dark] you paint your study].

– they also differ from DP-FRCs in that they are restricted to a universally quantified interpretation, if a definite interpretation is triggered, the result is usually degraded

- (37) a. ?Tomorrow I will speak [to who(m)] you spoke last night.
 b. ?You can't word your letter [how rudely] they worded theirs.

→ AP- and PP-FRCs are somehow different

- missing prepositions: In PP-FRCs, there can be a preposition missing in some languages, the only visible preposition then fulfills a double role:

- (38) a. He'll remain in whatever town he has been living (in) all his life.
 b. Children worry about whatever their parents worry (about).

– what is the underlying structure of such elements?

- (39) a. V [_{PP} P [_{FR} [_{DP} wh-word]₁ ... V ... P __₁ ...]

Larson (1987) – P has to be deleted somehow

- b. V [_{FR} [_{PP} P wh-word]₁ ... V ... __₁ ...]

Grosu (1996) – no missing P, PP is shared

4.2 Case matching

- languages differ as to whether they require strict matching or not, see Vogel (2001)

4.2.1 Strict Matching

- some varieties of German: case-mismatch results in ungrammaticality, irrespective of whether the *wh*-word bears the matrix case or the RC-case

- (40)
- a. [Wer nicht stark ist], muss_{nom} klug sein.
 who.NOM not strong is must clever be.INF
 ‘Who is not strong must be clever.’ MC: nom RC: nom
- b. [*Wen/*Wer die Natur schwach geschaffen hat], muss_{nom} klug sein.
 who.ACC/who.NOM the nature weak created has must clever be.INF
 lit.: ‘Who nature created weak must be clever.’ MC: nom RC: acc
- c. [*Wem/*Wer die Natur keine Kraft geschenkt hat], muss_{nom} klug sein.
 who.DAT/who.NOM the nature no force given has must clever be.INF
 ‘Who nature gave no force must be clever.’ MC: nom RC: dat

- obliqueness of the case does not play a role (in this variety), ungrammaticality also results if MC-case is more oblique than the RC-case:

- (41)
- a. Ich vertraue_{dat} [wem Peter hilft].
 I trust who.DAT Peter helps
 ‘I trust who Peter helps’ MC: dat RC: dat
- b. *Ich vertraue_{dat} [wer pünktlich ist].
 I trust who.NOM on time is
 ‘I trust who(ever) is on time.’ MC: dat RC: nom
- c. *Ich vertraue_{dat} [wen Peter mag].
 I trust who.ACC Peter likes
 ‘I trust who Peter likes.’ MC: dat RC: acc

- only solution in such languages: light-headed relatives: head-position occupied by a demonstrative (the RC then often behaves like a normal HRC):

- (42)
- a. Ich vertraue_{dat} dem, [der pünktlich ist].
 I trust the.DAT who.NOM on time is
 ‘I trust he who is on time.’ MC: dat RC: nom
- b. Ich vertraue_{dat} dem, [den Peter mag]
 I trust the.DAT who.ACC Peter likes
 ‘I trust he who Peter likes.’ MC: dat RC: acc

- exception in such languages: syncretic/underspecified forms can resolve the mismatch (so apparently, morphological case is crucial):

(43) *German wh-pronoun:*

	mask/fem	neut
Nom	wer	was
Gen	wessen	
Dat	wem	–
Akk	wen	was

- (44) *nom-acc syncretism:*
- a. [Was du gekocht hast], ist_{nom} widerlich.
What you cooked have.2s is disgusting
'What you cooked is disgusting.' MC: nom RC: acc
- b. Ich esse_{acc}, [was im Kühlschrank liegt].
I eat what in the fridge lies
'I eat what lies in the fridge.' MC: acc RC: nom

4.2.2 No strict matching

- some languages tolerate mismatches in the absence of syncretisms; the *wh*-phrase then either bears the MC- or RC-case
- Icelandic: matrix case (irrespective of obliqueness) → attraction

- (45) *attraction in Icelandic: matrix case on wh-phrase (Vogel 2001):*
- a. ég hjálpa_{dat} [hverjum / *hvern (sem) ég elska_{acc}]
I help who.DAT / who.ACC (that) I like
'I help the one I like.' MC: dat RC: acc
- b. ég elska_{acc} [*hverjum / hvern (sem) ég hjálpa_{dat}]
I like who.DAT / who.ACC (that) I help
'I like the one I help.' MC: acc RC: dat

- German B: FRC-case (irrespective of obliqueness):

- (46) a. Ich liebe_{acc}, [wer Gutes tut], und hasse, [wer mich verletzt].
I love who.NOM good does and hate who.NOM me hurts
'I love who does good and hate who hurts me.' MC: acc RC: nom
- b. Ich nehme_{acc}, [wem immer du vertraust].
I take who.DAT ever you trust.2s
'I take whoever you trust.' MC: acc RC: dat
- c. [Was ein Mädchen ist von gutem Gefühl], müssen_{nom} dergleichen
what.NOM/ACC a girl is of good taste must such
Sachen zuwider sein.
things repulsive be
lit.: 'What is a girl of good manners must be disgusted by such things.'
MC: dat RC: nom

- German C: RC-case, but only if RC-case is more oblique than MC-case:

- (47) nom > acc > dat, gen, PP
- (48) a. *Er zerstörte_{acc}, [wer ihm begegnete].
he destroyed who.NOM he.DAT met
'He destroyed who met him.' MC: acc RC: nom
- b. Ihm begegnete_{nom}, [wen er zerstören wollte].
he.DAT met who.ACC he destroy.INF wanted
'who he wanted to destroy met him' MC: nom RC: acc
- (49) a. *Er begegnete_{dat}, [wen er zerstören wollte].
he met who.ACC he destroy.INF wanted
'He met who he wanted to destroy.' MC: dat RC: acc
- b. Er zerstörte_{acc}, [wem er begegnete].
he destroyed who.DAT he met
'He destroyed who he met.' MC: acc RC: dat

- Gothic and Romanian: the more oblique case appears on the *wh*-pronoun (Grosu (1994: 133, 137), which can be an MC-case or an RC-case

- (50) a. [Cui/*cine i se dă de mâncare] trebuie_{nom} să muncească
 who.DAT/who.NOM him self give of food must subj work
 ‘He who gets food must work.’ MC: nom RC: dat
- b. Mă voi adresa_{dat} [cui/*cine mă poate înțelege]
 me I will address who.DAT/who.NOM me can understand
 ‘I shall turn to who can understand me’ *Romanian* MC: dat RC: nom

- Greek: obligatory case attraction, but but when the FRC-verb selects an oblique case, there additionally appears a resumptive pronoun:

- (51) a. Agapo [opjon/*opjos me agapa]
 love.1s who.ACC/who.NOM me loves
 ‘I love whoever loves me.’ MC: acc RC: nom
- b. Tha voithiso [opjon tu dosis to onoma mu]
 FUT help.1SG who.ACC 3s.M.GEN give.2SG the name my
 ‘I will help whoever you give him my name.’ MC: acc RC: gen

4.2.3 Overview: Case (mis-) matching

- Typology of case resolution (from Vogel 2001)

conflict	Icel	GerA	GerB	GerC	Romanian	Greek
m=NOM;r=ACC	M	–	R	R	R	M
m=NOM;r=OBL	M	–	R	R	R	Res
m=ACC;r=OBL	M	–	R	R	R	Res
m=ACC;r=NOM	M	–	R	–	M	M
m=OBL;r=NOM	M	–	R	–	M	M
m=OBL;r=ACC	M	–	R	–	M	M

5 Overview: surface position of the *wh*-phrase

- The evidence is conflicting:

	Head-account	Comp-account
extraposition	–	+
realization of C	–	+
clitic placement	–	+
reconstruction	+/-	+/-
extraction from <i>wh</i> -XP	+	–
category-matching	+	–
strict Case-matching	+	–
Case-mismatches	–	+

- To account for the matching effects, the Comp-account has to make additional assumptions, such as an Agree relationship between D and the relative operator, see e.g., Assmann (2013)

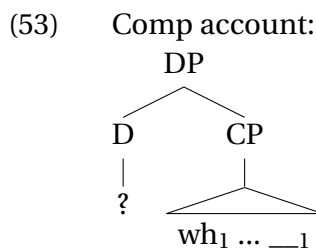
6 A few approaches

6.1 Comp-account with an empty head

- van Riemsdijk (2005): Is there a head at all in the structure, i.e. are we dealing with (52-a) oder (52-b)? If yes, what kind of empty element is it?

- (52) a. [_{DP} CP]
 b. [_{DP} D [_{CP} ...]]

- the head-position is empty (*Head bypass analysis*, Grosu (1994), Hirschbuhler and Rivero (1981, 1983), Harbert (1983a), the *wh*-phrase in SpecCP of the FRC takes over functions in the FRC and in the matrix clause
 - but structure seems exocentric ...
 - *wh*-phrase would get two theta-roles, in violation of the theta-criterion
- D cannot be completely empty, so (52-a) cannot be correct, rather (52-b) seems to be the correct option:



- What kind of empty element could it be?
 1. Trace? No, no antecedent
 2. PRO? No, PRO cannot occur in governed positions, but FRCs can be objects; no antecedent, but not always arbitrary interpretation → ruled out

(54) You can't make a pancake with what you bought (=with the thing(s) that you bought)

3. *pro*? Possible, as it can occur in governed positions, but it would have to be licensed
4. a silent determiner/demonstrative? What about the interpretation of FRCs?

* definite/specific or universally quantified:

- (55) a. You can't make a pancake with what you bought (=with the thing(s) that you bought)
 b. I will invite who(ever) you tell me to (=everybody that you tell me to invite)

- (56) a. I ate what the waiter put on my plate.
 b. I ate the thing that the waiter put on my plate.

- (57) a. I will eat whatever the waiter will put on my plate.
 b. I will eat anything / everything that the waiter will put on my plate.

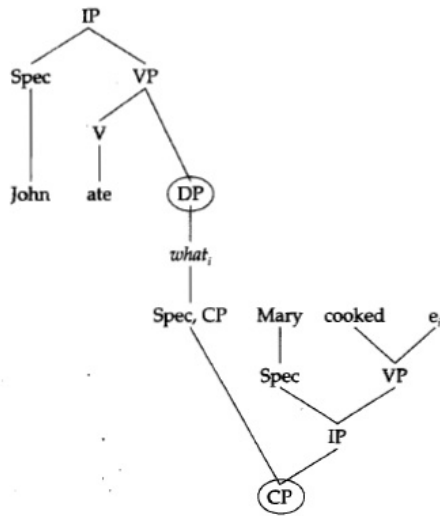
* adding *-ever* forces an universally quantified reading

→ see Assmann (2013) for a very recent approach

6.2 van Riemsdijk (2005)

- multidominance: the *wh*-phrase is both part of the matrix clause and of SpecCP:

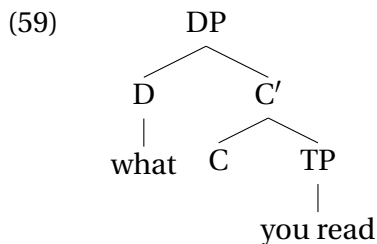
(58) John ate what Mary cooked.



- advantages
 - intended to capture both the Comp-effects (extraposition) as well as the head-effects (matching, extraction), but since the DP is shared, it is not clear which association is relevant for operations like extraposition or extraction from the *wh*-XP
- problems
 - Activity Condition: how can 1 DP check 2 cases?
 - languages without strict case-matching: van Riemsdijk (2005) proposes that case is checked within the FRC and therefore does not have to be checked in the matrix clause. However, this does not explain how the matrix probe can be discharged, nor does it account for the cases where the matrix case appears on the *wh*-phrase
 - languages without strict categorial matching are unexpected
 - unclear whether this kind of multidominance structure is constrained in any way

6.3 Donati (2006): reprojection: derived head without spurious D

- a labeling conflict arises when a *wh*-word is moved to SpecCP
- if C projects → embedded *wh*-CP
- if *wh*-word projects ₁ FRC



- advantages
 - accounts for the DP-distribution, categorial matching
 - accounts for felicity of extraction from *wh*-XP

- *wh*-pronouns in embedded *wh*-clauses and the *wh*-pronouns in FRCs are often similar:

(60)	a.	der Mann, den ich kenne, mag mich.	HRC
	b.	Ich mag, wen ich kenne.	FRC
	c.	Du fragst dich, wen ich kenne	<i>wh</i> -CP

- no spurious empty head

- problems

- how is extraposition possible if the FRC is a DP?
- unclear whether this is compatible with the evidence above for the Comp-account as the *wh*-word is in a similar position as the head noun in HRCs → this clashes with the clitic data and the DFC-data
- incompatible with complex DP-relatives (only simplex *wh*-words can reproject):

(61) I will buy [_{FRC} [_{DP} whichever book] you recommend]

- incompatible with PP-/AP-FRCs
- what about the Activity Condition?
- what about case-mismatches and category-mismatches?

6.4 Ott (2011): re-labeling

- The *wh*-word first moves to SpecCP

(62) (I eat) [_{CP} what₁ C_{FR} [_{TP} you [_{T'} cook ___₁]]]

- transfer in FRCs affects not only TP but C' (unlike in embedded *wh*-CPs because the phase head in FRCs does not have any interpretable features anymore)

(63) (I eat) [_{CP} what₁ C_{FR} [_{TP} you [_{T'} cook ____T]]]

- since the head of the CP-projection is lost, the label switches to DP:

(64) (I eat) [_{DP} what₁ C_{FR} [_{TP} you [_{T'} cook ____T]]]

- advantages

- no spurious empty D-head
- can handle PP/AP-FRCs
- can handle complex DP-FRCs
- probably can handle the evidence for the Comp-account if these properties are determined at a derivational stage when the complement is still a CP
- accounts for the felicity of extraction from the *wh*-DP: at the time of extraction, the DP is a complement of the matrix V

- problems

- the DP receives 2 theta-roles → theta-criterion has to apply at the phase-level: only one theta-role per phase
- selection: Transfer of the complement of a C-head usually applies once the next higher head is merged, viz., V in the current case → the clause is arguably still a CP at this stage, unclear how the selectional features of D can be checked (again at the next phase level?)
- Activity Condition: The DP should not be visible for case checking anymore after Agree with the verb inside the FRC (a Phase Condition?)
- what about case-mismatches?

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