

Attraction and matching in resumption and relatives

Evidence for top-down derivation

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The direction of the derivation

- 2 possibilities
 - bottom-up = Standard
 - top-down (e.g. Phillips 2003, Bianchi and Chesi 2014)
- most phenomena can arguably be analyzed in both ways, but:

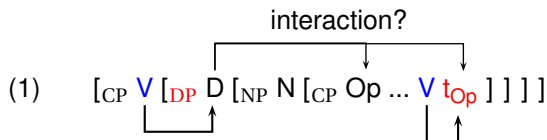
goal:

evidence for top-down derivation based on 2 phenomena:

- Case attraction
- matching in resumption

The direction of the derivation

- challenge: the form of a constituent inside the RC is affected by the Case properties of a constituent in the matrix clause



- 2 Case probes + 2 DPs
- expectation: every DP bears the Case of its local Case-probe
- but the DPs interact: Case of the matrix-DP determines the form of the DP inside the RC
- problem for bottom-up derivation: the necessary information (Case of the matrix DP) is not yet available
- advantage of top-down derivation: Case properties of the matrix DP are available before the RC-internal DP is introduced

Outline

- 1 Problems for bottom-up derivation
 - Case attraction
 - Matching in resumption
- 2 Solution under top-down derivation
 - Assumptions
 - Derivations
- 3 Extension: Free relative clauses
- 4 What about bottom-up derivation?
- 5 Implications for resumption
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Case attraction

- the relative pronoun *hoon* bears genitive, the Case of the HN although it should have been assigned accusative inside the RC, see Bianchi (2000: 58):

(2) ménmeste toon horkoon **hoon** [huus]
 remember.IMP the.GEN oaths.GEN which.GEN which.ACC
 omomókate
 swear.PFV.2P
 ‘Remember the oaths that you swore.’

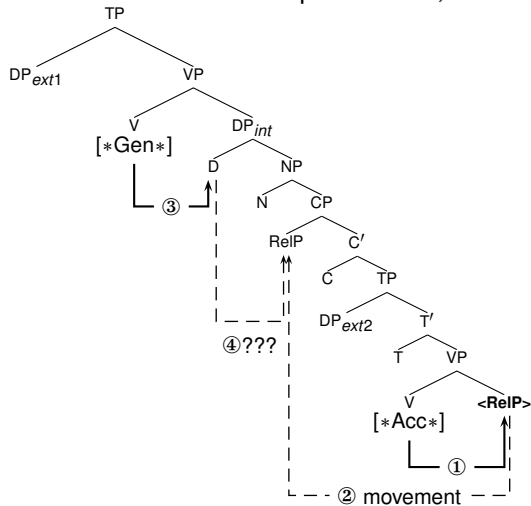
Ancient Greek

- Acc → Gen
- Case attraction is generally optional.
- attraction is only possible if the matrix Case is more oblique than the RC-Case, Grosu (1994: 122)

(3) P-Case > ... Gen > Dat > Acc > Nom

Case attraction

(4) Case attraction bottom-up: MC=Gen; RC=Acc; ReIP=Gen



Case attraction

- problems for bottom-up derivation (with Agree)
 - the RelP should get Acc in the RC through Agree with v
 - since it surfaces with Gen, one has to assume that
 - A the Case value can be overridden (Bianchi 2000:68) or
 - B Case assignment in the RC can be suppressed (Case probe is deleted) or
 - C Case assignment applies at PF (Bianchi 2000)
 - All solutions are problematic:
 - A is in conflict with the Activity Condition and violates recoverability
 - B requires look-ahead/violates the Earliness Principle
 - C is counter-cyclic (or rather: moves the problem to a different level)

Matching in resumption

- in many languages of the world, oblique relations (oblique Cases, complements of prepositions) are subject to strict recoverability conditions, i.e., they must not remain unrealized at PF
- German: e.g., dative and genitive under topic-drop, see Bayer et al. (2001)
- languages without relative pronouns often use resumptive pronouns for such relations
- Swiss German: gaps for SU and DO, but resumptives for IOs, see Weber (1987):

- (5)
- | | | |
|----|--|----|
| a. | d Frau, wo (*si) immer z spaat chunt
the roman C (she) always too late comes
'the woman who is always late' | SU |
| b. | de Bueb, wo mer *(em) es Buech ggëe händ
the boy C we (he.DAT) a book given have.1PL
'the boy who we gave a book' | IO |

Matching in resumption

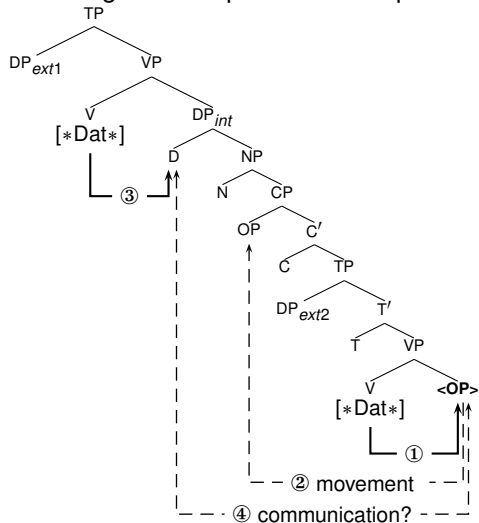
- the resumptive is omitted if the HN also bears dative, see Dalcher (1963: 127), Hodler (1969: 247):

(6) Lüte, [won es __/ ***ene** guet geit], darf me nid
 people.DAT C it they.DAT good goes may one not
 ergrübled Sachen uftische.
 disturbing things confront with
 'One shouldn't confront people who are doing well with negative
 things.' *Bernese*

- 3 scenarios:
 - MC-Case=Dat/structural RC-Case=structural → gap
 - MC-Case=structural RC-Case=Dat → resumptive
 - MC-Case=Dat RC-Case=Dat → gap
- the matching-effect in resumption is also attested in Hebrew and Greek, see Cole (1976), Joseph (1980)

Matching in resumption

(7) Matching in resumption bottom-up: MC=Dat; RC=Dat → gap



Matching in resumption

- problems for bottom-up derivation
 - choice between gap/resumptive would have to be made when the verb in the RC is merged with the IO
 - but: the necessary information for the right choice – Case of the HN – is not yet available
 - the problem arises in every theory of resumption (spell-out, base-generation, clitic doubling)
 - HN and relative operator must communicate somehow: RC-internal Case value would have to be passed into the matrix clause (e.g. through cyclic Agree), be compared with the Case of the HN, but then:
 - A information has to be passed down into the RC again or
 - B one postulates complex chains whose realization is determined at the interfaces
 - both solutions are problematic
 - A anticyclic and violates locality (Phase Impenetrability Condition)
 - B extremely non-local (against the development of the last 20 years)

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 - Case attraction
 - Matching in resumption
- 2 Solution under top-down derivation**
 - **Assumptions**
 - **Derivations**
- 3 Extension: Free relative clauses
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Assumptions for top-down derivation

- standard assumptions
 - the structure is built up incrementally from top to bottom
 - constituents are base-generated in their surface position
 - constituents are moved downwards because of theta-features (arguments), semantic features (adjuncts) or selectional features (verbs)
 - the usual locality restrictions hold → successive-cyclic movement
 - Case filter: Every DP needs Case
 - Activity Condition: A DP can only bear 1 Case
 - Earliness Principle, Strict Cycle

Assumptions for top-down derivation

- Assumptions about feature checking
 - Agree involves checking: necessary to explain how an XP with a Case can appear in the left periphery
 - Case-checking: A DP searches upward for a Case probe
 - 2 ways of discharging probe features: checking & matching
 - checking: Agree between a DP with an unchecked Case feature and a probe, involves *all* features
 - matching: Agree between a DP with a checked Case feature and a probe, probe has a *subset* of the features of the DP (independent motivation: PCC-effects, cf. Anagnostopoulou 2005; Richards 2008)
 - concord within DP: all heads have an inherent case feature/phi-feature that needs to be checked and a case-probe/phi-probe that checks another Case-/phi-feature (and needs to be discharged)

$$(8) \quad D_{\{[*\phi*], [\check{\bullet}\phi\check{\bullet}], [*acc*], [\check{\bullet}acc\check{\bullet}]\}}$$

Assumptions for top-down derivation

- Agree between HN and the relative operator: number/gender + Case (see also Spyropoulos 2011)

(9) la chanson OP que j' ai écrite t_{OP}.
 the song.F Op C I have written.F.SG
 'the song I wrote'

French

X variation: Case-Agree between N and the Rel-Op can be

- obligatory (Swiss German)
- optional (languages with Case attraction)
- prohibited (Modern German)

Assumptions for top-down derivation

- Case features:
 - case-decomposition: traditional case-labels are replaced by bundles of (more abstract) privative Case-features
 - the more marked, the more features a Case is composed of, see Béjar and Řezáč (2009), also Assmann (2013)

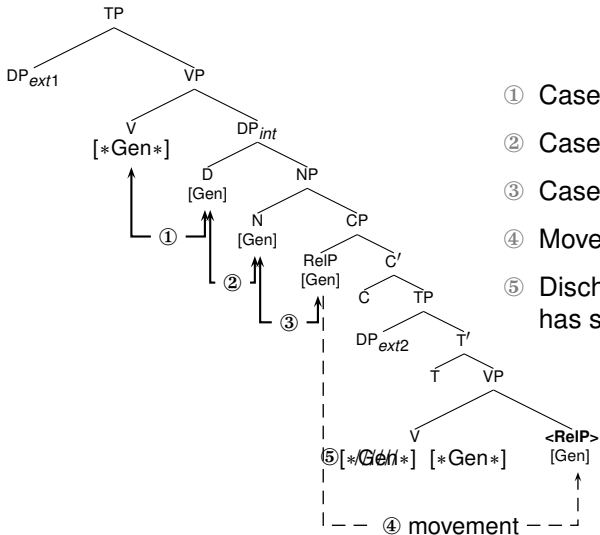
(10) P-Case > ... Gen > Dat > Acc > Nom

nom	α			
acc	α	β		
dat	α	β	γ	
gen	α	β	γ	δ

- feature-decomposition holds for probes and goals

Derivation Case-attraction top-down 1

(11) Case attraction – top-down: MC=Gen; RC=Gen → RelP = Gen



① Case-checking V-external D

② Case-checking D-N

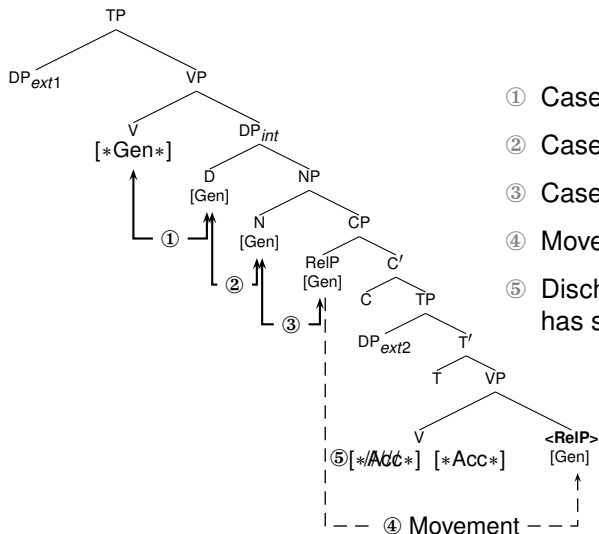
③ Case-checking N-RelP

④ Movement of RelP

⑤ Discharge under Matching (probe has subset of goal)

Derivation Case-attraction top-down 2

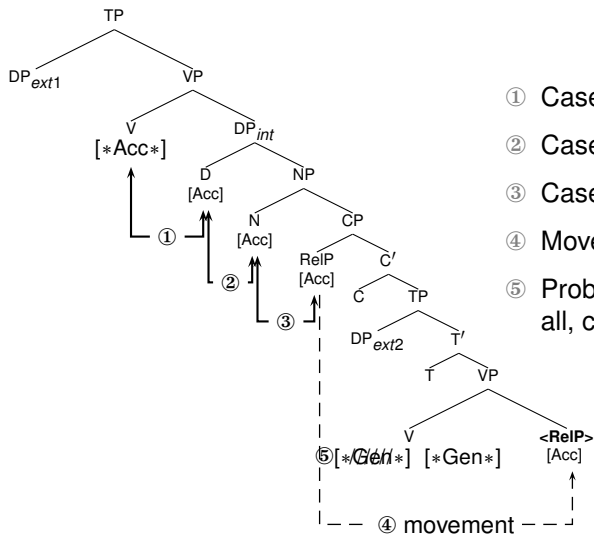
(12) Case attraction – top-down: MC=Gen; RC=Acc → RelP = Gen



- ① Case-checking V–external D
- ② Case-checking D–N
- ③ Case-checking N–RelP
- ④ Movement of RelP
- ⑤ Discharge under Matching (probe has subset of goal)

Derivation Case-attraction top-down 3

(13) Case attraction – top-down: MC=Acc; RC=Gen → RelP = Gen



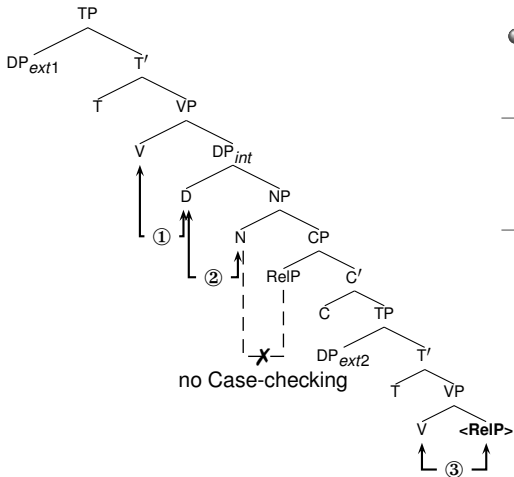
- ① Case-checking V–external D
- ② Case-checking D–N
- ③ Case-checking N–RelP
- ④ Movement of RelP
- ⑤ Probe cannot be discharged at all, crash (probe has superset)

Derivation Case attraction top-down

- 3 scenarios without Case attraction:
 - MC-Case is less oblique than the RC-Case, e.g.: MC=Acc, RC=Gen
 - MC Case is more oblique than the RC-Case, e.g. MC=Gen, RC=Acc in languages with attraction where attraction is optional
 - in any configuration in languages like Modern German which do not have Case attraction
- solution: no Case-checking between N and Rel-OP

Derivation without attraction

(14) MS=X RS=Y → RelP=Y



- Case-Checking V–D; D–N
- No Case-checking between N–RelP
- RelP remains available for Case-checking with RC-internal probe
- every DP bears the Case of its local Case probe

Attractio inversa

- relative pronoun seems to determine/override the Case of the HN (Nom → Acc), see Bianchi (2000):

(15) ton andra touton hon palai zēteis ... **houtos**
 the man.ACC this.ACC who.ACC long search.2SG ... this.NOM
 estin enthade
 is here
 ‘The man you have been searching for a long time, he is here.’

- but: attractio inversa involves a correlative structure (*houtos*)
- Attractio inversa without a correlative structure is ruled out because it would require a matrix probe with a feature set different from that of the external D. By assumption, checking is not possible in this configuration → crash of the derivation

Resumption

- Case hierarchy in Swiss German:

(16) Dat > unmarked (Nom, Acc)

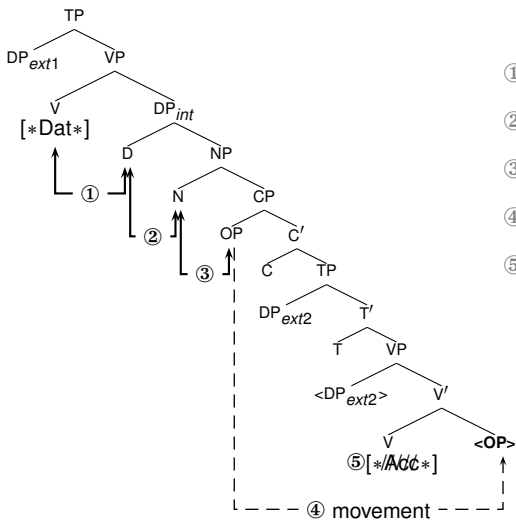
- Dative has a superset of case features of the unmarked case.
- Nom/Acc only differentiated in the personal pronoun paradigm.
- Distinction: The personal pronoun exponents are sensitive to the category of the head that checks case on the DP (diacritic on the DP): *v* vs. *T* (cf. Pesetsky & Torrego 2001).

Resumption

- 3 scenarios:
 - MC-Case=Dat/structural RC-Case=structural → gap
 - MC-Case=structural RC-Case=Dat → resumptive
 - MC-Case=Dat RC-Case=Dat → gap

Derivation Matching in resumption 1

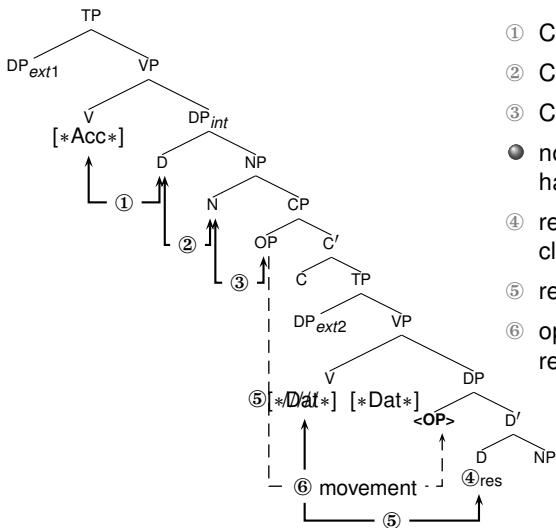
(17) Resumption top-down – scenario 1: MC=Dat; RC=Acc → gap



- ① Case-checking V-external D
- ② Case-Checking D-N
- ③ Case-Checking N-Op
- ④ Movement of Op
- ⑤ Discharge under Matching (probe has subset of goal)

Derivation Matching in resumption 2

(18) Resumption top-down – scenario 2: MC=Acc; RC=Dat → **resumptive**



- ① Case-checking V–external D
- ② Case-checking D–N
- ③ Case-checking N–Op
- no discharge under matching (probe has superset of goal)
- ④ resumptive inserted as a repair → clitic-doubling structure
- ⑤ resumptive checks dative of V
- ⑥ operator moves into Spec of resumptive

Overt evidence for the distribution of Cases

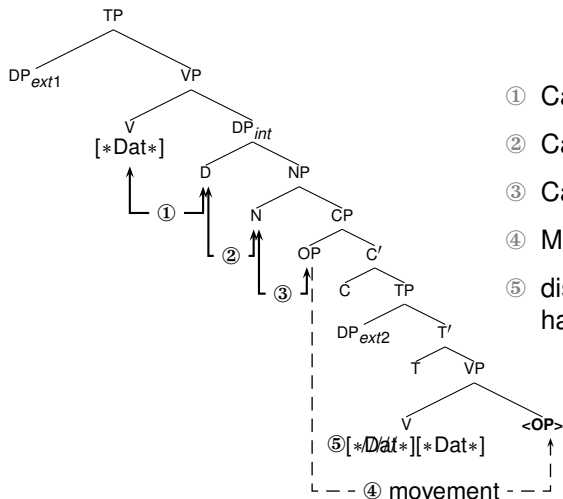
- What was postulated covertly for Swiss German can be found overtly in Free relatives in Greek, see Vogel (2001):
- the relative pronoun bears (via external D) the Case of the matrix verb, the oblique Case of the RC-internal probe is realized by a resumptive ('help' assigns Acc; 'give' assigns Gen):

(19) Tha voithiso opjon tu dosis to onoma mu
 FUT help.1SG **who.ACC** **3s.M.GEN** give.2SG the name my
 'I help whoever you give my name.'

Greek

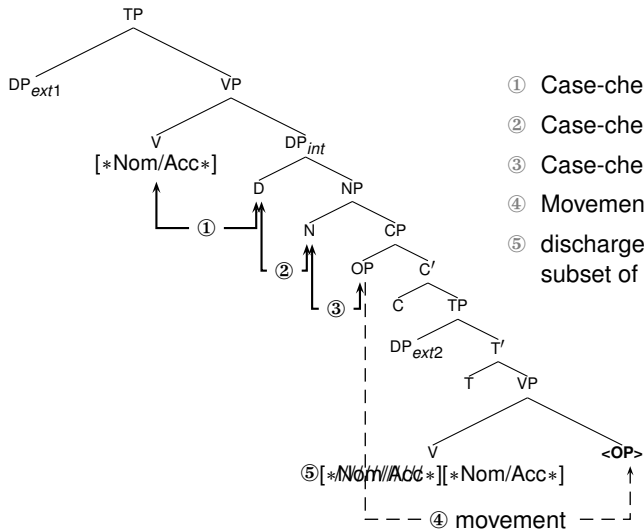
Derivation Matching in resumption 3

(20) Resumption top-down – scenario 3: MC=Dat; RC=Dat → gap



Derivation Matching in resumption 4

(21) Resumption top-down – scenario 3: MC=Nom/Acc; RC=Nom/Acc → gap



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Attraction and matching in FRCs

- 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

- assumptions:

- Comp-account: *wh*-pronoun = in SpecCP
- Case-checking D–*wh*-pronoun accounts for pivot function of *wh*-pronoun
- goal: different conditions on Matching derive the cross-linguistic differences

- patterns:

- Romanian/Gothic: like Case attraction restricted by the hierarchy
- Greek: like Swiss German: Nom + Acc = identical feature set
- German B: no Agree D–*wh*-pronoun
- German A (strict matching): Matching requires identity of features → problem: how to restrict Matching to FRCs (no matching requirement in HRCs, but the same probe!)
- German C: pattern suggests absence of Agree, but why no more oblique MC-Case?
- Icelandic: Cannot be derived since matching is explicitly ruled out if RC-probe has more features than MC-probe → features would remain on the probe → crash

→ FRCs are somewhat different from HRCs, but why?

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What about a bottom-up derivation

- Assumptions for bottom-up derivation:
 - Agree involves checking
 - 2 ways of discharging probe features: Checking (DP has unchecked Case features) and Matching (DP has checked Case-features)
 - Checking: probe and goal are deactivated if *all* features participate
 - Matching: probe must have a *superset* of the features of the probe (or: identity of features)
 - trick to make attraction possible: the RelP has *more* Case features than the RC-internal probe

Bottom-up – attraction 1: RelP = MC-Case

1. RC=Acc MC=Dat → result: attraction: RelP=Dat

a RelP = Acc

- RelP checks RC-probe; DP deactivated
- only possibility: Matching N-Op: Features on N remain → Crash

b RelP = Dat

- RelP checks RC-probe, RelP still active
- N checks Case of RelP, D checks N and Matrix V checks Case of D
→ convergence

Bottom-up – attraction 2: Matching

2. same case: e.g., 2x Acc

- RelP=Acc
 - RelP checks RC-probe, RelP = deactivated
 - Matching N–RelOp, Checking D–N, Checking matrix V–D
- convergence

Bottom-up – attraction 3: hierarchy blocks attraction

3. RC=Dat, MC=Acc → result: no attraction

a. ReIP= Acc

- ReIP = deactivated, but RC-probe still has features → crash

b. ReIP=Dat

- ReIP=deactivated, matching N–Op impossible because probe has *subset* (Acc vs. Dat)
- note that if matching was possible with a subset, the derivation should converge
- not problematic here, but superset-condition needed for resumption
- superset condition counter-intuitive (subset-condition under top-down makes more sense)

Bottom-up – attraction 4: absence of attraction

4. RC=Acc MC=Dat result: no attraction (optional or Modern German)
 - RelP=Acc
 - RelP checks RC-probe, RelP = deactivated
 - no Agree N–RelP → convergence

Bottom-up – resumption 1:

- RC=Nom/acc MC=Dat → gap
 - a. RelOp=Nom/Acc
 - RelOp checks RC-probe → RelOp deactivated
 - matching N–RelOp, features remain on N → crash
 - b. RelOp=Dat
 - RelOp checks RC-probe → RelOp deactivated
 - matching N–RelOp: N has more features, checking D–N, V–D
→ convergence

Bottom-up – resumption 2:

- RC=Dat MC=Nom/Acc → resumptive
 - a. RelOp=Dat
 - RelOp checks RC-probe → RelOp deactivated
 - matching N–RelOp impossible (N has subset) → crash
 - this assumption is crucial because if the derivation converged there would be no resumptive
 - b. RelOp=Nom/Akk
 - RelOp cannot check RC-probe → resumptive has to be inserted, resumptive checks RC-probe, RelOp still active
 - checking N–RelOp, checking D–N, checking V–D
 - convergence

Bottom-up – resumption 3:

- RC=Dat MC=Dat → gap
 - a. RelOp=Dat
 - RelOp checks RC-probe → RelOp = deactivated
 - Matching N–RelOp, checking D–N, checking V–D
→ convergence

Bottom-up: evaluation

- Given the possibility of feature discharge under Matching, the patterns can all be derived by means of bottom-up as well
- one drawback: Matching requires a superset/identity of features → unclear why subset is not sufficient

Top-down: determining resumption locally

- One crucial argument for top-down derivation: choice between resumptive and gap can be made locally:
 - at the point when the RelOp is in SpecvP one can determine whether it can check the RC-probe or not because the external Case is available (as a value on the RelOp)
 - if checking not possible → resumptive
 - resumptive can be inserted during the derivation
 - only one derivation, no transderivational economy
- bottom-up: choice cannot be made locally because the relevant information = MC-Case, is not yet available, i.e. nothing rules out the following derivation (also if MC and RC-Case = structural):
 - RC=Dat MC=Dat
 - RelOp=Dat
 - resumptive inserted, checks RC-probe, RelOP=active
 - Checking N–RelOp, checking D–N, checking V–D
 - convergence with a (superfluous) resumptive

Top-down resumption

- Couldn't one say that under bottom-up you have to use the Op if you can, i.e. if it has a matching Case = Move over Merge?
- no: if checking by RelOp (= movement) invariably blocks resumption, you could never derive resumptives in islands:

(22) De Maa, won i s Buech, won ***(er)** kchauft hät, blöd find
 the man C I the book C he bought has stupid find
 'The man such that I dislike the book he bought.'
- one has to allow for the optionality of merging either a resumptive or use the RelOp to check the RC-probe
- both derivations converge, a transderivational constraint is needed to filter out derivations with resumption under matching
- resumption in islands top-down:
 - if the extraction site is within an island, the RelOp gets stuck in the island and does not reach the theta-position
 - one can decide locally that a resumptive is the only possibility
 - just one derivation

Evidence for movement in the matching derivation

- Empirical argument against long representational chains between HN, base-generated OP and resumptive

- matching is not possible if the theta-position is inside an island → movement must be involved

(23) Ich han **em** **Bueb**, wo du kän Lehrer künsch, < won
 I have the.DAT boy C you no teacher know.2SG C
 *(**em**) vil zuetrouet >, es Komplimänt gmacht.
 he.DAT much consider capable a compliment made
 lit.: 'I made the boy such that I don't know a single teacher who
 considers him capable of much a compliment.' *CH-Germ*

- since discharge of dative probe is not possible, the RelOp cannot have moved to a position local to the probe
- Resumption inside islands does not involve movement (or operator is somehow defective)
- regular dative resumption involves movement of RelOP to a position close to the Case-probe (where it may stay or move into Spec of resumptive)

Summary

- Case attraction and Matching provide a challenge for bottom-up derivation with Agree = feature assignment, violation of fundamental syntactic principles seems unavoidable
 - top-down derivation provides a straightforward solution where all properties are locally determined; crucial ingredients:
 - Agree involves checking
 - the possibility of matching: feature discharge even if DP has undergone checking
 - the matrix Case is passed down into the RC through Agree N-RelOp
 - different conditions on matching may derive cross-linguistic variation w.r.t. the possible case mismatches
 - however, a bottom-up derivation can derive most of the facts once Case checking and Matching are adopted
- one crucial advantage for top-down: the choice between gaps and resumptives can be made locally: no transderivational economy

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