Particle incorporation in English double object constructions, nominalisations and elsewhere
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1. Introduction

- Complex head approach: V+Prt acts as a single head, e.g. for verb movement purposes (e.g. Dehé 2002, Farrell 2005, Haider 1997, Harley/Noyer 1998, Neelam 2002, Toivonen 2003). Example: deriving particle shift using the syntactic incorporation variant of the complex head approach:
  (1) a. \( [\{\{P\} \{\{V\} out\plus\} \{\{VP\} the light t out \}\}\} \]\) (particle shift)
  b. \( [\{\{P\} \{\{V\} put\plus\} \{\{VP\} the light t out \}\}\} \]\)

  (2) a. \( [\{\{P\} \{\{V\} put\plus\} \{\{VP\} the light R \{\{P\} the light \{\{VP\} out \}\}\}\} \]\)
  b. \( [\{\{P\} \{\{V\} put\plus\} \{\{VP\} the light R \{\{P\} the light \{\{VP\} out \}\}\}\} \]\)

- Fussy nominalisers (affixes which impose constraints on types/tokens of bases they select, e.g. foreign affixes like -ion, unproductive ones like -th) contrast with the elsewhere nominaliser –ing in being compatible with full PPs but not with particles:
  (3) Kari spärka heldigvis ut hunden. [Norw. Ramchand/Svenonius]
  K. kicked fortunately out the dog

- Quotative inversion (sect. 2):
  Nominalisations (the \{dividing/division\} up of the country) (sect. 3)
  Synthetic compounding in nominalised particle verbs (house-fixing-upper) (sect. 4)
  The double object+particle construction (send me out a letter) (sect. 5)

2. Quotative inversion

- V+Prt in pre-subject position in quotative inversion has been analysed in terms of particle incorporation (Collins & Branigan 1997:4f, Toivonen 2003:175f):
  (4) Hon spärkade inte ut honom. [Swedish, Toivonen 2003:43]
  she kicked not out him

- Quotative compounding in nominalised particle verbs (house-fixing-upper) (sect. 4)
  The double object+particle construction (send me out a letter) (sect. 5)

(5) a. \( [\{\{P\} \{\{V\} put\plus\} \{\{VP\} the light X \{\{P\} the light \{\{VP\} out \}\}\}\} \]\)
  b. \( [\{\{P\} \{\{V\} put\plus\} \{\{VP\} the light X \{\{P\} the light \{\{VP\} out \}\}\}\} \]\)

- I will nevertheless argue that \( [\{\{V\} V P\} \) exists. Phenomena discussed include:
  Quotative inversion (sect. 2)
  Nominalisations (the \{dividing/division\} up of the country) (sect. 3)
  Synthetic compounding in nominalised particle verbs (house-fixing-upper) (sect. 4)

3. Obligatory particle incorporation in English nominalisations

- Fussy nominalisers (affixes which impose constraints on types/tokens of bases they select, e.g. foreign affixes like -ion, unproductive ones like -th) contrast with the elsewhere nominaliser –ing in being compatible with full PPs but not with particles:
  (6) a. ‘Civilisation is going to pieces,’ broke out Tom violently. [attested; Toivonen]
  b. “Out with it” blurted out the Captain brusquely. [Cappelle 2010]
  c. “What?” shouted out John and Yuuda simultaneously. [Google]

- C&B’s analysis of quotative inversion (substituting T for Agr, VoiceP for VP):
  (7) “Why” \( [\{\{CP\} Op \{\{P\} \{\{V\} shouts out\}\}\}\} \]\)
  & “you do that?”

- Here \( [\{\{V\} V P\} \) makes sense of the fact that particles are the only items which can intervene between the verb and subject and of the ban on modified (hence clearly phrasal) particles in the construction.

- a. ‘Get lost!’, shouted Gertrude at him loudly.
  b. ‘You’re a crypto-lexicalist!’, shouted (*straight) out Gertrude to Basil.

- Material other than particles can only precede subjects if they have heavy-shifted, suggesting that non-heavy subjects are not extraposed.

- ‘Get lost!’ shouted at him [a man *in a bedraggled brown suit].

(9) ‘Get lost!’ shouted at him [a man *in a bedraggled brown suit].

4. Obligatory particle incorporation in English nominalisations

- Fussy nominalisers (affixes which impose constraints on types/tokens of bases they select, e.g. foreign affixes like -ion, unproductive ones like -th) contrast with the elsewhere nominaliser –ing in being compatible with full PPs but not with particles:

- a. the shipment of the goods to Europe last week
- b. the shipment off (of the goods) to (Europe) (last week)
- c. the shipping off of the goods to Europe last week

- a. the acquisition of Rodocker’s, or merger of it into our company [www]
  b. *the merger in of the company
- a. the enticement of people into a hall [www]
  b. *the enticement in of the people
- a. the growth of children into powerful adults [www]
  b. *the growth up of children

- a. the division (*up) of the country {into two}
  b. the leakage (*out) of water {out of the tank}
  c. the clearance (*out) of the goods {out of the factory}
  d. the closure (*down) of nuclear power plants
  e. the trial (*of) of the products

- A rejected account: Sichel (2010): fuzzy affixes disallow multiple subevents, so incompatible with resumptive particles. Problem: this wrongly excludes nominals with result PPs like (12a). (Analysing such PPs as adjuncts makes no sense in unselected object structures like (11): they merged it in does not entail they merged it.)

- My account:
  Particles must incorporate in nominalisations:

- the dividing {up} of the country {*up}
- V+Prt in pre-subject position in quotative inversion has been analysed in terms of particle incorporation (Collins & Branigan 1997:4f, Toivonen 2003:175f):
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4. Synthetic compounding in particle verb nominalisations
Noun incorporation in nominalised V+Prt (all data web-attested):
(20) trash taker outer
[cfr. the taker-outer of the trash]
(21) water soaker-upper, title thinker-upper
N P (Incorporation as head movement)
(22) a. towel thrower-inner
[who throws in the towel ‘gives up’]
 b. steam letter-offer
[that lets one to let off steam ‘relax’]
c. tab picker-upper; rear bringer upper; new-leaf-turner-over; last word getter inner; support drummer upper
Synthetic compounding in particle verb nominalisations
4.
(28) N° (Incorporation as direct merger)
 a. I am an inveterate and incurable taker of people into my house.(www)
b. an inveterate people taker-inner
 c. *an inveterate people taker into my house
(24) a. *a car pusher into the garage; *the ball thrower off the boat; *a bus driver south
b. *a door breaker open; *the partner shooter-dead
c. *a partner lover to bits; *the prisoner beater to death
d. *an opponent taker to the cleaners
(26) a. *a bricklayer drinker under the table
b. *bricklayer under-the-table-drinker
Dative PPs may coexist with incorporated nominals, (26), but there is independent evidence that such PPs can merge higher than Themes (Bruening 2010).
(27) a. *a car pusher into the garage
b. *car-push-er car
(33) a. das MüllWEGwerfen; das Ball REINwerfen
the rubbish.away.throwing the ball.in.throwing
(34) a. das MüllWEGwerfen; das BallREINwerfen
the rubbish.away.throwing the ball.in.throwing
4.1. The affix reduplication problem
Reduplication is due to conflicting requirements: affix must attach to right of its base and to the head of its base. This conflict only arises in (rare) left-headed structures. Similar problem with plural morphology in some dialects:
(31) *sisters-in-law; *governors generals; *atourneys generals [all web-attested]
 a. push-in-er push in of cars
b. car push-in-er car push in car
(34) a. das MüllWEGwerfen; das BallREINwerfen
the rubbish.away.throwing the ball.in.throwing
4.2. Appendix: particle incorporation in German synthetic compounds
(33) a. BäumeABsägen ‘trees.down.sawing’; KerzenABschnallen ‘candle.out.blowing’; MüllWEGbringen ‘rubbish.away.taking’; ReifenAUFpumpen ‘tyre.up.pumping’
b. FeuerANzünder ‘fire lighter’; WandANstreicher ‘wall.on.painter = wall painter; SackAUFreifer ‘bag.open.ripper = device for opening rubbish bags’
c. SelbstAUFopferung ‘self-up-offering’
d. BlutAUFnahme ‘blood.from.taking = blood test’
e. VogelAUSBeschossen ‘bird.down.shooter = person/thing that takes the cake’
(34) a. das MüllWEGwerfen; das BallREINwerfen
the rubbish.away.throwing the ball.in.throwing
b. *das Müll-in-die-Tonne-werfen; the rubbish in-the-bin throwing
   das Ball-in-den-Korb-Werfen the ball in-the-basket throwing
c. *das Müllwerfen in die Tonne; *das Ballwerfen in den Korb
   the rubbish throwing in the bin the ball throwing in the basket
d. das Werfen des Mülls in die Tonne; das Werfen des Balls in den Korb
   the throwing of the rubbish in the bin the throwing of the ball in the basket
e. *das Werfen des Mülls weg. *das Werfen des Balls rein
   the throwing of the rubbish away the throwing of the ball in

All material in front of nominalised V incorporates in German nominals with incorporated or genitive Themes:

(35) a. das Leertrinken des Kellers
   the empty drinking of the cellar
b. *das Komplett-Leer-Trinken des Kellers
   the completely empty drinking of the cellar
c. *das Trinken des Kellers leer
   the drinking of the cellar empty

5. The double object + particle construction

5.1. Particles and double objects: The data

Typical judgments on particles in DOC (e.g. Neeleman 2002, Farrell 2005):

(36) a. I sent [out] the people [out] their schedules [out].
   b. I sent [off] the people [off] the material [off].

-Clause-final particles are bad in DOC even if good in monotransitive contexts:

(37) a. I sent their schedules out.
   b. I sent the material off.

Less well-known: other particles can be clause-final. Most data below from den
Dikken (1995:173), which I have put in three groups:

(38) Particles with beneficiaries (no to-paraphrase; second object is for first obj, and V
does not name a way of giving an object to someone):
   a. (77) Would you saw Frank a piece off? [for Frank/*to Frank]
   b. (77) He poured Egbert a drink out.
   c. (??) She printed Edeltraud a copy out.

(39) back (acceptable to all speakers clause-finally; cf. Hudson 1992:259):
   a. She gave the people their books back.
   b. She {sent/handed/sold/passed} the people their stuff back.

(40) Other particles:
   a. (77) I passed Mary the wrench up/down.
   b. (77) She sent John some cigars over.

It is tempting to generalise that semantically transparent particles allow clause-final
order (esp. as clause-final particles seem worse in benefactives if non-transparent:
*write them a report up). However, this approach does not seem promising:

Non-transparent clause-final particles are ok in monotransitive contexts.

- Full PPs like (41) are ‘transparent’ yet illicit.¹

(41) a. *I passed the patient a tray to his bed.
   b. *I threw Fred a ball into his hands.
   c. *They sent her a doctor into the building.

Most accounts wrongly only allow DP-Prt-DP order (e.g. Neeleman, Farrell...).

- Exception: den Dikken (1995:132,174). His structures in (42) assume that clause-final
  particles are phrasal, and interposed particles only heads. This is correct, cf. (43).

(42) a. Interposed particle: [VP send [sc1 e [V NP Mary], NP [off [sc2 a package]]]]]]
   b. Final particle: [VP give [sc1 e [NP P, John], NP [[off [sc2 sc3 his books back], t]]]]

(43) a. I sent [right] out the people their stuff.
   b. I gave the people their stuff [right] back.

Problems: off/out can be phrasal elsewhere (send it right off/out

These particles (but not back) are precluded from being phrasal in DOC.

Treating SCs as arguments of out/off is hard to motivate. Normally off/out take
Grounds as complements, which is inapplicable here. Out arguably takes an SC as
the reading of out found in DOCs.

(42)b) implies that what goes to John is his books back, not his books.
One might seek have-structures like (48)a)

(44) a. John had [sc1 sc2 his books back] to John.]
   have=be+to
   b. John had [sc1 books on the table] vs. *I gave John [sc1 books on the table].
   c. Mary had [sc1 her hair short] vs. *A hairdresser gave Mary [sc1 her hair short].

5.2. The direction of my argument

One complete analysis of DOC involves dative shift: movement of
possessorrecipient out of a null-headed PP complement to a pre-Theme position (e.g.

(45) a. Ann gave a book to Mary.
   b. Ann gave Mary a book [sc1 P bMary]

Dative shifting does not preclude us from capturing constraints on variants of the
dative alternation unless we ignore the information-structural effects of word order
and/or confuse spatial and possessive to. Details: McIntyre 2012.

(46) a. send [a letter to his home/*his home a letter] [His home has a letter.]
   b. assign the book a number. [The book has a number.]

(47) pull {the cart to her/*her the cart} [not a giving event]

¹ Acceptable clause-final PPs (send him a letter to his home address) seem to be adjuncts:
(i) a. I sent him a letter, this time to his home address.
   (cf.) *I handed a book, this time to John
   b. I re-sent him a book to his home address. [re- doesn’t scope over PP]
Silent dative PPs distribute complementarily with other clause-final PPs, cf. (48)b,c).

I argue that acceptable clause-final particles are allowed because they are legitimate parts of the silent PP, e.g. because they are PP modifiers, cf. (48)d).

(57) I stepped back. [backwards]

5.4. What business up/down/over could have in a silent dative PP

A modifier analysis is less obvious for these particles than for back, so unsurprisingly some speakers do not dig (58). However, it can be motivated as follows:

The silent dative P in DOC is stative. Hence (59) (reinterpreting data discussed in Krifka 2004, Rappaport & Levin 2008).

(59) a. *Grandma’s drum playing gave headaches to John.
   [Headdaches cannot move in space. Overt to has a directional interpretation, and by implicature this will be forced if there is no good information-structural reason for Theme-Recipient order]

5.3. Back as a PP modifier

Back in its (little-known) role as a restitutive modifier (cf. again, wieder):

(49) Basil found the arms of Venus and glued them back onto the statue.
   → Modifier of PP: *...and glued them back.
   → Restitutive: presupposes nothing more than a prior arms-on-statue state

(50) a. I folded it back flat. [AP modification]
   b. The noise jarred him back awake.
   c. The goal brought the two teams back even.

(51) a. I wrote my name and crossed it back *(out).
   b. I turned the TV back *(off).
   c. I folded the carpet back *(up).

Such examples translate into (Standard) German with restitutive wieder ‘again’, not zurück ‘back’. Unlike zurück, back has been reanalysed as a restitutive modifier (cf. the prefix re-, which also originally meant back(wards)).

Indications that back is part of PP: PP-typical modifiers like straight, right.

(52) a. I pulled the book straight back out of my bag.
   b. The chicken hatched, but wanted to go right back into the egg.

Restitutive back in possessive contexts; presupposes prior possession:

(53) She gave the vase back to the person who made it.

We find restitutive back with monotransitive possessive verbs. This perhaps speaks for a silent PP. Exceptions: *possess back, *own back. These either involve no silent PP, or are formed by incorporation of a silent P, and back interferes with this.

(54) a. I bought my house back.
   b. The warlords conquered some parts of the country back.
   c. Likewise: get, receive, claim, obtain, procure, purchase, lease, acquire, win; (Stative:) have, want, need

(55) either licenses an elliptical PP or is a separate use of back/zurück/wieder).

(55) a. She left Bitterfeld and never came back.
   b. Sie verließ Bitterfeld und kam nie wieder/zurück.

Restitutive back is not to be confounded with other uses of back:

(56) Jack kicked Joe in the head. Joe kicked him in the head back. [reciprocal]
5.5. The structure of the DOC with clause-final particles

- My suggestions about the semantics of particles in DOC will make the right word order predictions if the silent dative PP is a small clause head. Two options:

**Variant 1: First object in spec,VP**

\[(63)\]

\[
\begin{array}{c}
\text{DP} \\
Ralph \\
v \\
\end{array}
\begin{array}{c}
\text{DP} \\
Jane \\
v \\
\text{t_hand} \\
\text{Small Clause} \\
\text{PP} \\
\text{the book} \\
\text{t_hand} \\
\end{array}
\begin{array}{c}
\text{v'} \\
\text{V'} \\
\text{V} \\
\text{P} \\
\end{array}
\begin{array}{c}
\text{Prt} \\
\end{array}
\begin{array}{c}
\text{TO} \\
\end{array}
\begin{array}{c}
\text{t} \\
\end{array}
\begin{array}{c}
\text{v} \\
\text{P} \\
\text{V'} \\
\text{v'} \\
\text{v} \\
\end{array}
\begin{array}{c}
\text{in} \\
\text{Ralph} \\
\text{sent} \\
\text{Jane} \\
\text{the book.} \\
\end{array}
\]

- \(\square\): phonologically empty non-case assigning variant of possessive to.
- Recipient moves to spec,VP. \(v\) can assign case to the specifier of its complement (feature inheritance). Cf. ‘adjacency’ requirement on case assignment to object.
- Lexical \(V\) assigns case to the book. This is unorthodox (but see Baker 1996, López 2001). \(V\) does not assign case with unaccusatives, passives and monotransitives since \(T\) only attracts caseless DPs, and since agentive little \(v\) assigns case. In DOCs there is an extra DP needing case, so \(V\) must assign case to it as a last resort. (Another last resort option is with in present/endow/award him with a prize. Cf. Baker 1988:264ff on markedness of case assignment to themes in applicatives.) \(V\)’s ability to assign case also surfaces in possessor raising unaccusatives:

\[(64)\]

a. [The violin] broke [to it, a string].
   - [a string gets case from \(V\)]
   - hence no little \(v\) involved in (a)]

b. *A string was broken by the violin.
   - [a string gets case from \(V\)]
   - hence no little \(v\) involved in (a)]

c. *Which string did the violin break?
   - [(a) vs. (c) explained by a possessor raising account: a but not which projects a specifier for possessors; high applicative analyses don’t predict (c)]

**Variant 2: High applicative head**

\[(65)\]

\[
\begin{array}{c}
\text{DP} \\
Ralph \\
v \\
\end{array}
\begin{array}{c}
\text{DP} \\
Jane \\
v \\
\text{t_hand} \\
\text{Small Clause} \\
\text{PP} \\
\text{the book} \\
\text{t_hand} \\
\end{array}
\begin{array}{c}
\text{v'} \\
\text{V'} \\
\text{V} \\
\text{P} \\
\text{Prt} \\
\text{TO} \\
\text{t} \\
\end{array}
\begin{array}{c}
\text{v} \\
\text{P} \\
\text{V'} \\
\text{v'} \\
\text{v} \\
\end{array}
\begin{array}{c}
\text{in} \\
\text{Ralph} \\
\text{sent} \\
\text{Jane} \\
\text{the book back.} \\
\end{array}
\]

- Applicative head attracts caseless DP and assigns it an affected reading (Marantz 1993) or a discourse-related (e.g. topical) one (Levinson 2005, Takano 1998).
- \(App\) assigns case by Agree to closest DP: the book. \(v\) assigns case to closest DP (the recipient, attracted to spec,App).

- Alternative: Base-generate recipient in spec,App and assume that \(App\) can trigger ellipsis of possessive-to-PPs (and perhaps certain for-PPs).
- Using both silent PP and \(App\) is unusual (though cf. Brandt 2003). An overt instantiation of such a configuration is (66) (where have/with correspond to \(App\)):

\[(66)\]

a. The idea, has \([SC \text{plausibility } \{\text{pp to it}\}]\).

b. an idea, with \([SC \text{plausibility } \{\text{pp to it}\}]\)

5.6. Clause-non-final particles

\[(67)\]

\[
\begin{array}{c}
\text{DP} \\
Ralph \\
v \\
\end{array}
\begin{array}{c}
\text{V} \\
\text{P} \\
\end{array}
\begin{array}{c}
\text{in} \\
\text{Ralph} \\
\text{sent the people out some letters.} \\
\end{array}
\]

- \(Prt\) and \(V\) are merged as a complex head. \(Prt\) is optionally affixal. If non-affixal, \(V\) will stay put when \(V\) raises, giving \(DP-Prt-DP\) order.
- \(V\) does not assign case with unaccusatives, passives and monotransitives since \(T\) only attracts case. In DOCs there is an extra DP needing case, so \(V\) must assign case to it as a last resort. (Another last resort option is with in present/endow/award him with a prize. Cf. Baker 1988:264ff on markedness of case assignment to themes in applicatives.) \(V\)’s ability to assign case also surfaces in possessor raising unaccusatives:

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- Any aversion to \(Prt-DP-DP\) order could also be explained by using the Applicative head derivation in (65), and assuming that \(App\) resists morphologically complex heads, cf. Harley’s (2007) reinterpretation of the ban on Latinate verbs in DOC (show/exhibit them the books) as a ban on morphologically complex verbs.

- \(Is\ this\ really\ an\ argument\ for\ [v-V\ P]?\ If\ the\ SC\ part\ of\ the\ structure\ is\ right,\ then\ the\ only\ other\ way\ of\ getting\ the\ word\ order\ right\ appears\ to\ be\ to\ have\ out\ take\ an\ SC\ complement\ (e.g. \(42a\)),\ for\ which\ it\ is\ hard\ to\ find\ independent\ motivation.

5.7. Conclusions

- Native speakers acquire the word order options for different particles in DOC despite the extremely low frequency of the constructions, so we need an account that derives these facts from independent principles.
- The assumption that a particle’s semantics may or may not allow it to integrate into a silent dative PP seems to be the most promising first step in this direction.
- If right, this approach supports abstract syntax and thus a non-lexicalist research programme. (Irony: it grew out of study of alleged ‘idiosyncrasies’ that should be home territory for non-abstract approaches like Lexicalism, Construction Grammar.)
Problems: a) No analysis for benefactive+particle structures yet.
   b) Can an account of DOC compatible with my assumptions about particles handle all the other facts about DOCS? E.g. particles that dislike clause-final order with full DPs are better with pronouns (*send him it out), suggesting that pronouns move higher than full DPs.
   c) Unclear how to handle constraints on particle+resultative constructions:

   (68) a. *Grandma beat the bouncer up unconscious.
   b. *Grandma worked out all the fat off her body.  [work out ‘do weightlifting’]
   c. She painted the barn up red.

6. References

Belvin, R. 1993. The two causative havens are the two possessive haves. MITWI 20: 19-34.