Untangling IPP word order restrictions

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1. Introduction

(1) Past participle morphology (Dutch)
   a. Ik heb ge-werk-t
      I have \textit{GE-work-D}  
      ‘I have worked.’
   b. Ik ben ge-kom-en
      I am \textit{GE-come-N}  
      ‘I have come.’
   c. Ablaut
      Ik heb ge-zong-en (< zingen)
      I have \textit{GE-sing\textsubscript{ABL-N}}  
      ‘I have sung.’
   d. suppletion
      Ik heb ge-wees-t (< zijn)
      I am \textit{GE-be\textsubscript{SUPPL-N}}  
      ‘I have gone.’

(2) Infinitivus pro participio (IPP) (Dutch)
   a. * Ik heb ge-wil-d werk-en
      I have \textit{GE-want-D work-INF}  
      ‘I wanted to work.’
   b. Ik heb \textit{will-en} werk-en
      I have \textit{want-INF work-INF}  
      ‘I wanted to work.’
   c. * Ik heb hem ge-zie-n werk-en
      I have him \textit{GE-see-N work-INF}  
      ‘I saw him work.’
   d. Ik heb hem \textit{zie-n} werk-en
      I have him \textit{see-INF work-INF}  
      ‘I saw him work.’
   e. * Ik heb ge-staa-n werk-en
      I have \textit{GE-stand-N work-INF}  
      ‘I was working for a while.’
   f. Ik heb \textit{staa-n} werk-en
      I have \textit{stand-INF work-INF}  
      ‘I was working for a while.’

(3) IPP with suppletive form (Dutch)
   Ik ben \textit{wez-en} zwemm-en
   I am \textit{be\textsubscript{SUPPL-INF} swim-INF}  
   ‘I went for a swim.’

2. Word order generalizations

(4) IPP requires: 1-2-3 auxiliary\textsubscript{1} \leftarrow participle\textsubscript{2} \rightarrow infinitive\textsubscript{3} (Dutch)

(5) No IPP with: 3-2-1 infinitive\textsubscript{3} \leftarrow participle\textsubscript{2} \leftarrow auxiliary\textsubscript{1} (Frisian, Stellingwerfs)

(6) Stellingwerfs (Bloemhoff 1977)
   ..dat Jan dat doe-n \textit{kun-d} had (*kunn-en)
   that John that do-INF can-D had
   ‘..that John could have done that.’

(7) But: cases of optional IPP with 3-2-1:

   a. Achterhoeks (Blom & Hoekstra 1996)
      ..dat ik schriev-m \{\textit{will-n}, \textit{e-wil-d}\} had
      that I write-INF want-INF GE-want-D had
      ‘..that I had wanted to write.’
b. *Swabian* (Steil 1989), among other orders
..daß d Anna ons bsauch-a well-a had
   that the Anna us visit-INF want-INF has
   ‘that Anna wanted to visit us.’

(3-2-1)

c. *Austrian Bavarian* (Wurmbrand 2004): 3-2-1 with IPP acceptable in judgment task

(8) IPP in optional orders
..daß er es hat lösen könn-en
   that he it has solve-INF can-INF
   ‘that he was able to solve it.’

(1-3-2)
b. *West Flemish* (Haegeman 1994)
..da Valère nie nor us will-en kom-en eet
   that Valery not to house want-INF come-INF has
   ‘that Valery did not want to come home.’

(2-3-1)
c. *Austrian Bavarian* (Patocka 1997)
..dama was lean-a hettn soi-n
   that we something learn-INF had shall-INF
   ‘that we should have learned something.’

(3-1-2)

(9) *New generalization*
IPP in 2-3 clusters occurs without exception: 1-2-3 Dutch
   2-3-1 West Flemish
   2-1-3 does not occur

3. 2-3 without IPP

(10) *Samatimeric* (Mileck 1997)

a. iø hed si g-se-ŋ fuad-foa-n
   you:PL have them GE-see-N away-go-INF
   ‘You saw them drive off.’

([1]-2-3)
beb. ëa hod k-holf-n omgro:m
   he has GE-helpABL-N dig:INF
   ‘He helped shovel.’

([1]-2-3)

(11) *Luxemburgisch* (Bruch 1973)

a. Hoffentlich huet keen dech ge-si go-en
   hopefully has noone you GE-see go-INF
   ‘Hopefully noone saw you leave.’

([1]-2-3)
b. Echhun dat ge-spier-t komm-en
   I have that GE-see-D come-INF
   ‘I saw that coming.’

([1]-2-3)

(12) *Austrian Bavarian* (Patocka 1997)

a. bin i aa dei gång fråg-n
   am I also DEMGE:GO SUPPL-Nask-INF
   ‘So I went and asked them too.’

([1]-2-3)
b. nåchdem håt des Gårn miaß-t g-wåsch-n weed-n
   afterwards has the net must-D GE-wash-N become-INF
   ‘Afterwards the net must be washed.’

([1]-2-4-3)
(13) Siberian Mennonite Plautdiitsch (Jedig 1969)
a. äm kunt haud-st kun-t ne:m² ([1]-2-3)
   the Walachian had-2SG can-D take:INF
   ‘You could have taken the Walachian [a horse].’

b. däi ha:ft j-äpí:-t äm prodavâts ko:m² ([1]-2-3)
   DEMhas GE-see-D the merchant come:INF
   ‘He saw the merchant come.’

(14) Zimbrian (Schweitzer 1939)
a. de pruoder dahuame henn-en nixt ga-sex-t kxenn-j ([1]-2-3)
   the brothers at home have-him not GE-see-D come-INF
   ‘The brothers at home did not see him come.’

b. alora inj hêrre hêt-ar ga-wou-t fang-an wänte ([1]-2-3)
   then the man has-he GE-want-D take-INFrocks
   ‘Then the man wanted to pick up rocks.’

(15) Afrikaans (Du P. Scholtz 1963)
..dat ek ge-kom werk het (2-3-1)
   that I GE-come work:INF have

(16) Yiddish, Middle High German, Middle Dutch

4. Status of the V3 infinitive

(17) Funny aspects about the [2-3] orders without IPP:

a. V3 infinitive must be final, yielding the 2-1-3 order found only with extraposition elsewhere (18)

b. the relevant dialects generally have descending (3-2-1) orders (19)

c. there is a 3-2 alternative with IPP (20)

d. the infinitive may be ‘satzwertig’ (21)

(18) Luxemburgish (Bruch 1973)
ob-s de hollänesch ge-léier-t hues schwätz-en (2-1-3!!)
   whether-2SG you Dutch GE-learn-D have speak-INF
   ‘whether you learned to speak Dutch.’

b. Zurich Swiss German (Lötscher 1978)
..wil er en ghôö-r-t hât choo (2-1-3!!)
   because he him hear-D has come:INF
   ‘because he heard him come.’

[Note: Zurich Swiss German has IPP with [1]-2-3, but Lötscher notes that there is a tendency for participles to appear where infinitives are expected, suggesting another case of 2-3 without IPP]

(19) temporal auxiliary follows the participle in embedded clauses

Siberian Mennonite Plautdiitsch (Jedig 1969)
van moº de mutº niç j-º-storº ve:º (2-1)
   if only the mother not GE-die:N were
   ‘If only mother hadn’t died.’
(20) competition with IPP-variant


   ji: haud *t'əm* hə:rt
   you:PL had CAN:INF mow:INF
   ‘You could have mown.’

b. *Samatimeric* (Mileck 1997)

   iə hed si fuad-foa-t
   you:PL have them away-go-INF see-INF
   ‘You saw them drive off.’

c. *Luxemburgish* (Bruch 1973)

   wa keen dech hättheier-e komm-en
   when noone you had hear-INF come-INF
   ‘...when noone would have heard you come.’

d. *Austrian Bavarian* (Patocka 1997)

   war i mit knecht und dian həun ábat-n miass-n
   how I with servant and maid have work-INF must-INF
   ‘how I had to work with servants and maids.’

e. *Zurich Swiss German* (Lötscher 1978)

   ..wil er en ghōor-e choo hāt
   because he him hear-INF come:INF has
   ‘...because he heard him come.’

(21) V3 infinitive may be ‘satzwertig’

a. *Samatimeric* (Mileck 1997)

   mie hom si k*š*:ja [ mədən kinh ha:mn əː ]
   we have her GE-see-N with her child home go:INF
   ‘We saw her go home with her child.’

b. *Siberian Mennonite Plautdiitsch* (Jedig 1969)

   dāi hāt jə:di:s-t [ ām prodavats ko:mmə ]
   DEM has GE-see-D the merchant come:INF
   ‘He saw the merchant come.’

(22) reminiscent of the ‘third construction’

a. *Dutch*

   ..dat hij het ge-probeer-d heeft [ te lez-en ]
   that he it GE-try-D has to read-INF
   ‘...that he tried to read it.’

b. *Frisian* (Reuland 1990)

   ..dat er my dat boek ferbea-n hat [ te lêz-en ]
   that he me that book forbid-N has to read-INF
   ‘...that he forbid me to read that book.’

(23) Hypothesis

a. 2 = IPP [ 1 - 2 - 3 ] (order irrelevant)

b. 2 = participle [ 1 - 2 ] 3 (order irrelevant within [cluster] )
a. **Austrian Bavarian** (Patocka 1997)

wånn-st iawand såg-n hå-st g-hea-t

when-2SG someone say-INF have-2SG GE-hear-D

‘when you heard someone say’

b. **Samatimeric** (Mileck 1997)

ɛa hõd mi kom-a g-se-ŋ

he has me come-INF GE-see-N

‘He saw me come.’

c. **Samatimeric** (Mileck 1997)

du hôsdra kox-n k-holf-n

you have.her cook-INF GE-helpABL-N

‘You helped her cook.’

d. **Luxemburgish** (Bruch 1973)

deen de leit moral priedig-en as gaang

REL the people ethics preach-INF is ge:goSUPPL

‘who has gone preach ethics to the people’

e. **Luxemburgish** (Bruch 1973)

deen de leit moral priedig-e gaang as

REL the people ethics preach-INF ge:goSUPPL is

‘who has gone preach ethics to the people’

f. **Siberian Mennonite Plautdiitsch** (Jedig 1969)

ät’ ha: åm honomía sjrï-ë jï-hï-d

I have the cock crow-INF GE-hear-D

‘I heard the cock crow.’

(25) 2 = participle 3 [ 1 - 2 ] (order within cluster irrelevant) (cf. (23))

(26) The IPP-effect occurs whenever a participle takes an infinitive in its complement domain (i.e. the infinitive is not ‘extraposed’).

(27) a. [ V1 [ V2 [ V3 ] ] ] IPP


5. **Status of ge**

(28) **History of ge** (Van Swaay 1899, Van Dijk 1998)

a. preverb meaning FULL, COMPLETE →

b. telicity inducing particle →

c. perfective marker →

d. relative tense marker →

e. (some dialects) simple past marker

(29) **Gothic** ga-mains ~ **Latin** com-munis

Dutch ge-zusters ‘sisters of each other’

(30) **Gothic** lisan ‘reap’ ~ **ga-lisan** ‘collect’

Dutch ge-knield ‘kneeled down’

(31) **Dutch** ge-zeg-d-e ‘what has been said’ ~ **Latin** praedicatum ‘predicate’

GE-say-D-NOM
(32) **Dutch**

I heb het ge-wet-en (state)
I have it GE-know-N
‘I knew it.’

(33) **Zimbrian** (Schweitzer 1939:94)

un hat-en funt-at nôu in de tave’rn g’er hat ga-trinkx-et
and has-him find-D still in the tavern where he has GE-drink-D
‘and he found him still in the tavern where he was drinking’

(34) **Infinitive: perfect functioning as simple past**

a. Hij beweert dat hij sliep toen ik binnen kwam (Dutch)

He claims that he sleep:PAST when I in come:PAST
‘He claims that he was asleep when I came in.’

b. Hij beweert ge-slap-en te hebben toen ik binnen kwam

He claims GE-sleep-N to have:INF when I in come:PAST
‘He claims to have been asleep when I came in.’

(35) The application of *ge* to the past participle was already productive in Old Saxon / Old High German (Prokosch 1939:205)

\[Kern (1912:49) and Paul (1920:128) date the earliest cases of IPP in Middle High German in the early 13th century, which led to the hypothesis that IPP is an innovation involving suppression of *ge*. This scenario predicts the Middle High German (and Middle Dutch) should have *ge*-less participles instead of infinitives in the IPP construction, contrary to fact (Kern loc cit). Instead we assume (with Paul loc cit) that *ge*-less participles where assimilated to infinitives already before the Middle High German period.\]

(36) **2-verb cluster**

- AUX ... *ge* ... [participle] AUX ... participle ... infinitive AUX ... infinitive ... infinitive
- AUX ... *ge* + participle AUX ... *ge*-less part...infinitive AUX ... infinitive ... infinitive
- AUX ... *ge* + participle AUX ... infinitive ... infinitive (IPP) AUX ... infinitive ... infinitive

(37) **Vestiges of *ge*-less participles in IPP-clusters**

a. **Dutch** (West Flemish, Western East Flemish, parts of Antwerp province and Belgian Brabant)

Hij is wees-t viss-en
he is be SUPPL-D fish-INF
‘He has been out fishing.’ (De Schutter 1974 [1983:273-275])

b. **Dutch** (Zeeuws, West Brabantish, northern Antwerp province, and parts of Belgian Brabant)

Hij is wees-t-en viss-en
he is be_suppl-D-INF fish-INF
‘He has been out fishing.’ (loc cit)

c. **Altenburgisch** (Weise 1900:154)

..dass ihm kein Menschswas hat konn-t an-hab-en (1-2-3)
that him no man something has can:D on-have-INF
‘...that noone could do anything to him.’

d. **Dillingen (Saar)** (Labouvie 1938:105)

Er hat nicht möch-t-en komm-en
he has not may-D-INF come-INF
‘He was not allowed to come.’

e. **Early Middle Dutch** (Heersche 1991:166)

..of hi also alse recht es hem heuet daen sinn-en
whether he thus like just is him has do_suppl-N excuse-INF
‘...whether he thus rightly let himself be excused.’
Hypothesis
The IPP-effect is the result of analogical leveling of a ge-less participle to an infinitive

6. The tense of infinitives

An infinitive is [+tense] if it expresses tense information

Simple past = once removed from the here and now (cf. Ebeling 1962:92)

Test: cotemporaneity with reference point in the past → (34a,b)

An infinitive is [+tense] if it shifts to an aux+participle construction to express cotemporaneity with a reference point in the past

Ik { sliep / * heb ge-slap-en } toen hij binnen kwam
I sleep: PAST have GE-sleep-N when he in came

Ik moet { ge-slap-en hebben / * slap-en } toen hij binnen kwam
I must GE-sleep-N have:INF sleep:INF when he in came

The complement of IPP-verbs is always [-tense]

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deontic vs. epistemic

a. Jij moet ge-slap-en hebben toen ik binnen kwam (probability/*obligation)
you must GE-sleep-N have:INF when I in came
‘You must have been asleep when I came in.’
NB. also irrelevant relative tense reading: You must have had your nap when I came in.

b. Jij moet van mij ge-slap-en hebben toen hij binnen kwam (only obligation)
you must of me GE-sleep-N have:INF when he in came
‘I demand that you have rested by the time he came in.’

c. Jij hebt moet-en slapen (IPP: only obligation)
you have must-INF sleep:INF
‘It had to sleep.’
‘*You probably slept.’

Conative verbs may have a coerced tensed complement: then no IPP

a. Hij heeft ge-probeer-d [ gekozen te worden morgen]
his GE-try-D elected to become tomorrow
‘He tried to (make arrangements such that he would) be elected tomorrow.’

b. * Hij heeft prober-en [ gekozen te worden morgen]
his try-INF elected to become tomorrow

Proposal: an event is bounded by:
D on a nominal complement
T on a clausal complement
(47) a. John completed the/a letter (in/*for) 10 minutes
b. John completed letters (for/*in) 10 minutes

(48) a. John saw the play (in/for) 10 minutes
b. John saw us play (for/*in) 10 minutes

(49) Atelicity of ECM complements
a. Ik heb het boek ge-lez-en b. Ik liet het boek lez-en
I have the book GE-read-N I let:PAST the book read-INF
’I read the book.’ ‘I let (sc. them) read the book.’
[book is finished] [book is not finished, possibly not even read]
c. Ik heb de film ge-zie-n d. Ik heb de film zien op nem-en
I have the movie GE-see-N I have the movie see-INF up take-INF
’I saw the movie.’ ‘I saw (sc. them) shoot the movie.’
[the whole movie] [some segment of the shooting process]

(50) tenseless complement → unbounded event → incompatible with ge → ge-less participle/IPP

(51) Perhaps: no T → no C → no phase (phasal/interpreted complement is what bounds events)

(52) let
a. laten stikken b. laten zitten
let suffocate let sit
’abandon, leave to one’s own devices’ ‘give up, forget about’
c. laten vallen
let fall
’drop, cease to pursue’ ’abandon, withdraw support’

(53) see
a. iemand zien zitten b. iemand niet zien staan
someone see sit someone not see stand
’appreciate someone’ ‘ignore someone, fail to respect someone’

(54) noncompositionality
a. Hij heeft mij lat-en stikk-en b. # Ik benge-stik-t
he has me let-INF suffocate-INF I am GE-suffocate-D
’He abandoned me.’ ‘I suffocated’
(not ‘I was abandoned’)
c. Hij heeft mij nooit zie-n zitt-en
he has me never see-INF sit-INF
’He never liked me.’
d. # Ik heb nooit ge-zet-en volgens hem
I have never GE-sit-N according.to him
’I never sat, according to him.’
(not ‘He never liked me.’)

7. Conclusion
a. the complement of IPP-verbs is (inherently) tenseless
b. tenseless complements yield unbounded events, incompatible with the completive particle ge
c. originally, all perfect participles were ge-less, but some (the ones indicating bounded events) came
to be associated with ge, which then got reanalyzed as a prefix.
d. participles without ge were leveled with infinitives: the IPP effect.
e. [2-3] clusters without IPP then must be tenseless, and the alternation with IPP variants must be a
function of the tense properties of the infinitival complement
f. if so: IPP is not restricted by word order, but by the (phrasal) status of V3
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