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Some notes on the origin and distribution of the IPP-effect

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1. Introduction

(1) Past participle morphology (Dutch)

- a. Ik heb ge-werk-t
I have GE-work-D
'I have worked.'
- b. Ik ben ge-kom-en
I am GE-come-N
'I have come.'

c. Ablaut

- Ik heb ge-zong-en (< zingen)
I have GE-sing_{ABL}-N
'I have sung.'

d. suppletion

- Ik ben ge-wees-t (< zijn)
I am GE-be_{SUPPL}-N
'I have gone.'

(2) Infinitivus pro participio (IPP) (Dutch)

- a. * Ik heb ge-wil-d werk-en
I have GE-want-D work-INF
'I wanted to work.'
- b. Ik heb will-en werk-en
I have want-INF work-INF
'I wanted to work.'
- c. * Ik heb hem ge-zie-n werk-en
I have him GE-see-N work-INF
'I saw him work.'
- d. Ik heb hem zie-n werk-en
I have him see-INF work-INF
'I saw him work.'
- e. * Ik heb ge-staa-n werk-en
I have GE-stand-N work-inf
'I was working for a while.'
- f. Ik heb staa-n werk-en
I have stand-INF work-INF
'I was working for a while.'

(3) IPP with suppletive form (Dutch)

- Ik ben wez-en zwem-m-en
I am be_{SUPPL}-INF swim-INF
'I went for a swim.'

2. Word order generalizations

- (4) IPP requires: 1-2-3 auxiliary₁ → participle₂ → infinitive₃ (Dutch)

- (5) No IPP with: 3-2-1 infinitive₃ ← participle₂ ← auxiliary₁ (Frisian, Stellingwerfs)

(6) Stellingwerfs (Bloemhoff 1977)

- ..dat Jan dat doe-n **kun-d** had (*kunn-en)
that John thatdo-INF can-D had
'..that John could have done that.'

(3-2-1)

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

a. Achterhoeks (Blom & Hoekstra 1996)

- ..dat ik schriev-m {will-n, e-wil-d} had
that I write-INF want-INF GE-want-D had
'..that I had wanted to write.'

(3-2-1)

- b. *Swabian* (Steil 1989), among other orders
..daß d Anna ons bsuach-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
- (13) Optional IPP in other orders
- a. *Standard German* (Wurmbrand 2004)
..daß er es hat **lös-en** 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 wås lean-a hettn **soi-n**
that we something learn-INF had shall-INF
‘..that we should have learned something.’ (3-1-2)
- (14) *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

- (15) *Samatimeric* (Mileck 1997)
- a. iø hed si **g-se:-ŋ** fuəd-fəa-n ([1]-2-3)
you:PL have them GE-see-N away-go-INF
‘You saw them drive off.’
- b. εø hød **k-holf-n** ʊmgrɔ:m ([1]-2-3)
he has GE-help_{ABL}-N dig:INF
‘He helped shovel.’
- (16) *Luxemburgisch* (Bruch 1973)
- a. Hoffentlich huet keen dech **ge-si** go-en ([1]-2-3)
hopefully has noone you GE-see go-INF
‘Hopefully noone saw you leave.’
- b. Echhun dat **ge-spier-t** komm-en ([1]-2-3)
I have thatGE-see-D come-INF
‘I saw that coming.’
- (17) *Austrian Bavarian* (Patocka 1997)
- a. bin i aa dei **gång** fråg-n ([1]-2-3)
am I also DEM GE:go_{SUPPL}:Nask-INF
‘So I went and asked them too.’
- b. nåchdem håt des Gårn **miaß-t** g-wåsch-n wead-n ([1]-2-4-3)
afterwards has the net must-D GE:wash-N become-INF
‘Afterwards the net must be washed.’

- (18) *Siberian Mennonite Plautdiitsch* (Jedig 1969)
- a. äm kunt^a haud-st **kun-t** ne:m^e
the Walachian had-2SG can-D take:INF
'You could have taken the Walachian [a horse].'
- b. däi ha:ft **j^e-spi:^e-t** äm prodaväts ko:m^e
DEMhas GE-see-D the merchant come:INF
'He saw the merchant come.'
- (19) *Zimbrian* (Schweitzer 1939)
- a. de pruoder dahuame henn-en nixt **ga-sex-t** kxenn-j
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 wânte
then the man has-he GE-want-D take-INFrocks
'Then the man wanted to pick up rocks.'
- (20) *Afrikaans* (Du P. Scholtz 1963)
- ..dat ek **ge-kom** werk het
that I GE-come work:INF have
- (21) Yiddish, Middle High German, Middle Dutch
- (22) *Factors involved*
- a. status of the V3 infinitive
b. status of the *ge*-prefix

4. Status of the V3 infinitive

- (23) V3 infinitive must be final (*d.n.a.* to Afrikaans, Zimbrian, Yiddish)
- a. *Luxemburgish* (Bruch 1973)
- ob-s de hollänesch **ge-léier-t** hues schwätz-en
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 **ghöör-t** hät choo
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]

- (24) temporal auxiliary follows the participle in embedded clauses

Siberian Mennonite Plautdiitsch (Jedig 1969)

van mo^a de mut^a niç j^e-storv^e ve^a
if only the mother not GE-die:N were
'If only mother hadn't died.'

- (25) competition with IPP-variant

- a. *Siberian Mennonite Plautdiitsch* (Jedig 1969)
- ji: haud **t'xn^e** hä:v^e
you:PL had can:INF mow:INF
'You could have mown.'

- b. *Samatimeric* (Mileck 1997)
 ie hed si fuəd-fəa-n **səi-ŋ** ([1]-3-2)
 you:PL have them away-go-INF see-INF
 'You saw them drive off.'
- c. *Luxemburgish* (Bruch 1973)
 wa keen dech hätt**héier-e** komm-en (1-2-3)
 when noone you hadhear-INF come-INF
 '..when noone would have heard you come.'
- d. *Austrian Bavarian* (Patočka 1997)
 wiər i mit knecht unddian həun åabat-n **miass-n** (1-3-2)
 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 **ghöör-e** choo hät (2-3-1)
 because he him hear-INF come:INF has
 '..because he heard him come.'

(26) V3 infinitive may be 'satzwertig' (extraposed)

- a. *Samatimeric* (Mileck 1997)
 miəhom si **k-səi-ŋ** [mid iən kind ha:m gə:] ([1]-2-3)
 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)
 däi ha:ft **j^e-špir^e-t** [äm prodaväts ko:m^e] ([1]-2-3)
 DEMhas GE-see-D the merchant come:INF
 'He saw the merchant come.'

(27) reminiscent of the 'third construction'

- a. *Dutch*
 ..dat hij het **ge-probeer-d** heeft [te lez-en] (2-1-3)
 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 lēz-en] (2-1-3)
 that he me that book forbid-N has to read-INF
 '..that he forbid me to read that book.'

(28) Hypothesis

- a. 2 = IPP [1 - 2 - 3] (order irrelevant)
 b. 2 = participle [1 - 2] 3 (order irrelevant within [cluster])

(29) 3-2 orders without IPP: intraposition

- a. *Austrian Bavarian* (Patočka 1997)
 wånn-st iawand såg-n hå-st **g-hea-t** (3-1-2)
 when-2SG someone say-INF have-2SG GE-hear-D
 'when you heard someone say'

- b. *Samatimeric* (Mileck 1997)
 ea h̥od mi k̥om-a **g-səx-ŋ** ([1]-3-2)
 he has me come-INF GE-see-N
 'He saw me come.'
- c. *Samatimeric* (Mileck 1997)
 du h̥osdra kox-n **k-hɔlf-n** ([1]-3-2)
 you have.her cook-INF GE-help_{ABL}-N
 'You helped her cook.'
- d. *Luxemburgish* (Bruch 1973)
 deen de leit moral priedig-en as **gaang** (3-1-2)
 REL the people ethics preach-INF is ge:go_{SUPPL}
 'who has gone preach ethics to the people'
- e. *Luxemburgish* (Bruch 1973)
 deen de leit moral priedig-e **gaang** as (3-1-2)
 REL the people ethics preach-INF ge:go_{SUPPL} is
 'who has gone preach ethics to the people'
- f. *Siberian Mennonite Plautdiitsch* (Jedig 1969)
 ät' ha: äm ho:n sjri:-e **j^ə-hi^ə-d** ([1]-3-2)
 I have the cock crow-INF GE-hear-D
 'I heard the cock crow.'

(30) 2 = participle 3 [1 - 2] (order within cluster irrelevant) (cf. (28))

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

- (32) a. [V1 [V2 [V3]]] IPP
 b. [[V1 [V2]] & [V3]] participle

5. Status of *ge*

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

- a. preverb meaning FULL, COMPLETE →
- b. telicity inducing particle →
- c. perfective marker →

(34) But not a perfective marker in all varieties

- a. *Zimbrian* (Schweitzer 1939)
 un hat-en funt-at nōu~ 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*'
- b. *Afrikaans* (De Vos 2002)
 stadig het die nachte 'n speciale soort puurheid ge-kry
 slowly have the nights a special kind purity GE-get
 'slowly the nights were *achieving* a special kind of purity'

(35) *Hypothesis*

IPP occurs only where *ge* is a pure perfective marker
 (i.e. not where *ge* is absent [Frisian] or where it has a different status [Afrikaans, Zimbrian, Yiddish])

6. Aspectual properties of 3-verb clusters

(36) Atelic

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

(37) Resultative particle impossible

- | | |
|--|--|
| a. Ik heb mijn fout ge-zie-n
I have my mistake GE-see-N
'I saw my mistake.' | b. Ik heb mijn fout in ge-zie-n
I have my mistake in GE-see-N
'I realized my mistake.' |
| c. Ik heb het plan (*in) zie-n mislukk-en
I have the plan in see-INF fail-INF
'I saw the plan fail.' / *'I realized that the plan had failed.' | |

(38) Modals: projected polarity transition, incompatible with resultative

- | | |
|--|---|
| a. Hij stierf
he died | b. Hij wilde / zou / kon / mocht / moest sterf-en
he wanted / would / could / might / had to die-INF |
| c. Hij is ge-storv-en (# maar hij leeft nog)
he is GE-die-N but he lives still
'He died, he is dead (but he is still alive).' [contradictory] | |
| d. Hij heeft will-en / kunn-en / mog-en / moet-en sterf-en (maar hij leeft nog)
he has want-INF / can-INF / may-INF / must-INF die-INF but he lives still
'He wanted / could / was allowed / had (to) die (but he is still alive).' [not contradictory] | |

(39) Instability of relation auxiliary—modal (Hoekstra 1997, chapter 3)

- | | |
|---|---|
| a. Hij hadzull-en sterf-en
he hadshall-INF die-INF
'He would have died, was supposed to die.' | b. Hij zou ge-storv-en zijn
he shall:PAST GE-die-N be:INF
'He would have died.' |
|---|---|

(40) Postural verb incompatible with telicity

- | | |
|--|--|
| a. Hij zit te viss-en
he sits to fish-INF
'He is fishing, he is angling.' | b. Hij heeft zitt-en viss-en
he has sit-INF fish-INF
'He has been fishing, angling.' |
| c. Hij heeft de vijver leeg ge-vis-t (# maar er zijn er nog genoeg over)
he has the pond empty GE-fish-D but there's plenty left
'He fished all the fish out of the pond.' [telic] | |
| d. Hij heeft de vijver leeg zitt-en viss-en (maar er zijn er nog genoeg over)
he has the pond empty sit-INF fish-INF but there's plenty left
'He has been busy fishing all the fish out of the pond.' [atelic] | |

(41) Accomplishment vs. past activity

- | | |
|---|---|
| a. Hij is wez-en zwemmen-en
he is be _{SUPPL} -INF swim-INF
'He has been out for a swim.' | b. Hij is zwemmen-en
he is swim-INF
'He is out for a swim.' |
|---|---|

- c. Hij is tien minuten wez-en zwemmen
 he is ten minutes be_{SUPPL}-INF swim-INF
 'He has been out for a swim *for ten minutes*.'
- d. * Hij is in tien minuten wez-en zwemmen
 he is in ten minutes be_{SUPPL}-INF swim-INF
 (*intended reading*) 'He was back from his swim *in ten minutes*'.

(42) *IPP incompatible with resultative*

- a. Hij heeft **ge-help-en** allochtonen te ler-en fiets-en
 he has GE-help-N foreigners to learn-INF bike-INF
 'He helped foreigners to learn how to ride a bike.'
- b. Hij heeft allochtonen **help-enler-en** fiets-en
 he has foreigners help-INF learn-INF bike-INF
 'He helped foreigners to learn how to ride a bike.'
- c. Hij heeft { tien minuten, *in tien minuten } ge-studeerd
 he has ten minutes in ten minutes GE-study-D
 'He studies { for / *in } ten minutes.'
- d. Hij heeft zich{ in tien minuten, *tien minuten } rijk ge-studeerd
 he has REFL in ten minutes ten minutes rich GE-study-D
 'He studied himself to a fortune { in / *for } ten minutes.'
- e. ? Hij heeft zich rijk **ge-help-en** allochtonen te ler-en fiets-en
 he has REFL rich GE-help-N foreigners to learn-INF bike-INF
 'He made a fortune helping foreigners to learn how to ride a bike.'
- f. * Hij heeft zich rijk allochtonen **help-enler-en** fiets-en
 he has REFL rich foreigners help-INF learn-INF bike-INF
- g. ? Hij heeft zich suf **ge-probeer-d** een vriendin te vind-en
 he has REFL drowsy GE-try-D a girlfriend to find-INF
 'He tried to the very end to find a girlfriend.'
- h. * Hij heeft zich suf **prober-en** een vriendin te vinden
 he has REFL drowsy try-INF a girlfriend to find-INF

- (43) Conclusion: ! the V2 participle in 3-verb clusters would not have triggered application of perfective *ge*
 ! IPP results not from suppression of *ge* but from failure to add *ge*

7. The historic development

(44) *Side by side*

- a. auxiliary + ge-marked participle
 b. auxiliary + ge-less participle + infinitive
 c. modal + infinitive + infinitive

- (45) Result: analogical pressure to assimilate the ge-less participle to the infinitive
 (cf. Paul 1920: 129)

(46) *In between forms*

- | | |
|---|--|
| a. West Flemish (De Schutter 1974)
Hij is wees-t viss-en
he is be _{SUPPL} -D fish-INF
'He has been out fishing.' | b. Zeeuws (De Schutter 1974)
Hij is wees-t-en viss-en
he is be _{SUPPL} -D-INF fish-INF
'He has been out fishing.' |
|---|--|

Altenburgisch (Weise 1900)

- b. ..dass ihm kein Menschwas 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.'
- c. wenn man das hätte **konn-t** wiss-en (1-2-3)
 when one thathad can-D know-INF
 'If one only could have known that.'
- d. *Dillingen (Saar)* (Labouvie 1938)
 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)
 ..of hi also else recht es hem heuet **dae-n** sinn-en
 whether he thus like just is him has do_{SUPPL}-N excuse-INF
 '..whether he thus rightly let himself be absolved.'

(47) *Interference Frisian* (Wolf 1996)

- a. rinn-en sjoe-n → b. sjoe-n rinn-en → c. sje-n rinn-en
 run-INF see_{ABL}-N see_{ABL}-N run-INF see-INF run-INF

8. 2-3 as a unit for spell-out

(48) *let*

- | | |
|--|---|
| a. laten stikken
let suffocate
'abandon, leave to one's own devices' | b. laten zitten
let sit
'give up, forget about' |
| c. laten vallen
let fall
'drop, cease to pursue' 'abandon, withdraw support' | |

(49) *see*

- | | |
|--|---|
| a. iemand zien zitten
someone see sit
'appreciate someone' | b. iemand niet zien staan
someone not see stand
'ignore someone, fail to respect someone' |
|--|---|

(50) *noncompositionality*

- | | |
|---|--|
| a. Hij heeft mij lat-en stikk-en
he has me let-INF suffocate-INF
'He abandoned me.' | b. # Ik benge-stik-t
I am GE-suffocate-D
'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.') | |

(51) *fronting*

- a. Ik heb hem niet zie-n zwemmen
I have him not see-INF swim-INF
'I did not see him swim.'

- b. * Zwemmen heb ik hem niet zie-n / ge-zie-n
 swim-INF have I him not see-INF GE-see-N
- c. Zie-n zwemmen heb ik hem niet
 see-INF swim-INF have I him not
 'I did not see him swim.'

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