Parameterising Germanic ditransitive variation: A historical-comparative study

Hezekiah Akiva Bacovcin

University of Pennsylvania - Department of Linguistics

April 20, 2017

Outline

- Introduction
- Theoretical Analysis
- Swedish Data
- 4 Historical English Data
- Conclusions and Questions

Contributions

- New analysis of recipient ditransitives: Recipients are universally introduced as dative PPs in the specifier of an applicative phrase
- 2 Complete syntax framework: Complete set of additional syntactic machinery to explain Germanic recipient ditransitive data
- Typological summary: Collection of all of the relevant data on Germanic recipient ditransitives in one place
- New historical data: Collection of new data on the history of English from parsed corpora
- New historical methods: Applications of new techniques to use historical data in theoretical syntax investigations

Theory Outline

- What is a recipient?
- What is a dative PP?
- Where is the specifier of an applicative phrase?
- What syntactic mechanisms do we need to posit for empirical coverage?
- Why should we prefer this analysis on conceptual grounds?

Question

What is a recipient?

Theta Role Theory

- Recipient is one of a number of theta roles
- Building on Dowty (1991):
 - Theta roles are morphosyntactic categories (like singular/plural)
 - Each role is associated with prototypical features
 - Prototypes guide assignment of theta roles to agruments
 - Ambiguous cases are determined by local cultural/linguistic norms

Recipients

- Recipients are the endpoint of a transfer of possession event (that may or may not involve movement)
- GIVE is the prototypical recipient action (an AGENT transfers a THEME to a RECIPIENT)

Question

What is a dative PP?

Structural vs. Non-structural case

- Long history of a distinction between structural and non-structural case (Woolford (2006) gives a summary of arguments)
- Structural cases alternate, while non-structural cases do not
- Dative case (typical for recipients) has usually been regarded as non-structural

Prepositional theory of non-structural case

- Non-structural case can be distinguished by the addition of an extra syntactic layer (Bittner and Hale, 1996; Bayer et al., 2001)
- Recent proposals associate this extra layer with prepositional phrases (Asbury, 2005, 2007; Rezac, 2008; Caha, 2009)
- As a non-structural case, the case marking on recipients (often called dative) is actually just the morphological reflex of a preposition concord

Prepositions, thematic roles, and case

- The preposition that introduces an argument (or adjunct) is syntactically associated with the thematic role of the argument
- All recipients are introduced with a recipient P
- Example: [P_{recipient} [DP Recipient]]

Structural cases

- Nominative and accusative (structural cases) are features of ungoverned DPs (i.e., not embedded in PPs)
- DPs under prepositions do not receive syntactic structural case (although the reflexes of non-strucutral case may be morphologically syncretic with structural cases)

Question

Where is the specifier of an applicative phrase?

Applicative Analysis

$$PP_{\text{Recipient}}$$
 $Appl$
 $Appl$
 DP_{Theme}
 VP
 V

Properties of Analysis

- Applicatives do not assign thematic roles (prepositions do)
- Applicatives only provide a syntactic position for applied arguments to enter the derivation
- Completely exchangable with a Larsonian VP-shell analysis (Larson, 1988)

Question

What syntactic mechanisms do we need to posit for empirical coverage?

Five morphosyntactic operations

- Contextual allomorphy
- VP-internal scrambling
- Cliticisation
- P-incorporation
- 5 Locality/intervention effects

English Examples

- (1) Active
 - a. I gave the woman the book.
 - b. I gave the book to the woman.
 - c. I gave it the woman

Contextual allomorphy

- The realization of recipient P is subject to allomorphy
- In some languages, this allomorphy is determined contextually by adjacency to particular words
- Same mechanism that determines "many dog-s" vs. "many sheep"

Early Modern English: Analysis

- (2) Vocabulary Items (14th–18th Centuries):
 - a. Null Allomorph Item: $/\emptyset/\leftrightarrow$ [dative P] / verb^{\cappa}
 - b. To Item: $/tu/ \leftrightarrow [dative P]$

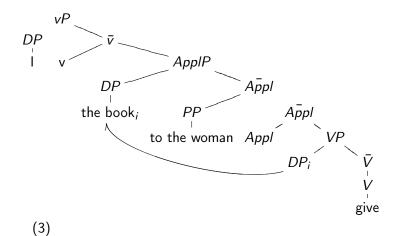
English

I gave \emptyset the woman the book

VP-internal scrambling

- Many languages allow two word orders for recipients and themes (RT vs TR)
- RT word order is base generated; TR derived by VP-internal scrambling (Takano, 1998; Lenerz, 1977)
- Theme moves to a higher specifier of the ApplP (McGinnis, 1998)

Scrambling Analysis:



Cliticisation

- Cliticisation is head movement of a pronoun into a higher element
- Allows two constructions ("violating" locality):
 - ① Theme cliticisation: John [gave it] ∅ him.
 - ② Recipient cliticisation: The book was [given ∅ him].

English Examples

(4) Active

- a. The woman was given the book.
- b. To the woman was given the book.
- c. The book was given to the woman.
- d. The book was given the woman.

P-incorporation

- P-incorporation allows dative-to-nominative conversion (Alexiadou et al., 2014)
- P-incorporation is a type of head movement

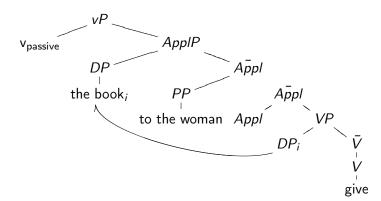
English

The woman was [given $P=\emptyset$] the book

Head Movement Targeting Condition

Head Movement Targeting Condition: When head movement is triggered, the head triggering the movement adjoins to the nearest head that asymmetrically c-commands the highest position of the triggering head.

Incompatibility with VP-internal scrambling



Passivisation and Properties of T

- Two crucial properties: Locality and Argument Validity
- Assumptions:
 - 1 Only DPs (not PPs) can receive nominative case
 - 2 Languages vary in whether or not PPs can move to subject position
 - **3** Language vary in whether they can inspect multiple arguments for movement/case assignment

Consequences of T variation

	PP Subjects
Two Arguments	DAT recipient subject and NOM theme object
One Argument	?DAT recipient subject and ACC theme object
	No PP Subjects
Two Arguments	NOM theme subject and DAT recipient object
One Argument	Ungrammaticality

Question

Why should we prefer this analysis **on conceptual grounds**?

Answer

- Empirical coverage with smallest number of syntactic tools
- Almost all of the machinery is already necessary:
 - For other constructions (e.g., prepositions)
 - For non-English languages (e.g., VP-internal scrambling)

Swedish Introduction

- Swedish provides best evidence for prepositional analysis of recipient case
- Necessary facts about Swedish:
 - No remaining synthetic accusative-dative distinction
 - V2 language

Swedish Incorporation

- Swedish shows P-incorporation overtly (Holmberg and Platzack, 1995)
- Non-Particle Verbs (e.g., gav 'give'):
 - Allow TR and RT orders
 - Allow overt prepositional marking on the recipient
 - Only allow theme passivisation (with prepositional marking on recipient)
- Particle Verbs (e.g., er-bjod 'offer'):
 - Only allow RT orders
 - Never allow prepositional marking on the recipient
 - Only allow recipient passivisation

Swedish Non-Particle Verbs: Active

(5) Swedish:

Jag gav Johan en bok.

I gave John a book.

'I gave John a book (Holmberg and Platzack, 1995).'

(6) Swedish:

Jag gav en bok *(til) Johan.

I gave a book to John.

'I gave a book to John (Holmberg and Platzack, 1995).'

Swedish Non-Particle Verbs: Passive

- (7) * Pelle gavs ett äpple Pelle gave.PASS a apple 'Pelle was given an apple (Anward 1989, Lundquist 2006).
- (8) Ett äpple gavs *(til) Pelle. An apple gave.PASS *(to) Pelle. 'An apple was given to Pelle (Anward 1989,Lundquist 2006).

Swedish Particle Verbs: Active

- (9) Han erbjöd **Jan** ett nytt jobb he.NOM offered John a new job 'He offered John a new job'
- (10) ?? Han erbjöd ett nytt jobb **til Jan** he.NOM offered a new job to John 'He offered a new job to John'
- (11) * Han erbjöd ett nytt jobb **Jan** he.NOM offered a new job John 'He offered a new job to John'

Swedish Particle Verbs: Recipient Passive

(12) Recipient passive:

Han erbjöds ett nytt jobb he.NOM offered.PASS a new job

'He was offered a new job (Anward 1989, Lundquist 2006).'

Swedish Particle Verbs: Theme Passive (Take 1)

(13) Recipient clitic passive:

Ett nytt jobb erbjöds=honom.

A new job offered.PASS=him.OBL.

'A new job was offered to him (Anward 1989,Falk 1990,Lundquist 2006).'

(14) "Theme passive":

Jobbet erbjöds mannen med den långa svarta job.DEF offered.PASS man.DEF with the long black kappan.

'The job was offered to the man with the long black coat (Lundquist, 2004, ex 26).'



Problem!!!

- Theme passive with P-incorporation should be impossible (without recipient cliticization)
- But theme passives are reported grammatical with particle verbs in Swedish!!!

Problem!!!

- Theme passive with P-incorporation should be impossible (without recipient cliticization)
- But theme passives are reported grammatical with particle verbs in Swedish!!!
- Solution: In V2 languages, preverbal position is not an unambiguous subject position

Swedish Particle Verbs: Theme Passive Redo

- (15) Between auxiliary and participle:
 - a. DET jobbet har Kalle tilldelats. that job.DEF has Kalle assigned.PART.PASS 'THAT job, Kalle has been assigned (Lundquist, 2004, ex. 59).'
 - b. ?? DEN mannen har jobbet that man.DEF has job.DEF tilldelats.
 assigned.PART.PASS
 'To THAT man, the job has been assigned (Lundquist, 2004, ex. 58).'

Cconclusion

Swedish verbs show P-incorporation overtly

Historical Oultine

- Background on Technique
- Case #1: Introduction of P-incorporation
- 3 Case #2: Introduction of recipient "to"

Background

- Syntactic variation is caused by "competing grammars" (Kroch, 1989)
- The choice between grammatical options can be modelled using logistic regression
- Time based regression models captures diffusion of a syntactic option

Linking Hypothesis

Shared historical behaviour **implies** shared syntactic representation

Technical Details

- Bayesian models used with weakly informative priors
- Results interpretation: Probability distribution over parameter values
- All models fit with STAN

Technical Takeaway

Interaction term of zero suggests shared historical behaviour

Case 1: P-incorporation

Case #1: P-incorporation

Shared Property

- The existence of P-incorporation permitted two surface constructions:
 - Nominative recipient passives
 - ② Pseudopassives

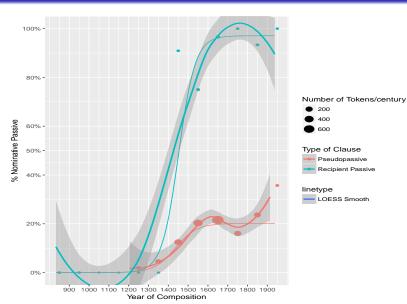
Recipient Passive

- (16) Middle English (Kroch and Ann Taylor, 2000) and Early Modern English (Kroch et al., 2004)
 - a. to thy holy name be given laude and praise (STOW-E2-P2,581.96)
 - the king Gurthym, that we clepteth Gurmundus, were i-yeve the provinces of Est Anglia and Northumbria (CMPOLYCH-M3,VI,377.2770)
 - c. for the prioress is given a matter to proud in the beginning of her ordinance (CMBENRULE-M3,43.1346)

Pseudopassive

- (17) Pseudopassive:
 - a. I slept in the bed.
 - b. The bed was slept in.

Graph



Parameter Estimates

	5%	Point Estimate	95%
Intercept	2.21	3.03	4.11
Recipient Passive	-0.97	0.41	2.14
Year of Composition (z-scored)	2.06	2.88	3.90
(*)Recipient Year Interaction	-0.68	0.72	2.57

Table: Parameter results from Bayesian Inference, (*) indicates rows relevant for the Constant Rate Effect

Case 2: Rise and Fall of 'to'

Case #2: Rise and Fall of 'to'

Stages of 'to'

- Old English: Recipient P realised as null
- 2 Early Middle English: Spread of 'to' realisation
- 3 Early Modern English: Spread of null contextual allomorph

Old English: Data

- (18) Examples using Both Word Orders:
 - a. and sealde healfne dael (*to) Pam and gave half portion.ACC to the.DAT gesaeligan Pearfan blessed.DAT needy.DAT
 - 'and gave a half portion to the blessed needy (coaelive.03,+ALS_[Martin]:69.6009)'
 - b. Man sceal eac syllan (*to) Pam seocan one should also give to the DAT sick. DAT men husel man.DAT eucharist. ACC
 - 'One should also give the sick man eucharist (coaelhom.03,+AHom_11:177.1583)'

Old English: Analysis

- (19) Vocabulary Items (6th-11th Centuries):
 - a. Universal Null Item: $/\emptyset/\leftrightarrow$ [dative P]

Middle English: Data

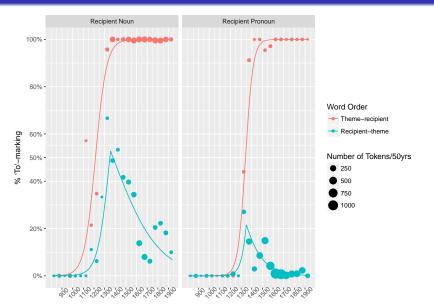
- (20) Examples using Both Word Orders:
 - a. I have given Purry a gown (PASTON,I,232.2716)
 - b. They gave to the people this bread (CMWYCSER-M3,248.452)
 - c. Thou givest thine aught (possessions) **God** (CMVICES1-M1,37.437)
 - d. Lord, in thy will, thou gave virtue **to my fairness** (CMEARLPS-M2,32.1360)

Middle English: Analysis

- (21) Competing Vocabulary Items (11th-14th Centuries):
 - a. Universal Null Item: $/\emptyset/\leftrightarrow$ [dative P]
 - b. To Item: $/tu/ \leftrightarrow [dative P]$

Outline Introduction Theoretical Analysis Swedish Historical English Conclusions Reference Conclusions Reference Conclusions Reference Conclusions Reference Conclusions Reference Conclusions Conclusions Reference Conclusions Reference Conclusions Conclusions Reference Conclusions Reference Conclusions Conclusions Reference Conclusions Conclusions Reference Conclusions Conclus

English 'to' Graph



Early Modern English: Analysis

- (22) Vocabulary Items (14th-18th Centuries):
 - a. (Null Allomorph Item: $/\emptyset/\leftrightarrow$ [dative P] / verb^{\(\)}_)
 - b. To Item: $/tu/ \leftrightarrow [dative P]$

Quantitative Results

	5%	Point Estimate	95%
Reanalysis (Nouns)	1334.43	1344.52	1382.89
Reanalysis Diff.	-38.37	-1.01	8.08
CH2 Interaction	-0.98	-0.73	-0.48
CH1 Interaction (a)	0.23	1.65	3.55
CH1 Interaction (b)	-1.69	-0.35	1.23
CH1 Interaction (c)	-0.64	1.25	4.06
CH1 Interaction (d)	-2.83	-0.40	2.66

Table: Parameter results from Bayesian Inference, CH2 Interaction shows the interaction between year and recipient type for the loss of *to*; CH1 Interaction (a) shows the interaction with year between "I gave the book (to) John" and "I gave the book (to) him"; CH1 Interaction (b) shows the interaction with year between "I gave the book (to) John" and "I gave (to) John the book"; CH1 Interaction (c) shows the interaction with year between "I gave the book (to) John" and "I gave (to) him the book"; CH1 Interaction (d) shows the interaction with year between "I gave the book (to) him" and "I gave (to) him the book"; CH1 Interaction (d) shows the interaction with year between "I gave the book (to) him" and "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave the book (to) him" and "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave the book (to) him" and "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction with year between "I gave (to) him the book"; I lateraction (d) shows the interaction (d) s

Conclusions

- Recipients are base-generated as PPs in the specifier of an applicative phrase
- Historical data can provide independent evidence for syntactic theory

THANK YOU!

QUESTIONS?

References I

- Alexiadou, Artemis, Elena Anagnostopoulou, and Christina Sevdali. 2014. Opaque and transparent datives, and how they behave in passives. *The Journal of Comparative Germanic Linguistics* 17(1):1–34.
- Anward, Jan. 1989. Constraints on Passives in Swedish and in English. Working papers in Scandinavian syntax 44:15–29.
- Asbury, Anna. 2005. Adpositions as case realisations: Structures and consequences. *Leiden Papers in Linguistics* 2(3):69–92.
- ———. 2007. Towards a typology of morphological case. *Nordlyd* 33(1).
- Bayer, Josef, Markus Bader, and Michael Meng. 2001. Morphological underspecification meets oblique case: Syntactic and processing effects in German. *Lingua* 111(4-7):465–514.

References II

- Bittner, Maria, and Ken Hale. 1996. The structural determination of case and agreement. *Linguistic inquiry* 1–68.
- Caha, Pavel. 2009. The nanosyntax of case. Ph.D. thesis, Universitetet i Tromsø.
- Dowty, David. 1991. Thematic proto-roles and argument selection. *Language* 547–619.
- Falk, Cecilia. 1990. On double object constructions. *Working* papers in Scandinavian syntax 46:53–100.
- Gerwin, Johanna. 2013. Give it me! pronominal ditransitives in English dialects. *English Language and Linguistics* 17(03): 445–463.
- Haddican, William, and Anders Holmberg. 2012a. Object movement (a) symmetries in British English dialects. In *Proceedings of WCCFL 29*.

References III

- ———. 2012b. Object movement symmetries in British English dialects: Experimental evidence for a mixed case/locality approach. The Journal of Comparative Germanic Linguistics 15(3):189–212.
- Holmberg, Anders, and Christer Platzack. 1995. *The Role of Inflection in Scandinavian Syntax*. New York and Oxford: Oxford University Press.
- Kroch, Anthony, and Ann Taylor. 2000. The Penn-Helsinki Parsed Corpus of Middle English (PPCME2).
- Kroch, Anthony, Beatrice Santorini, and Lauren Delfs. 2004. The Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME).
- Kroch, Anthony S. 1989. Function and grammar in the history of English: Periphrastic do. *Language change and variation*. *Amsterdam: Benjamins* 133–172.

References IV

- Larson, Richard K. 1988. On the double object construction. *Linguistic inquiry* 19(3):335–391.
- Lenerz, Jürgen. 1977. Zur Abfolge nominaler Satzglieder im Deutschen. TBL-Verlag Narr.
- Lundquist, Björn. 2004. Subjektsval vid passivering av bitransitiva verb. Ph.D. thesis, University of Lund.
- ----. 2006. Ditransitives in Swedish.
- McGinnis, Martha. 1998. Locality in A-movement. Ph.D. thesis, Massachusetts Institute of Technology.
- Rezac, Milan. 2008. Phi-Agree and Theta-Related Case. In *Phi theory: Phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger, and Susana Béjar, 83–129. Oxford University Press.
- Takano, Yuji. 1998. Object shift and scrambling. *Natural Language* & Linguistic Theory 16(4):817–889.

References V

Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic inquiry* 37(1):111–130.