

When there aren't clear semantically equivalent variants:  
Microparametric variation in the case of the double modal  
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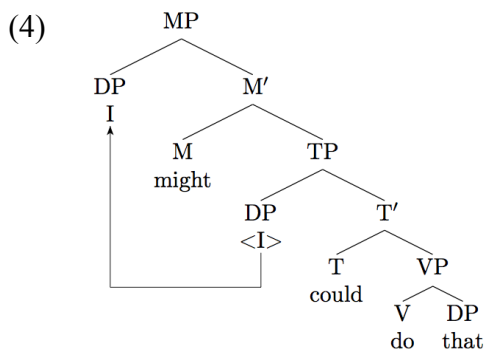
The system developed by Adger (2006, 2007) utilizing underspecification of features to account for and predict patterns of variation in the agreement structure of *be* in Buckie is able to maintain an invariant syntactic engine while theorizing the availability for social, discourse/pragmatic, and phonological information to interact with this invariant system through the choice function U. This system captures traditional Labovian variation “where each variant is a distinct feature complex, with the same semantic interpretation, and with potentially different phonological forms” (Adger 2007: 696) as well as parametric variation in featural composition of functional categories (Adger & Smith 2010). However, can this system be maintained for cases of variation that do not involve two clearly equivalent co-variants? In this paper, I extend this analysis to cases of syntactic variation without clearly identifiable semantically equivalent forms like the double modal structure of Southern English (1), and I analyze this as microparametric variation (Henry 1995, Wilson & Henry 1998, Adger & Smith 2010) with the locus of the variation being at the level of the choice of lexical items, i.e., the choice function U in Adger’s system.

The double modal construct cannot be said to vary with single modals (2) but rather a Standard English equivalent would require a different structure for one of the modals, either an AdvP or a non-finite TP complement (3). Neither of these options map easily to an underspecification of features (e.g., Adger 2006) that would yield these different structures. Instead, I analyze the double modal as parametric variation involving a functional head M housing the 1st epistemic modal merged on top of the TP containing the 2<sup>nd</sup> modal (4).

Double modal question structures (5) show that the 2<sup>nd</sup> modal raises to C while the 1<sup>st</sup> modal cannot. This inversion indicates that the 2<sup>nd</sup> modal is in T, with the 1<sup>st</sup> modal apparently higher in the structure. Consistent with a feature driven system, I analyze M as lacking syntactic Tense and C-selecting for a 2<sup>nd</sup> modal specified for Tense to fill T. I argue for the 1<sup>st</sup> modal’s lack of syntactic Tense based on its immunity to sequence of tense effects (6 and 7), since the Tense of the 2<sup>nd</sup> modal drives the reading independent of any apparent morphological tense for the 1<sup>st</sup> modal. This is expected if the 2<sup>nd</sup> modal is in T but the 1<sup>st</sup> modal is somewhere higher in the structure. This analysis is extended to account for the asymmetry of the two modals in the question data through a Probe/Goal feature system looking for Tense. I account for the subject’s location in Spec-MP through an EPP feature on M.

From this analysis, I argue that the locus of intra-speaker variation is in the choice of lexical items. If M is chosen, its features produce the double modal, but if M is not chosen, another set of lexical items must be chosen to express a similar meaning. The variation then is controlled for in the choice function U between the lexical items and is sensitive to the social factors of age, gender, and education (Hasty 2011) as well as discourse/pragmatic and speaker accommodation factors (Hasty et al. 2012). Thus, this paper shows the system developed by Adger and taking a microparametric view can account for other types of syntactic variation which do not have neatly semantically equivalent co-variants.

- (1) a. I **might could** go to the store.  
 b. You **might should** eat before you go.  
 c. I **may can** get a little work done.
- (2) a. I **might can** make the next one.  
 b. #I **might** make the next one. (loses ability reading)  
 c. #I **can** make the next one. (loses possibility reading)
- (3) a. I **might could** go to the store. (Southern English double modal)  
 b. **Perhaps** I could go to the store. (Standard English AdvP equivalent)  
 c. I might **be able to** go to the store. (Standard English TP complement equivalent)



- (5) a. **Could** you **might** go to the store? (answer: I might could go to the store.)  
 b. \***Might** you **could** go to the store?
- (6) a. John said it might **could** snow. (ambiguous)  
 b. John said it may **can** snow. (only relative to now)
- (7) a. John said it may **could** snow. (ambiguous)  
 b. John said it might **can** snow. (only relative to now)

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# the syntactic variable

- different ways of saying the same thing (Labov 1972)
- determining semantic equivalence
  - truth conditions (Weiner and Labov 1983)
  - functional equivalence (Lavendera 1978, Dines 1980, Romaine 1984, Lefebvre 1989)
  - descriptive meaning (Winford 1996)
- difficult to decide
  - unanswered questions (Lavendera 1978, Labov 1978, Romaine 1981, Cheshire 1987)
- Adger and Trousdale (2007)
  - semantic equivalence read off of the output of syntax

# types of syntactic variation

- different forms/types of syntactic variation
- type 1: clear variants—Labovian
- type 2: lack of clear variants—Parametric

# clear variants

- *was/were* and verbal –s in Buckie
  1. The mothers **was** / **were** shouting at you to come in. (Adger and Smith 2010)
- copula absence in AAE
  2. They **∅** / **are** walking too fast. (Green 2002)
- negative concord
  3. a. I **ain't never** done **nothing** like that before.  
b. I **haven't ever** done **anything** like that before.

# lack of clear variants

- stressed BIN in AAE
4. a. She **BIN** running (Green 2002)  
b. She has been running for a long time.
- completive *done* in SUSE and AAE
5. a. I **done** told you once.  
b. I have already told you once (emphatic)
- emphatic pronoun tags in Northern British
6. a. I don't like it **me** (Cheshire, Kerswill, and Williams 2005)  
b. I don't like it myself (emphatic)

# Adger and Smith (2010)

- lexical, feature-based approach
- modular view of competence and use
  - invariant syntactic system
    - Merge, Move, and Agree
  - choice function (U)
    - sensitive to sociolinguistic, discourse, pragmatic, and processing information



# Adger and Smith system

- Labovian (combinatory variability)
  - underspecification of features in their mapping to phonological forms
  - Pool of Variants (PoV)
- Parametric variation
  - varying feature specifications of functional categories

# double modal

- 7) a. You know what **might could** help that is losing some weight.
- b. My bones **might not can** take that.
- c. We **may can** just hold it for a while.  
(Verilogue Corpus)
- Age, gender, and education (Hasty 2011)
  - Politeness feature (Hasty et al. 2012)

# lack of clear co-variant

- not with single modals

8) a. I **might can** make the next one.

*(It's possible that I have the ability to make the next one)*

b. #I **might** make the next one.

c. #I **can** make the next one.

- Standard English equivalent

9) a. I **might be able to** make the next one.

b. (**Possibly**) I (**possibly**) **can** (**possibly**) make the next one.

# range of double modals

10) Might can	May can	Must can
Might could	May could	Must could
Might should	May should	
Might would	May would	
Might will	May will	

- 1<sup>st</sup> modal: epistemic
- 2<sup>nd</sup> modal: root

# modals and tense

- Cinque 1999 and Stowell 2004
- root
  - can/could
  - shall/should
  - will/would
- epistemic
  - may?/might?
  - must / ?
- parametric variation in epistemic modals
  - $M_{\text{eps}}$  +Tense (non-double modal)
  - $M_{\text{eps}}$  –Tense (double modal)

# double modal questions

- 11) a. **Could** you **might** go to the store for me?  
b. \***Might** you **could** go to the store for me?

- 2<sup>nd</sup> modal inverts with subject
- 1<sup>st</sup> modal cannot invert with subject
- evidence for 2<sup>nd</sup> modal in T
  - with 1<sup>st</sup> modal higher in structure

# sequence of tense

- 12) a. John said it **might could** snow. (ambiguous)  
b. John said it **may can** snow. (only relative to now)
- ‘tense matched’ behave as expected
    - past: ambiguous
    - present: unambiguous

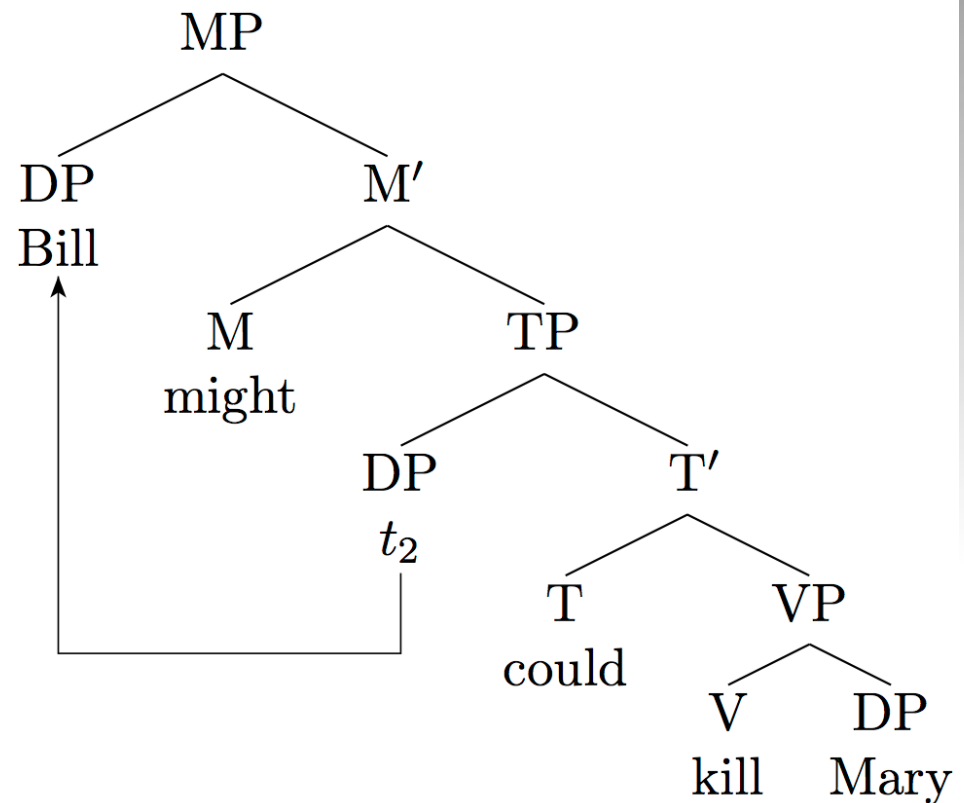
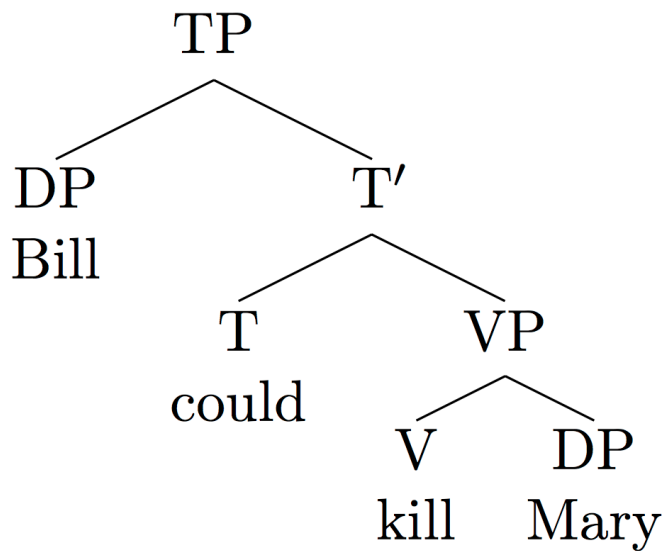
# sequence of tense

- 13) a. John said it **may could** snow. (ambiguous)  
b. John said it **might can** snow. (only relative to now)
- ‘tense mixed’ follow the tense of 2<sup>nd</sup> modal
    - 1<sup>st</sup> present, 2<sup>nd</sup> past: ambiguous
    - 1<sup>st</sup> past, 2<sup>nd</sup> present: unambiguous
  - apparent tense of 1<sup>st</sup> modal does not affect reading



# MP analysis

- 1<sup>st</sup> modal above the TP
- heads a MP (-Tense)



# stranded quantifiers

14) [<sub>MP</sub>We (all) might [<sub>TP</sub>(all) could [<sub>VP</sub>(all) go to the store.

- movement through a Spec position (Sportiche 1988, Boskovic 2004)
- *all* stranded between the two modals
  - Spec position above 2<sup>nd</sup> modal
  - Since 2<sup>nd</sup> modal is in T, evidence for another Spec position above TP

# cross linguistic evidence

- Cinque 1999
  - epistemic modality higher than Tense
- parametric variation in epistemic modality
  - +Tense or –Tense

# double modal derivation

- $M_{EPS}(-Tense)$  selected by U
- C-selectional features of  $M_{EPS}$  require a 2<sup>nd</sup> root modal in T
- invariant syntax produces the double modal
- if U selects  $M_{EPS}(+Tense)$ 
  - single epistemic modal in T
  - additional lexical items (AdvP; subordinate clause) must be selected

# MP questions

- 15) a. **Could** you **might** go to the store for me?  
b. \***Might** you **could** go to the store for me?
- Head Movement Constraint (Travis 1984)
    - may not skip intermediate heads
    - may not skip **Active** heads
  - Probe/Goal feature checking movement system (Chomsky 2000)
    - C probing for a Goal +Tense (Pesetsky and Torrego 2001; Zwart 1996)
    - 1<sup>st</sup> modal in  $M_{EPS}(-Tense)$ , not active
    - 2<sup>nd</sup> modal in T (+Tense), active

# adverbial analysis

- Labov (1972)
  - 1<sup>st</sup> modal's rigid location
- 16) a. I (probably) could (probably) go to the store (probably).  
b. I (might) could (\*might) go to the store (\*might).
- double modal negation
    - Negation to left of 2<sup>nd</sup> modal
- 17) a. I might **not** can go to the store.  
b. \*I probably **not** can go to the store.  
c. \*I **not** can go to the store.

# single lexical item

- Boertien (1986) co-heads both under T
- Di Paolo (1989) single lexical item
- intervening items between modals

18) a. I might **not** could go to the store.

b. He might **really** could help you.

- questions raising only 2<sup>nd</sup> modal

19) a. **Could** you **might** go to the store? (63%, 19/30)

b. **Might could** you go to the store? (13%, 4/30)

# adjoined to T-bar

- Battistella 1991, 1995
  - adjunction only at the XP level
    - Chomsky 1986; Kayne 1994; Alexiadou 1994, 1997; Cinque 1995, 1997
  - negation between modals
    - NegP would be merged inside of T-bar
- 20) I might **not** could go to the store.



# model comparison

- Variable rules (Labov 1972, Cedergren and Sankoff 1974)
  - probabilities on syntactic operations
  - non-modularity of competence and use
  - based on Transformational Grammar
- HPSG (Bender 2000, 2005)
  - probabilities on lexical items
  - non-modularity of competence and use

# model comparison

- Competing Grammars (Kroch 1994, Embick 2008)
  - variation in lexicon
  - Blocking Effect: no doublets
  - Adger & Smith: difference in selectional features enough to rule out Blocking Effect
- Parametric approaches (Henry 1995)
  - variation in lexicon

# conclusion

- MP analysis of double modal
  - $M_{EPS}(-Tense)$  vs.  $(+Tense)$
  - accounts for more of the data
- Adger and Smith model accounts for both types of variation
  - clear variants: Traditional Labovian (Type 1)
  - lack of clear variants: Parametric (Type 2)

# conclusion

- areas of consensus
  - locus of the variation in lexicon
- Adger and Smith model advantages
  - modularity of competence and use
  - accounts for both types of variation
- areas for expansion
  - what counts as syntactic variables
  - variation: one underlying form with multiple surface generalizations
  - syntactic variation: two closely related yet different underlying forms which produce same semantic content

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