Can't we make it possible? Maybe (not)

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1. LIS

- LIS is SOV;
- Modals are postverbal;
- Negation is postverbal and post-modal [1];
- In the variety under investigation, negative NMM (headshake) alone cannot negate the clause ($\neq$ LSC & DGS [2]);
- Negation can be incorporated into modal signs (more below; see also [3,4]);
- Negative concord is not allowed between a negative modal and a manual negation.

2. The Inventory

- **'Positive' Modals**

- CAN_1 epist, ability, deontic
- CAN_2 ability
- CAN_3 deontic

- $MUST_1$ epist, deontic
- $MUST_2$ epist

- **'Negative' Modals**

- CAN_1-NEG
- $MOD.NEG_1$
- $MOD.NEG_2$

  derivative | suppletive

3. The Problem

▶ Can we determine the semantics and makeup (if any) of suppletive modals?

We restrict our attention to manual signs.

References

[1] **Geraci, Carlo.** 2006. "Negation in LIS", Proceedings of NELS 35. ● [2] **Pfau, Roland and Josep Quer.** 2003. "V-to-Neg Raising and Negative Concord in Three Sign Languages". ● [3] **Zeshan, Ulrike.** 2005. "Irregular Negatives in Sign Languages". WALS. OUP, 558–67. ● [4] **Shaffer, Barbara.** 2002. "Can't: The Negation of Modal Notions in ASL", Sign language studies, 3(1), pp. 34-53. ● [5] **Chung, Inkie.** 2007. "Suppletive Negation in Korean and Distributed Morphology", *Lingua* 117: 95–148.

Funding

4. Decomposing Negative Modals

- We evidence split-scope readings with 'negative modals', using ALWAYS;
- Those readings obtain both with the derivative (CAN_1-NEG) and with the suppletive ($MOD.NEG_{1/2}$) forms (1c)-(2c):

(1) a. GIANNI E-MAIL ANSWER ALWAYS {CAN_1-NEG/$MOD.NEG_1$}.
   b. *'Gianni is unable to always answer emails.'* *(surface scope)*

   $NEG > CAN_{ability} > ALWAYS$

   c. Or: *'It is not always the case that Gianni can answer emails.'* (▶*split scope*)

   $NEG > \textbf{ALWAYS} > CAN_{ability}$

(2) a. GIANNI ANSWER ALWAYS $MOD.NEG_2$.
   b. *'It mustn't be the case that Gianni always answers (the phone).'* *(surface scope)*

   $MUST_{deontic} > NEG > ALWAYS$

   c. Or: *'It must be the case that Gianni never answers (the phone).'* (▶*split scope*)

   $MUST_{deontic} > \textbf{ALWAYS} > NEG$

- The split-scope readings are genuine readings, despite the fact that they entail the surface scope readings:

  ▪ **First case (1):** We ensure that ALWAYS is in the matrix, using anaphoric THAT, which replaces the complement clause fully:

(3) PIERO K2 CLIMB ON-TOP WANT. IX-3 THAT ALWAYS CAN_1-NEG/$MOD.NEG_1$.
   'Piero wants to climb Mount K2. He is not always able to do so.'

  ▪ **Second case (2):** A falsity test (4) shows that B reacts to the split-scope reading (we also ensure that ALWAYS does not in fact take scope in the matrix, over the modal (5)):

(4) *Context:* The rule is that Gianni doesn't always pick up the phone...
   A: GIANNI ANSWER ALWAYS $MOD.NEG_2$. (2a)
   B: NO, TRUE NOT, GIANNI ANSWER ONE CAN.
   'No, that is not true, Gianni can pick up the phone (sometimes).'

(5) #RAMBO SURVIVE ALWAYS $MOD.NEG_2$. *ALWAYS>MODAL

- Implications:
  ▪ The existence of split-scope readings shows that the suppletive forms are not atomic: evidence against a lexicalist approach;
  ▪ Despite the logical equivalence between $\neg\Diamond$ and $\Box\neg$, we can thus infer what their real makeup is (another benefit of using the intervener ALWAYS):
    ▪ $MOD.NEG_1$ comprises a modal (meaning $can_{epist/ability/deontic}$) and negation ($\neg\Diamond$);
    ▪ $MOD.NEG_2$ comprises a modal (meaning $must_{epist/deontic}$) and negation ($\Box\neg$).

5. Conclusions and Theoretical Issues

- Modals in LIS take **surface** scope w.r.t. negation.

- This suggests that the split-scope readings reflect and reveal the 'underlying structures' shown opposite;
- The morphophonological process (fusion) does not affect scopal relations.

(6) GIANNI ANSWER NOT MUST. MUST>NOT

(7) GIANNI ANSWER MUST NOT. NOT>MUST

(tree for (1c))   (tree for (2c))
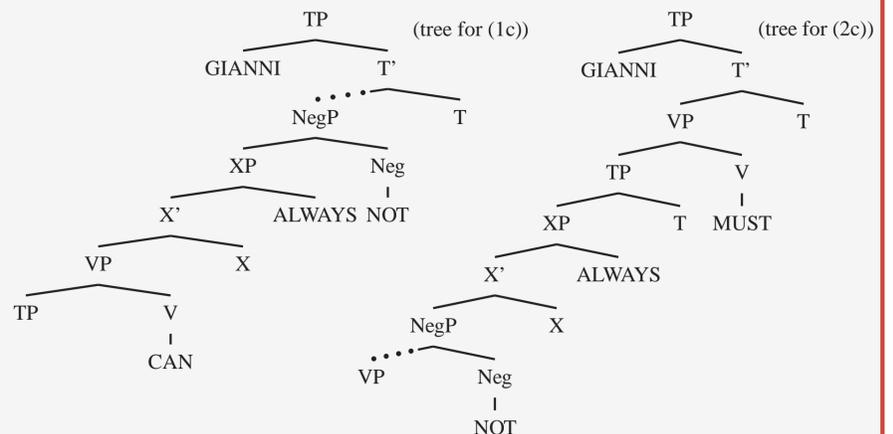
- Open Issues:
- Adjacency is **not** a necessary condition for fusion (similar facts observed in Korean [5]); there may even be a clause boundary intervening (2);
- If fusion is a by-product of head movement, then, surprisingly, the moving element is the modal in one case, and negation in the other case.
- In LIS and in the many languages (mainly but not exclusively signed) that exhibit suppletive negative modals, only some combinations seem to be attested.

  Generalization: Of the two possible combinations of a modal with negation, only the logically stronger one can be retained in a fused form ($\checkmark\neg\Diamond$, $\Box\neg$; *$\Diamond\neg$, $\neg\Box$).