The expression of exhaustivity and scalarity in Burmese

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Colloquial Burmese *m̥a* appears to have two uses:

(1)   **Exhaustive *m̥a* (cleft):**
        Aung-ga   ye-ko-*m̥a*   θauʔ-kɛ-dɛ.
        Aung-NOM   water-ACC-MA   drink-PAST-REAL
        'It's WATER that Aung drank.'

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        'It's WATER that Aung drank.'

(2)   **Scalar *m̥a* ('even'-like):**
        Aung-ga   ye-ko-*m̥a*   **mə**-θauʔ-kɛ-dɑr.
        Aung-NOM   water-ACC-MA   NEG-drink-PAST-DAR
        ≈ 'Aung didn't even drink WATER.'

- John Okell's 1969 reference grammar says there are two *m̥a*:

hmá ̥ A   hmá ̥ B
'only if, only when'   '*emphatic*, even, so much as'

with no description of their distribution.

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- We show that the scalar reading requires the combination of **local negation** and **sentence-final** *–dar*.

Proposal

- $ma_C(p)(w^*)$ introduces the not-at-issue content:

$$\forall q \in C \, [q <_{likely} p \rightarrow \neg q(w^*)]$$

"All less likely alternatives are false."

At-issue meaning is unaffected.

($\approx$ Velleman et al 2012's semantics for English *it* clefts.)

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- C includes conjunctive alternatives

Exhaustive *m̥a*

Aung drank water   Aung drank beer

Exhaustive *m̥a*

Aung drank water   Aung drank beer

Aung drank water and beer

Exhaustive *m̥a*

Aung drank water   Aung drank beer

⌄ likely   ⌄ likely
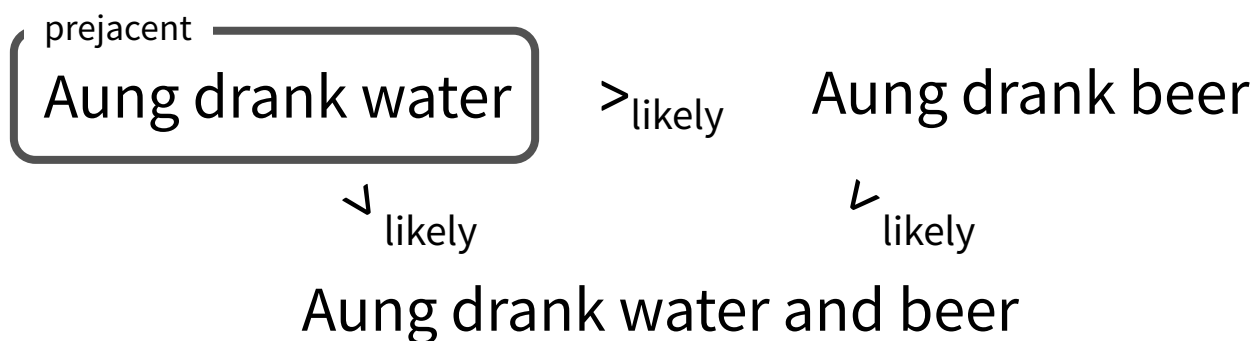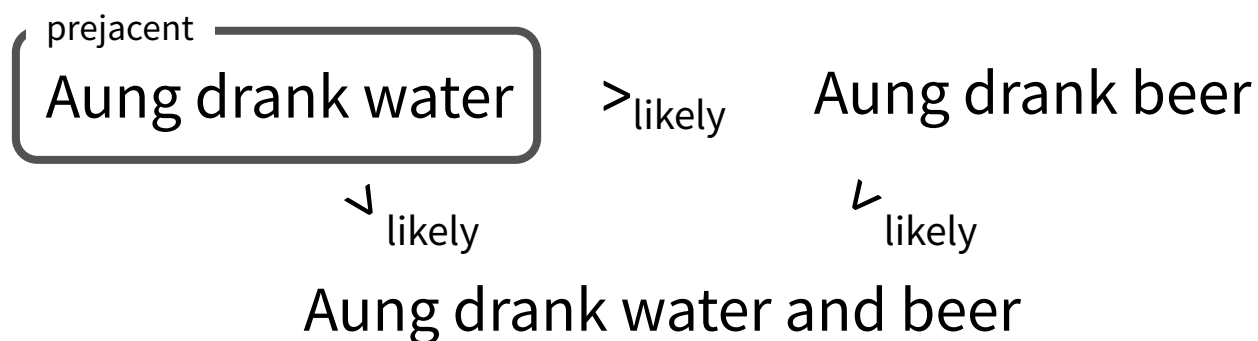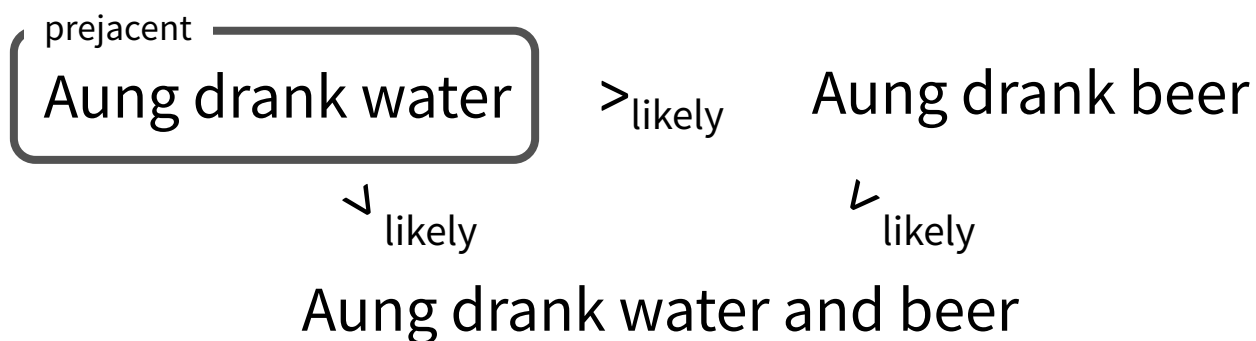
Aung drank water and beer

Exhaustive *m̥a*

Aung drank water $>_{likely}$ Aung drank beer

$\searrow_{likely}$ $\nearrow_{likely}$

Aung drank water and beer

Exhaustive *m̥a*

prejacent

| Aung drank water | $>_{likely}$ | Aung drank beer |

$\searrow_{likely}$ $\swarrow_{likely}$

Aung drank water and beer

Exhaustive *m̥a*

prejacent

Aung drank water $>_{likely}$ Aung drank beer

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Aung drank water and beer

$m̥a_C(p) \rightsquigarrow \neg beer \wedge \neg(water \wedge beer)$

Exhaustive $m̥a$

prejacent

| Aung drank water | $>_{likely}$ | Aung drank beer |

$\searrow_{likely}$ $\swarrow_{likely}$

Aung drank water and beer

$m̥a_C(p) \rightsquigarrow \neg beer \wedge \neg(water \wedge beer)$

Together with p = water, $\Rightarrow \neg beer$

Exhaustive: 'It's water that Aung drank.' = (1)

Exhaustive $m̥a$

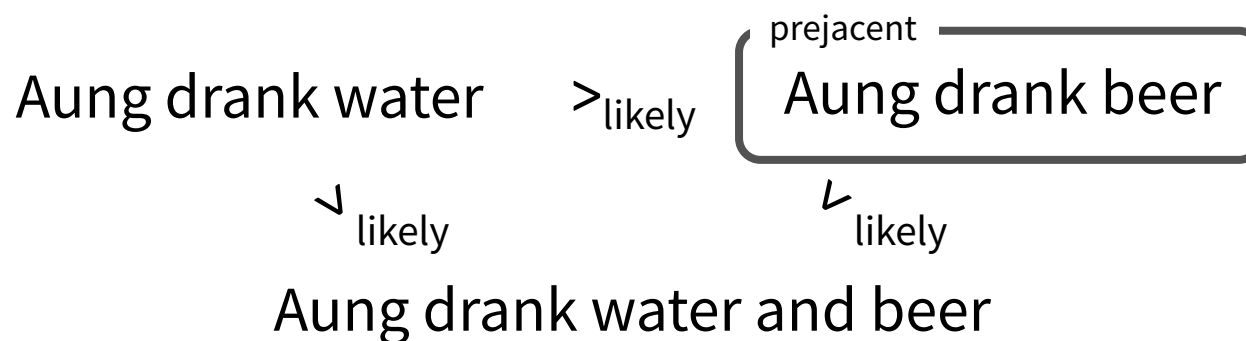Aung drank water $>_{likely}$ prejacent
Aung drank beer

$\searrow_{likely}$ $\swarrow_{likely}$

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Exhaustive $m̥a$

Aung drank water $>_{likely}$ prejacent
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$m̥a_C(p) \rightsquigarrow \neg(\text{water} \wedge \text{beer})$

Exhaustive $m̥a$

Aung drank water $>_{\text{likely}}$ prejacent
                                          Aung drank beer
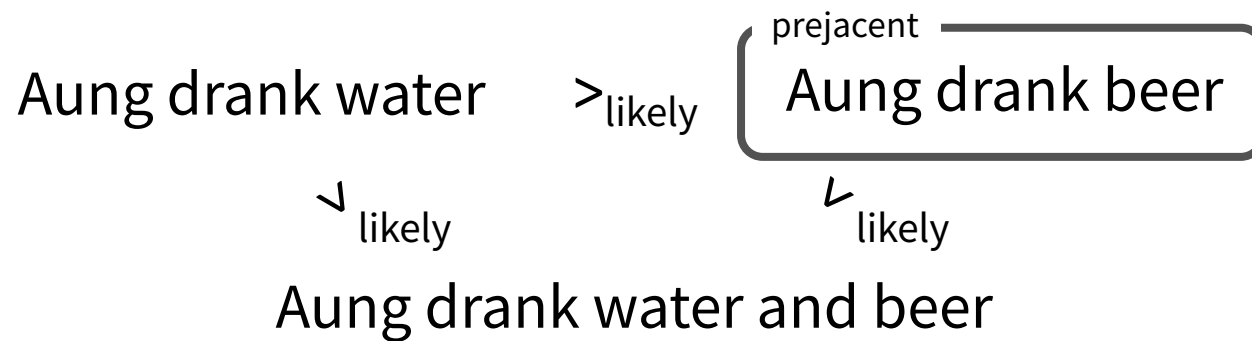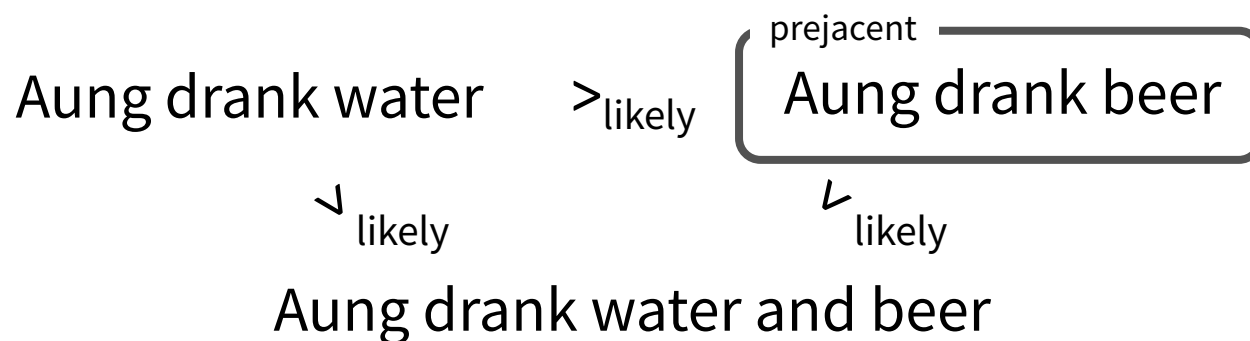
$\searrow_{\text{likely}}$ $\swarrow_{\text{likely}}$
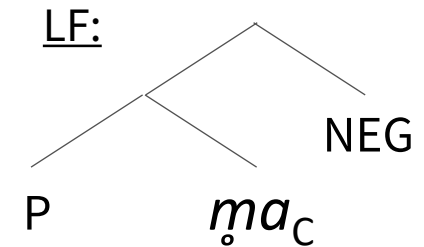
Aung drank water and beer

$m̥a_C(p) \rightsquigarrow \neg(\text{water} \wedge \text{beer})$

Together with $p = \text{beer}, \Rightarrow \neg\text{water}$

Exhaustive: 'It's beer that Aung drank.'

m̥a under negation

LF:

P   m̥a_C   NEG

prejacent

Aung drank water $>_{likely}$ Aung drank beer
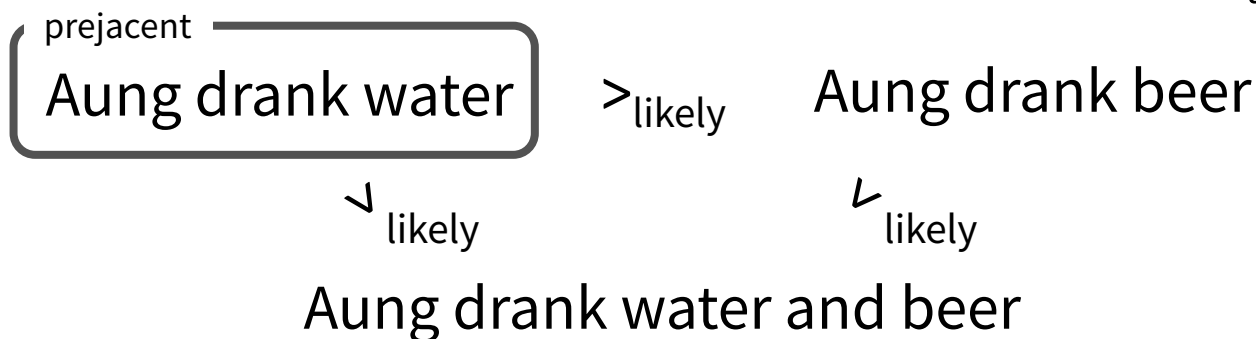
↘ likely   ↗ likely

Aung drank water and beer

LF:

P $m̥a_C$ NEG

$m̥a$ under negation

prejacent

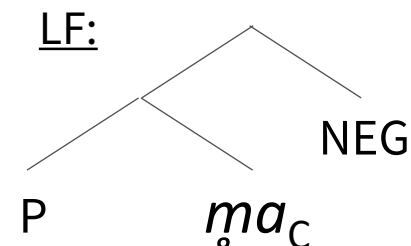Aung drank water $>_{likely}$ Aung drank beer

$↘_{likely}$ $↗_{likely}$

Aung drank water and beer

NEG($m̥a_C(p)$) at-issue: ¬water

LF:

NEG

P $m̥a_C$

$m̥a$ under negation

prejacent

Aung drank water $>_{likely}$ Aung drank beer

$↘_{likely}$ $↗_{likely}$

Aung drank water and beer

NEG($m̥a_C(p)$) at-issue: ¬water

$m̥a_C(p) ⇝ ¬beer ∧ ¬(water ∧ beer)$

Together, $⇒$ ¬beer

m̥a under negation

LF:

P $m̥a_C$ NEG

prejacent

Aung drank water $>_{likely}$ Aung drank beer

$↘_{likely}$ $↙_{likely}$

Aung drank water and beer

NEG($m̥a_C(p)$) at-issue: ¬water

$m̥a_C(p) ⇝ ¬$beer $∧ ¬($water $∧$ beer$)$

Together, $⇒ ¬$beer

m̥a under negation

LF:

NEG

P m̥a_C

Aung drank water $>_{likely}$ prejacent **Aung drank beer**

$\searrow_{likely}$ $\swarrow_{likely}$

Aung drank water and beer

$m̥a$ under negation
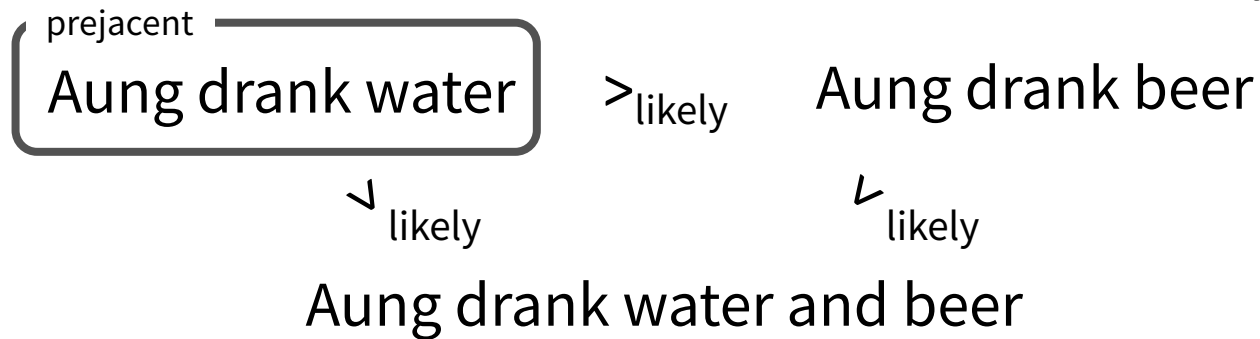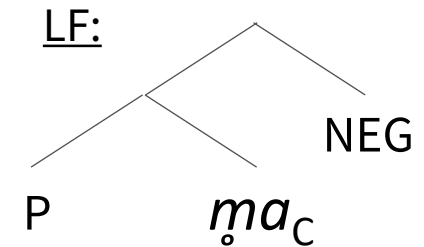
LF:

P $m̥a_C$

NEG
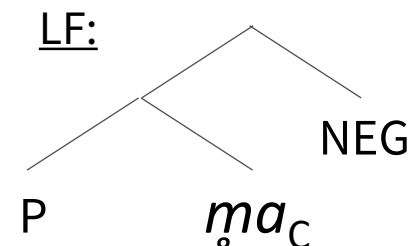
Aung drank water $>_{likely}$ prejacent

Aung drank beer

$↘_{likely}$ $↙_{likely}$

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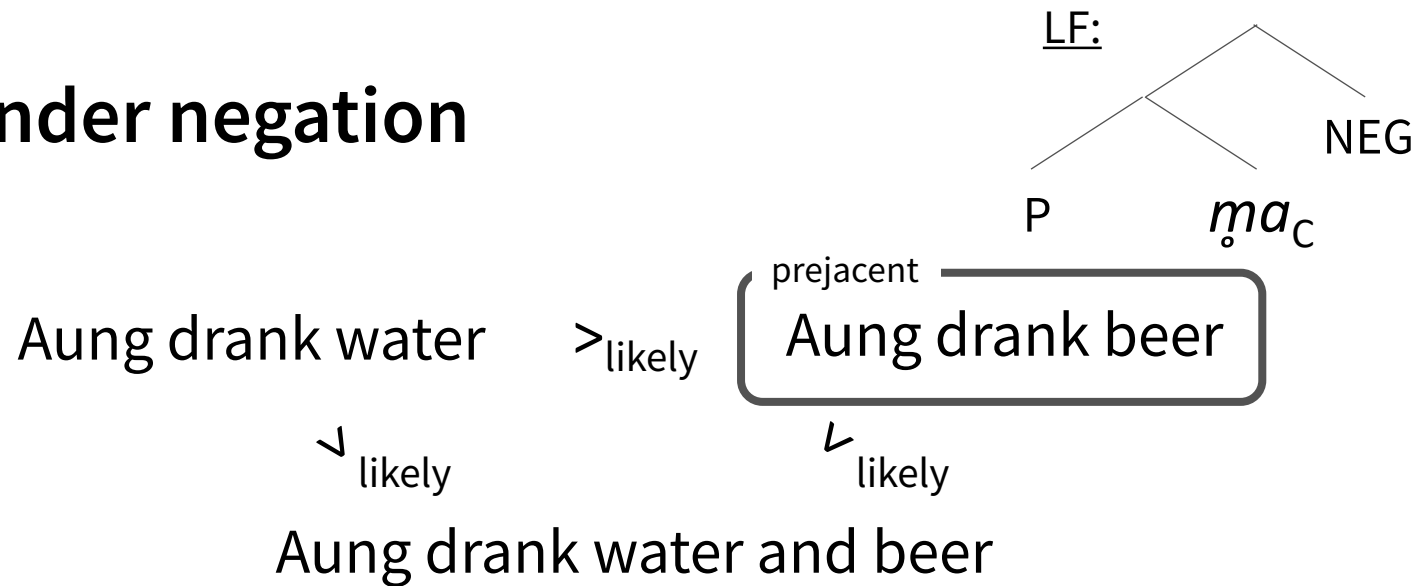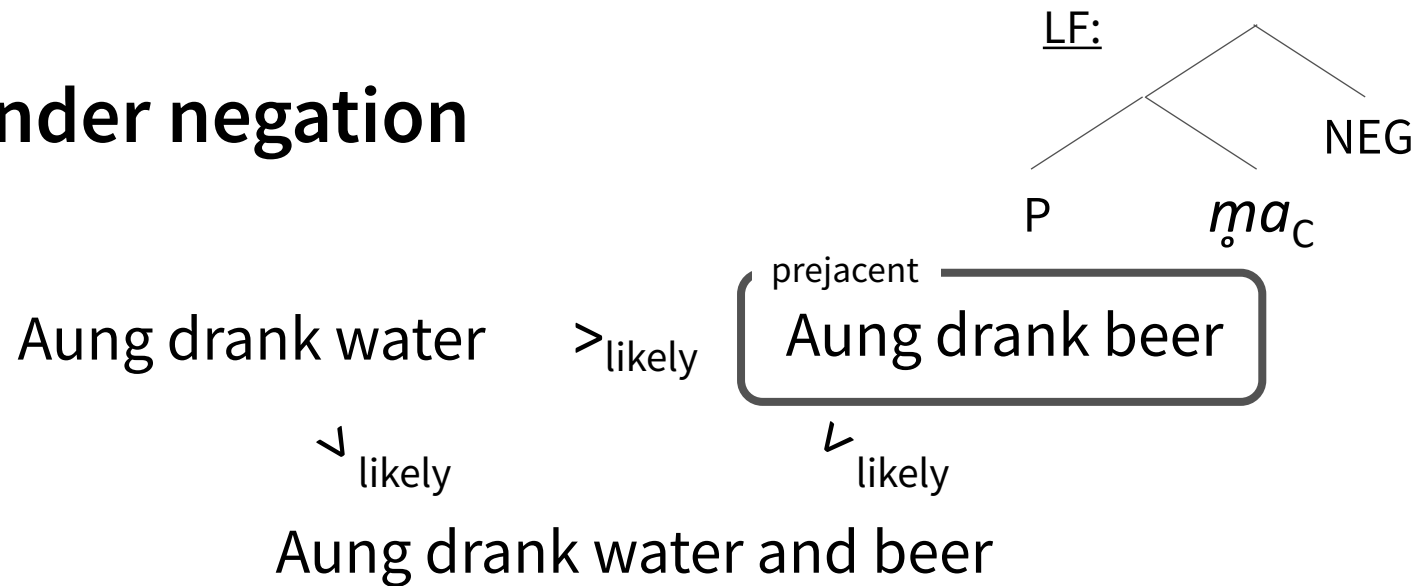
$NEG(m̥a_C(p))$ at-issue: ¬beer

m̥a under negation

LF:

P   *m̥a*$_C$

NEG

prejacent

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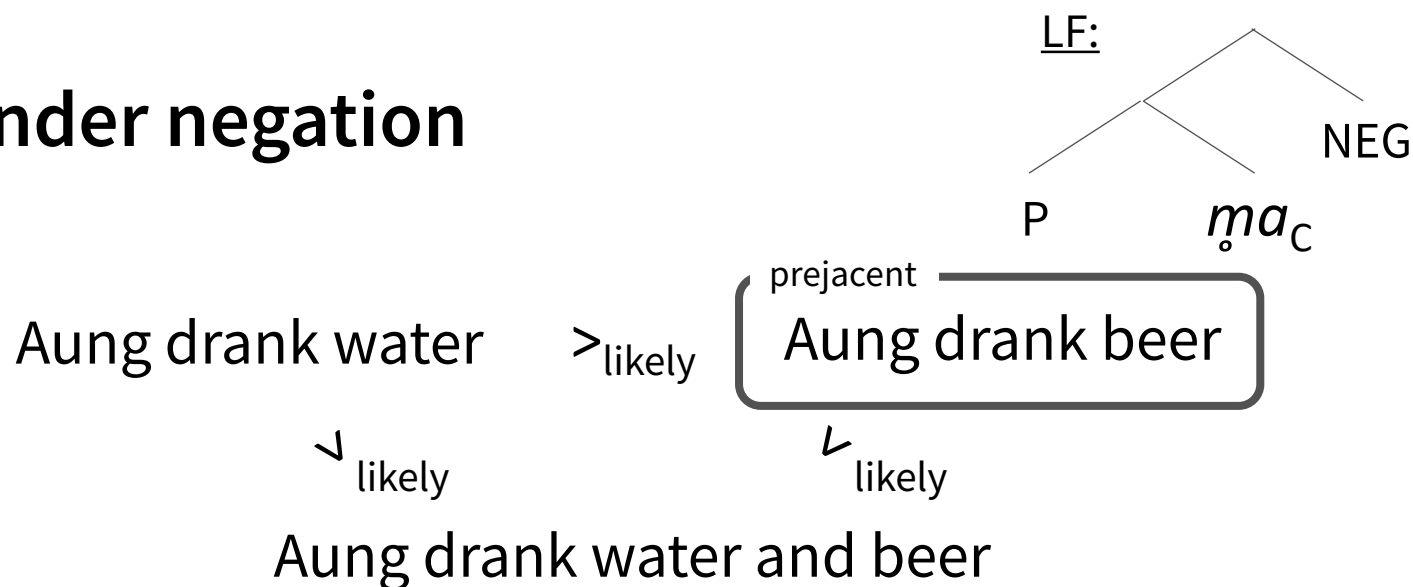
NEG($m̥a_C(p)$) at-issue: ¬beer

$m̥a_C(p) \rightsquigarrow$ ¬(water ∧ beer)

m̥a under negation

LF:

P   *m̥a*$_C$ NEG

prejacent

Aung drank water $>_{likely}$ Aung drank beer

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Aung drank water and beer
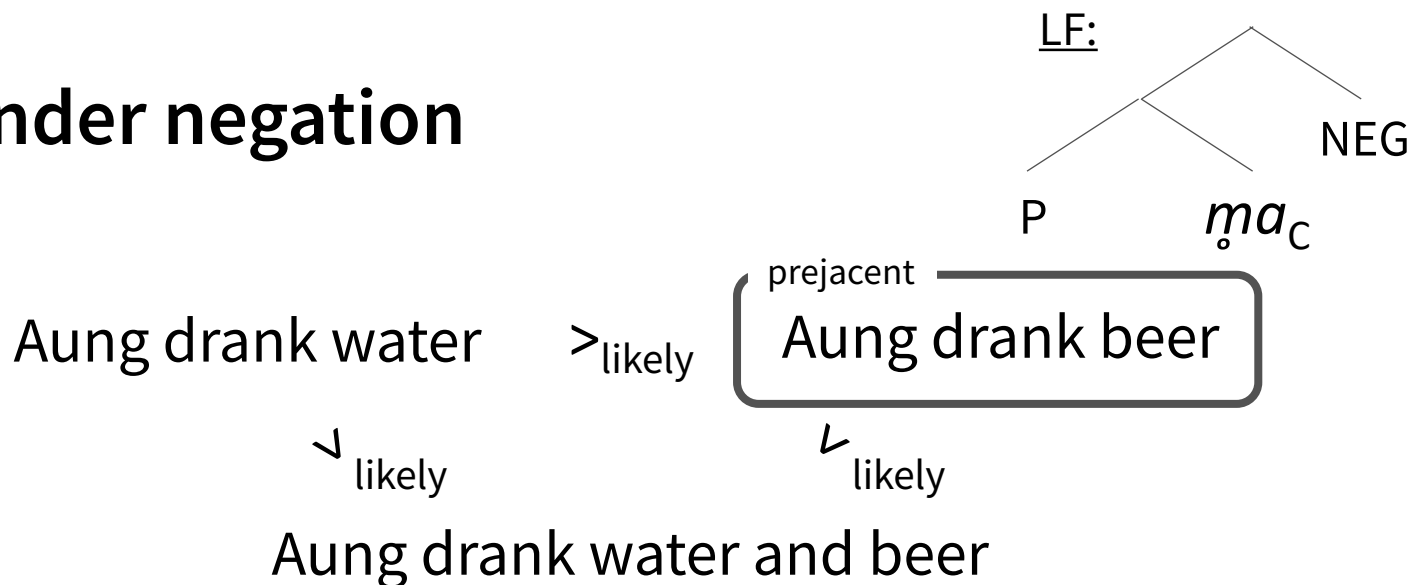
NEG($m̥a_C(p)$) at-issue: ¬beer

$m̥a_C(p) \rightsquigarrow$ ¬(water ∧ beer)

Here, $m̥a_C$ contributes nothing!
Therefore ungrammatical by Non-Vacuity (Črnic 2011)

Upshot

- *ṃa* references likelihood, but does not express that the prejacent is low or high on the scale (cf. *even*).

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- Nonetheless, under negation, the use of *m̥a* requires that there are less likely alternatives and that they are false.

- With wide scope, *m̥a* is always grammatical as an exhaustive.

At the poster

- The function of sentence-final –*dar*

- *Wh-m̥a* NPIs:

   (3)   ŋa   **bɛ**-panθi-ko-*m̥a*   **mə**-yu-kɛ-bu.

   1   which-apple-ACC-MA   NEG-take-PAST-NEG

   'I didn't take any apple(s).'

- Snacks from Singapore

Thank you!