FROM MANDARIN TEXTS TO UPDATE WITH CENTERING

Glosses in Mandarin texts

Noun markers
CL classifier (count noun)
M measure word (mass noun or action verb)

Noun phrase markers
PAT patient (bā)
AGT agent (bèi)

Pronouns
1SG I, me, my
2SG you (sg.), your (sg.)
3SG he, she, it, him, her, his, her
1PL we, us, our
2PL you (pl.), your (pl.)
3PL they, them, their

Aspectual typing (a.k.a. Aktionsart)
\E^1 1-atom event (a.k.a. ‘resultative action verb’)
\E n-atom event (a.k.a. ‘other action verb’)
\S^1 1-degree state (a.k.a. ‘quality verb’)
\S n-degree state (a.k.a. ‘other stative verb’)

Aspect markers
DUR durative aspect (v-inflection -zhe)
PNC punctual aspect (v-inflection or s-final partical (-)le, a.k.a. ‘perfective’)
TRM terminative aspect (v-inflection -guo, a.k.a. ‘experiential’)

Prospective modals
DES^\- state of desire/intent or pre-state (yào)
EXP^\- state of expectation (huì)
CAN^\- state of being able/allowed/… (néng)
:

Negation
NOT (unmarked) negation (bù)
\NOT retrospective negation (méi)

Sentence final particles
OPT optative (ba)
YN yes-no question (ma)
SFP other sentence final particle (de, ne)

Other boundary markers
H head-modifier, modifier-head (de in [head H modifier] or [modifier H head])
AV adverbial (de in [phrase AV])
DIS distributive (dōu v)
POS positive degree of gradable adjectival state (hěn v\S)
(1) I will go to bed right after I finish writing three letters.

\[ \text{Wǒ xiě-wán-le yì-fèng xín, jiù qù shuì.jiào.} \]

\(1\)SG \text{write\-finish\ one-CL letter, then\ go\ sleep}\]

\(\) \(\) \(\) \(\)

\[ \)(\) \(\)

Eventuality | Symbol: Description | Temporal relations | Source
--- | --- | --- | ---
• | \(\) | \(\) | \(\)
• | \(\) | \(\) | \(\)
• | \(\) | \(\) | \(\)

(2) Lisi fell asleep listening to the radio.

\[ \text{Lísi tíng-zhe shōuyīnjī shuì.zháo-le.} \]

\(\text{Lisi listen\-DUR radio\ fall.asleep}\]

\(\) \(\)

Eventuality | Symbol: Description | Temporal relations | Source
--- | --- | --- | ---
• | \(\) | \(\) | \(\)
• | \(\) | \(\) | \(\)
• | \(\) | \(\) | \(\)

\(\) \(\)

\(\) \(\)
Q: Where can I buy a computer mouse?

(1) I have a mouse that I brought over from Germany.

Wo you yi-ge cong Xide dai.lai de 'mouse'
1SG have3s one-CL from Germany bringE1 H mouse

[\text{[C:1] COMPUTER MOUSE (MB fw)}]

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[\text{[C:1] COMPUTER MOUSE (MB fw)}]
(1) In Chu (722-221 b.c.), a man was crossing the river Jiang by boat.

*Chū-guó yǒu gè rén* ...

Chu-land have\$ CL man ...

[x] x = i chu.land;  \[s] in\$ s, 1s, ⊥ \(d\)];  \[x|] x = i ⊥ \(T, man(x)\);  \[;\] ...

... *chéng chuán dū Jiāng.*

... go.by\$E, boat cross\$E, Jiang

[e] travel.\$ by\(e, T \delta, \perp e\), ∨ e = i ⊥ \(T \sigma\);  \[x|] x = i ⊥ \(\epsilon, boat(x)\);  \[e|] cross\(e, \perp \epsilon, \perp e\),

\[e = i \perp \epsilon\];  \[x|] x = i \perp \epsilon, x = i jiang.river\]

(2) His sword fell out of the boat into the river.

*Jiàn* ...

sword ...

\[x|] sword.on\(x, T \delta, \perp e, σ\);  \[s|] 1s = i \perp \delta, \perp e \in i \perp \epsilon\] \[;\] ...

... *cóng chuán-shàng diào jīn shuí lǐ le.*

... from boat-loc fall.in\$E river-in PNC

[x] boat\(x\), x ∈ i \(⊥ \delta\);  \[e|] fall\(e, T \delta\), \(π\) \(e \in i \perp \delta\), \(δe \in i \perp \epsilon\);  \[x|] river\(x\),

\(x ∈ i \perp \delta, \perp e \subseteq i \perp \epsilon\) in \(x\);  \[⊥ \epsilon = i \perp \sigma\]

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\((τs)_1\): man x2 is in Chuland (722-221 b.c.) x1

\(e_1\): s1 \(\subseteq ^\perp e_1\), man x2 travels by boat x3

(\(e_1\): man x2 gets across river Jiang x4)

\(e_2\): δe2 = δ\(s_1\), x2's sword x5 falls fr. boat x3 into rv. x4

(3) The man hastily drew a mark down the side of the boat.

*Zhè-ge rén biàn* ...

this-CL man then ...

\[x|] man\(x\), x ∈ \(T \perp \delta\);  \[s|] s \(\subseteq ^\perp \perp \sigma\); ...

... *jìmáng zài chuán-biān kē xià yi-ge jiăo.*

... hurry\$E on boat-side carve.down\$E one-CL mark

[in.haste\(T \sigma, T \delta\);  \[x|] boat\(x\), x ∈ \(\perp \delta\);  \[x|] side.of\(x, \perp \delta\);  \[e|] carve\(e, T \delta, \perp e\),

\(e = i \perp \sigma\);  \[on\(\perp \perp \epsilon, \perp \perp \epsilon, \perp \delta\);  \[x|] x = \(\perp \perp \epsilon, mark(\epsilon)\);

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\((τs)_3\): man x2 is in Chu x1 using boat x3 to cross rv. J. x4

\(e_2\): δe2 = δ\(s_1\), x2's sword x5 falls fr. boat x3 into rv. x4

\((τs)_3\): s3 \(\subseteq ^\perp s_1\), man x2 in haste

\(e_3\): x3 = \(s_3\), man x2 draws mark x7 on x3-bow x6
(4) And then he calmly sat waiting for the boat to land.

Ránhòu jiù ...

afterward then ...

\[ t \in \text{v} \land e \]; \[ s \in T \tau \]; ...

... yǒu xián-de dēng-zhe chuán kào’àn.

... at.leisure-ADV wait\E-DUR boat land\E

... [at.leisure(T \sigma, T \delta)]; [e] wait(e, T \delta); [T \sigma = \land e] \tau; [x] boat(x), x \in \land \delta; [e] land(e, \land \delta), \text{\vartheta} e = \text{\vartheta} \land T \sigma

\[(\tau) s_1]\text{ man x}_2 \text{ is in Chuland (722-221 b.c.) x}_1

\[ : : \]

\[ \bullet \]

\[ e_3; e_3 = \text{\vartheta} s_3, \text{ man x}_2 \text{ draws mark x}_7 \text{ on x}_3\text{-bow x}_6 \]

\[ \tau t_4; t_4 \subseteq \text{\vartheta} \land s_3, \text{ after } \text{\vartheta} s_3 \]

\[ \tau s_4; \text{\vartheta} s_4 = t_4, \text{ man x}_2 \text{ at leisure} \]

\[ o o o \]

\[ e_4; \text{\vartheta} e_4 = s_4, \text{ man x}_2 \text{ waiting for e}_4 \]

\[ \bullet \]

\[ e’_4; \text{\vartheta} e’_4 = \text{\vartheta} s_4, \text{ boat x}_3 \text{ lands} \]

(5) When the boat stopped at the landing,

Chuán kào’ân tīng xiāo dàí yīhòu,

boat land\E stop\E after

[x] boat(x), x \in i \land \delta; [e] land(e, \land \delta), \text{\vartheta} e = \text{\vartheta} \land T \sigma; [stop(\land e, x)]; [i] t \subseteq i \land e]

he jumped from the place he had marked into the river in search of the sword.

tā jiù cóng kè jiāo de dīfang tāo jīn shuǐ-lǐ qū zhǎo jiàn,

3SG then from [carve\E mark H place] jump.in\E river-in go\E seek\E sword

\[ t[x] x = T \delta]; \[ s \text{\vartheta} s = T \tau \]; [e x] carve(e, T \delta, x), e \in \land e, mark(x), x \in \land \delta] ;

[x] loc.of(x, \land \delta); [e] jump.into(e, T \delta, i e), e = h T \sigma; [at(\land e, T \delta, \land \delta)];

[x] x = \land e, river(x), x \in \land \delta, in(\land e, T \delta, x)]; [e] seek(e, T \delta, i e), \text{\vartheta} e = \land e]

[x] x = \land e, sword(x), x \in T \delta]

But he never found his sword again.

kēshì zǎi yē méi yòu zhǎo dào jiàn.

but any more \text{\textsuperscript{\textnot{NOT}}} find\E sword

[s] s = \land e, \text{\vartheta} s < \text{\vartheta} T e, \text{~}[e] find(e, T \delta, \land \delta), \text{\vartheta} e \subseteq \text{\vartheta} \land \sigma]; [sword(\land \delta), \land \delta = T \delta]

\[(\tau) s_1\text{ man x}_2 \text{ is in Chuland (722-221 b.c.) x}_1

\[ : : \]

\[ \bullet \]

\[ e_3; e_3 = \text{\vartheta} s_3, \text{ man x}_2 \text{ draws mark x}_7 \text{ on x}_3\text{-bow x}_6 \]

\[ : : \]

\[ \bullet \]

\[ e_4; \text{\vartheta} e_4 = s_4, \text{ man x}_2 \text{ waiting for e}_4 \]

\[ \bullet \]

\[ e’_4; \text{\vartheta} e’_4 = \text{\vartheta} s_4, \text{ boat x}_3 \text{ lands} \]

\[ \bullet \]

\[ e_5; \text{\vartheta} e_5 \subseteq \text{\vartheta} s_4, \text{ boat x}_3 \text{ lands} \text{ & stops} \]

\[ t s_5; \text{\vartheta} s_5 = t_5, \text{ man x}_2 \text{ dur. t}_5 \text{ (after e}_5\text{-stop)} \]

\[ \bullet \]

\[ e’_5; e’_5 = h s_5, \text{ man x}_2 \text{ jumps fr mark x}_7 \text{ into river x}_4 \]

\[ o o o \]

\[ e”_5; \text{\vartheta} e”_5 = \land e’_5, \text{ man x}_2 \text{ seeks sword x}_5, \text{ doesn’t find it} \]
[1] THE LOST SWORD

(1) In Chu (722-221 b.c.), a man was crossing the river Jiang by boat.

\[ \text{Chù-guó yǒu gè rén ...} \]

Chu-land have\'s CL man ... 

\[ [x] \ x = \text{chu.land}; \ x' [s \ in \langle x, \perp \delta \rangle]; \ \top [x] \ x = \top \ \delta, \ \text{man}(x); \ [1 \ \{ \ \top \delta \}] \top ; \ ... \]

... \text{chwán dū Jiāng.}

... go.by\underline{E}, boat cross\underline{E} Jiang

\[ [e] \ travel.by(e, \top \delta, \perp e); \ e = \top \ \delta, \ \text{boat}(x); \ [e] \ cross(e, \perp \delta, \perp e), \ \top e = \perp e; \ [x] \ x = \perp e, \ \text{Jiang.river} \]

(2) His sword fell out of the boat into the river.

\[ \text{Jiàn ...} \]

sword ...

\[ \top [x] \ \text{sword.on}(x, \top \delta, \ \text{boating}(e \ \delta \ \sigma)); \ \top \ \delta = \top \ \text{max}\{ \ \top \delta \}; \ [s] \ s = \top \ \delta, \ \text{s.e} \ \text{e} \ \text{e} \ \perp e \ \text{e} \ \text{e}; \ [x] \ \text{river}(x), \ \text{e} = \top \ \delta; \ \text{man}(x) \]

\[ \text{... from boat-loc fall.in\underline{E} \ \text{in} \ \text{PNC}} \]

\[ [x] \ \text{boat}(x), \ x \in \perp ^{\infty} \delta; \ [e] \ \text{fall}(e, \top \delta, \perp e \ \text{e} \ \text{e} \ \text{e} \ \text{e} \ \perp e \ \text{e} \ \text{e} \ \text{e}); \ [x] \ \text{river}(x), \ x \in \perp ^{\infty} \delta, \ perp.e \ \text{e} \ \text{e} \ \perp e \ \text{e} \ \text{e} \ \text{e}; \ [\perp e] \ x = \top \ \delta, \ text{mark}(x) \]

\[ \text{---} \]

\[ \top s_1; \ \text{man} \ x_2 \ \text{is in Chuland (722-221 b.c.) x_1} \]

\[ \text{e_1: s_1 \ \text{e}_1, \ \text{man} \ x_2 \ \text{travels by boat x}_3 \]

\[ \text{e_2: x_2 \ \text{gets across river Jiang x}_4 \ }

\[ \text{e_2: \ \text{e}_2 = \ \text{e}_2, \ \text{man} \ x_2 \ \text{draws mark \ x}_5 \ \text{falls fr. boat x}_3 \ \text{into rv. x}_4} \]

(3) The man hastily drew a mark down the side of the boat.

\[ \text{Zhè-ge rén biàn ...} \]

this-CL man then ...

\[ \top [x] \ \text{man}(x), \ x \in \perp ^{\infty} \delta; \ [1 \ \{ \ \perp \delta \}] \top \; [s] \ s \in \perp \ \sigma; \ ... \]

... \text{jìmáng zài chuán-biàn kě.xià yì-ge jǐhào.}

... hurry\underline{E} on boat-side carve.down\underline{E} one-CL mark

\[ [\text{in.haste}(\top \delta, \perp \delta); \ [x] \ \text{boat}(x), \ x \in \perp ^{\infty} \delta); \ [x] \ \text{side.of}(x, \perp \delta); \ [e] \ \text{carve}(e, \top \delta, \perp e), \ e = \top \ \delta; \ [on](\perp e, \perp e, \perp \delta); \ [x] \ x = \perp e, \ \text{mark}(x); \ [1 \ \{ \ \perp \delta \}] \top \]

\[ \text{---} \]

\[ \top s_3; \ \text{man} \ x_2 \ \text{is in Chu x}_1 \ \text{boating x}_2 \ \text{cross rv. J. x}_4 \]

\[ : \]

\[ \text{e_2: \ \text{e}_2 = \ \text{e}_2, \ \text{man} \ x_2 \ \text{draws mark x}_5 \ \text{falls fr. boat x}_3 \ \text{into rv. x}_4} \]

\[ \top s_3; \ s_3 \ \text{e}_3 \ \text{e}_3, \ \text{man} \ x_2 \ \text{in haste} \]

\[ \text{e_3: e}_3 = \text{e}_3, \ \text{man} \ x_2 \ \text{draws mark x}_7 \ \text{on x}_3-bow x_6 \]
(4) And then he calmly sat waiting for the boat to land.

Ránhòu jiù ...

afterward then ...

\[ t \in \partial \cup \epsilon \]; \[ s \in \tau \]; ...

yóuxián-de dēng-zhe chuán kào’àn.

... at.leisure-ADV wait'E-DUR boat land'E

... [at.leisure(T \sigma, T \delta)]; [e] wait(e, T \delta); [T \sigma = \nabla \epsilon]

\( \tau \); [x] boat(x), \( x \in \perp \delta \); [e] land(e, \perp \delta), \( \partial e = \partial \sigma \)

\( (\tau)_{s_1} \): man \( x_2 \) is in Chu \( x_1 \) using boat \( x_3 \) to cross rv. J. \( x_4 \)

\( \ldots \)

\( \bullet \)

\( e_3 : e_3 = \text{s}_3, \) man \( x_2 \) draws mark \( x_7 \) on \( x_3 \)-bow \( x_6 \)

\( \tau \) \( t_4 : t_4 \in \partial \sigma s_3, \) after \( \text{s}_3 \)

\( \tau \) \( s_4 : \partial s_4 = t_4 \), man \( x_2 \) at leisure

\( o \)

\( e_4 : \nabla e_4 = s_4 \), man \( x_2 \) waiting for \( e'_4 \)

\( e'_4 : \nabla e'_4 = \partial s_4 \), boat \( x_3 \) lands

(5) When the boat stopped at the landing,

Chuán kào’àn tīngxiǎolái yīhòu,

boat land'E stop'E-1 after

\[ [x] \text{boat}(x), \ x \in _{\perp \delta} \ ]; \ [T \delta = \max \{ T \delta \}] ; [e] \text{land}(e, \perp \delta), \ \partial e = \partial \sigma \];

\( \partial \; \text{stop}(\perp \epsilon, x) ; \ [t] \ t \in _{\perp \delta} \perp \epsilon \); he jumped from the place he had marked into the river in search of the sword.

tā jiù cónɡ kě jīhào de dīfāng tiào.jīn shuí-li qu zhǎo jiàn,

3SG then from [carve'E mark H place] jump.in'E1 river-in go'E1 seek'E sword

\( [x] x = T \delta; \ [s] \partial s = T \tau; \ [e] \text{carve}(e, T \delta, x), \ e \in _{\perp \epsilon}, \mark(x), \ x \in _{\perp \delta} \ ]; \ [x] \ loc.of(x, \perp \delta) ; [e] \text{jump.into}(e, T \delta, \perp \epsilon), \ e = \nabla \sigma \]; [at(\perp \epsilon, T \delta, \perp \delta)] ;

\( [x] x = _{\perp \epsilon}, \text{river}(x), \ x \in _{\perp \delta}, \text{in}(\perp \epsilon, T \delta, x) ; [e] \text{seek}(e, T \delta, \perp \epsilon), \nabla e = _{\perp \epsilon} \); \ [x] x = _{\perp \epsilon}, \text{sword}(x), \ x \in _{\perp \delta} \)

But he never found his sword again.

kēshī zài yě méiyǒu zháo dào jiàn.

but any.mor 'NOT find'E1 sword

\[ [\text{\textgreater} \text{\textless} (\perp \epsilon)] \]; \ [\perp \epsilon = \max \{ \perp \epsilon \}] ; [s] s = \nabla \epsilon, \partial s < \partial \sigma e, \ not [e] \text{find}(e, T \delta, \perp \delta), \ \partial e \in \partial \sigma \]; [sword(\perp \delta), \perp \delta \in _{\perp \delta}]

\( (\tau)_{s_1} \): man \( x_2 \) is in Chuland (722-221 b.c.) \( x_1 \)

\( \ldots \)

\( \bullet \)

\( e_3 : e_3 = \text{s}_3, \) man \( x_2 \) draws mark \( x_7 \) on \( x_3 \)-bow \( x_6 \)

\( \ldots \)

\( \bullet \)

\( o \)

\( e_4 : \nabla e_4 = s_4 \), man \( x_2 \) waiting for \( e'_4 \)

\( e'_4 : \nabla e'_4 = \partial s_4 \), boat \( x_3 \) lands

\( \bullet \)

\( e_5 : \partial e_5 \subseteq \partial s_4 \), boat \( x_3 \) lands & stops

\( \bullet \)

\( t_5 : t_5 \subseteq \partial \epsilon e_5, \) after \( e_5 \)-stop

\( \bullet \)

\( e'_5 : e'_5 = \text{s}_5 \), man \( x_2 \) jumps fr mark \( x_7 \) into river \( x_4 \)

\( o \)

\( e''_5 : \nabla e''_5 = \partial \epsilon e'_5 \), man \( x_2 \) seeks sword \( x_5 \), doesn't find it
[2] The Peasant and the Hare

(1) A peasant in Song (960–1279) was plowing his field.
Song-land have\textsuperscript{T} peasant just be\textsuperscript{1} plow\textsuperscript{E} field
[x] name x = song.land, x ∈ \{\text{at}\}; \textsuperscript{T}s x \in \langle s, x, \perp \delta \rangle, peasant(x); \textsuperscript{1}\{\perp \delta\}_{\text{at}}; [s| T \sigma \subseteq s]; [e| plow(e, T \delta), \perp \epsilon = \perp \sigma]; [x| x = \perp \epsilon, field.of(x, T \perp \epsilon)]

\begin{itemize}
  \item \textsuperscript{T}s\textsubscript{1}: peasant x\textsubscript{2} in Song (960–1279) x\textsubscript{1} at e\textsubscript{1}-plowing
  \item s\textsubscript{1}: s\textsubscript{1} ⊆ s\textsubscript{1}
  \item e\textsubscript{1}: \perp e\textsubscript{1} = s\textsubscript{1}, peasant x\textsubscript{2} plows his field
\end{itemize}

(2) Next to the field, there was a big tree stump. A hare darting past it accidentally bumped into it and fell dead with its neck broken.
field-side have\textsuperscript{T} big tree-stump
[x| beside(x, \perp \delta)]; [s| hv\langle s, \perp \delta, \perp \delta \rangle, \perp \sigma \sigma = \perp \sigma]; [x| x = \perp \epsilon, big.tree.stump(x); \textsuperscript{1}\{\perp \delta\}_{\text{at}};]

\begin{itemize}
  \item yi-zhi tzi feib\textsubscript{E} guolai, one-CL hare dart\textsuperscript{E} pass.by\textsuperscript{E}
  \item bu xiao-xin zhuang-zai shu-zhuang-shang, NOT careful\textsuperscript{S} bump-at\textsuperscript{E} tree-stump-loc,
  \item zhe-duan bozi si le. break\textsuperscript{E} neck die\textsuperscript{E} PNC
\end{itemize}

\[\text{[e| break.neck(e, T \delta), e = \perp \delta \epsilon]}; [\text{die}\langle \perp \epsilon, T \delta \rangle, \perp \epsilon = \perp \sigma]\]

\begin{itemize}
  \item \textsuperscript{T}s\textsubscript{1}: peasant x\textsubscript{2} in Song (960–1279) x\textsubscript{1} plowing field x\textsubscript{3}
  \item s\textsubscript{2}: \perp s\textsubscript{1} ⊆ \perp s\textsubscript{2}, beside field x\textsubscript{3} there is big tree stump x\textsubscript{4}
  \item e\textsubscript{2}: \perp e\textsubscript{1} ⊆ \perp e\textsubscript{2}, hare x\textsubscript{5} darts
  \item \textsuperscript{T}s\textsubscript{2}: s\textsubscript{2} ⊆ \perp e\textsubscript{2}, hare x\textsubscript{5} passes stmp x\textsubscript{3} in intended w\textsubscript{2}
  \item e\textsubscript{2}′: \perp e\textsubscript{2}′ ⊆ s\textsubscript{2}, hare x\textsubscript{5} bumps into stump x\textsubscript{4}
  \item e\textsubscript{2}′′: e\textsubscript{2}′′ = \perp e\textsubscript{2}′′ = \perp s\textsubscript{2}, hare x\textsubscript{5} breaks neck & dies
\end{itemize}
Maria Bittner (30 Sep., 2011)  
http://www.rci.rutgers.edu/~mbittner

(3) The peasant was delighted with this accidental windfall of a hare.

Zhè–ge nónɡmín wùyízhōnɡ dédào tūzǐ, shìfēn ɡāoxìnɡ.

this-CL peasant accidentally get\(^1\) hare, extremely happy\(^\alpha\)

\(\{[x] \text{peasant}(x), x \in E \land \delta; \}; \{[x] \text{accident}(\perp \epsilon); \}; \{[x] \text{get}(e, \top \delta, x), \text{hare}(x), \top \sigma = \top e\}; \{[x] \text{extremely.happy}(s, \top \delta), \top \sigma \subseteq s\}\)

\(\top s_1:\) peasant \(x_2\) in Song.land (960–1279) \(x_1\)

\(\bullet \)

\(\top e''_2: e''_2 = \top e''_2, \top e''_2 = s'_2, \) hare \(x_5\) breaks neck & dies

\(\top s_3: \top s_3 \subseteq \top e''_2, \) peasant \(x_2\) in wake of accident \(e''_2\)

\(\bullet \)

\(e_3: \top e_3 = s_3, \) peasant \(x_2\) gets a hare \(x_6\) (= \(x_5\))

\(s'_3: s_3 \subseteq s'_3, \) peasant \(x_2\) is extremely happy

(4) From then on, he stopped farming and stood guard by the tree stump,

(Cong-Cl biàn făngxia nónɡjù,

from-Mevt then put.down\(^1\) farm.tools,

\(\{[t] \text{t} = \top \epsilon \land \sigma; \}; \{[e] \text{stop.farming}(e, \top \delta), e = \top \epsilon \land \sigma; \}

shōu zài shù-zhūǎnɡ pángbiān.

guard\(^1\) at tree-stump beside

\(\{[e] \text{stand.guard}(e, \top \delta), \top e = \top \epsilon \land \sigma; \}; \{[x] \text{beside}(\perp \epsilon, x), \text{tree.stump}(x), x \in \epsilon \land \delta^\alpha\}\)

\(\top s_1:\) peasant \(x_2\) in Song.land (960–1279) \(x_1\)

\(\bullet \)

\(e_3: \top e_3 = s_3, \) peasant \(x_2\) gets a hare \(x_6\) (= \(x_5\))

\(s'_3: s_3 \subseteq s'_3, \) peasant \(x_2\) is extremely happy

\(\bullet \bullet \bullet \)

\(\top s_4: \top s_4 = \top e_3, \) peasant \(x_2\) after \(e_3\)-happy.accident

\(e_4: e_4 = \top s_4, \) peasant \(x_2\) stops farming

\(\bullet \bullet \bullet \)

\(e'_4: \top e'_4 = \top e_4, \) peasant \(x_2\) stands guard by stmp. \(x_4\)

(5) But he never got another hare.

Dànshí, cónɡ-nà yǐhòu, tā zài méiyǒu dédào tūzǐ.

but, from-that after, 3SG again \(\neg\) get\(^1\) hare

\(\{[s] \text{get}(e, \top \delta), \top [x] x = \top \delta; \}; \{[E] \text{e} \in E, e \in \perp \epsilon^\tau; \}; \{[\text{not}][e] e \in \perp \epsilon \land \sigma, e \subseteq \top \epsilon \land \sigma; \}

\(\{[x] \text{get}(e, \top \delta, x), \text{hare}(x); \}; \{[\perp \epsilon \land \sigma = \perp e^\tau \land \delta]\}

\(\top s_1:\) peasant \(x_2\) in Song.land (960–1279) \(x_1\)

\(\bullet \)

\(e_3: \top e_3 = s_3, \) peasant \(x_2\) gets a hare \(x_6\) (= \(x_5\))

\(\bullet \)

\(e_4: e_4 = \top s_4, \) peasant \(x_2\) stops farming

\(\bullet \bullet \bullet \)

\(e'_4: \top e'_4 = \top e_4, \) peasant \(x_2\) stands guard by stmp \(x_4\)

\(\top s_5: \top s_5 = \top e_4, \) peasant \(x_2\) after \(e_4\)-stop.of.farming,

\(x_2\) doesn't get any hares during \(s_5\)

(1) One summer day, an ant was blown by the wind into a pond.

Xià-tiān, yǒu yì-zhī māi yè bǐ fēng guā.dào-le chìtáng-ll.
summer-Mday, have's one-CL ant AGT wind blow.to\:E\:PNC pond-inside
(([$t$] summer.day($t$)); $T$[$x$] | $\delta$s = $\perp t$ $; T$[$x$] $\top$ $\sigma$ = $x$, ant($x$)); [1 { $\top$ $\delta$, $\perp$ $\sigma$ }]) $T$;
(([$x$] wind.at($x$, loc $\top$ $\sigma$, $\mathcal{v}$ $\top$ $\delta$)); $e$ blown.by($e$, $\top$ $\delta$, $\perp$ $\delta$, in($\mathcal{v}$ $e$, $\top$ $\delta$, $\perp$ $\delta$),
$\perp$ $\mathcal{v}$ = $\perp$ $\mathcal{v}$ $\sigma$); [$\perp$ $\delta$ $\Sigma$ $\sigma$ < $\perp$ $\mathcal{v}$ $\mathcal{v}$]; [$x$] pond($x$); [$x$] $x$ = $\perp$ $\mathcal{v}$, inside($x$, $\perp$ $\delta$))

(2) Seeing the ant, a dove up in a tree hastily threw a leaf into the pond.

Shū-shàng de gē\:zi kǎndào-le,
tree-top $\mathcal{H}$ dove see.rvc|E\:PNC $T$
(([$x$] tree.top($x$)); $[x$] dove($x$), in($x$, $\perp$ $\delta$); $e$ see($e$, $\perp$ $\delta$, $\top$ $\sigma$), $\mathcal{v}$ $e$ = $\perp$ $\delta$ $\sigma$;
[$T$[$s$] $\perp$ $\mathcal{v}$ = $\perp$ $\mathcal{v}$ $s$, $\perp$ $\mathcal{v}$ $s$ < $\perp$ $\mathcal{v}$ $s$]) $T$;
gānmáng jiāng yě\:zi diū.jin chītáng.
hurry take\:E\:leaf throw.into\:E\:pond
$e$ hurry($e$, $\top$ $\mathcal{e}$), $\mathcal{v}$ $e$ = $\top$ $\perp$ $\mathcal{e}$; [$e$] take($e$, $\top$ $\mathcal{e}$, $\perp$ $\mathcal{e}$), $e$ = $\top$ $\perp$ $\mathcal{e}$; [$x$] $x$ = $\perp$ $\mathcal{v}$, leaf($x$);
$e$ throw.into($e$, $\top$ $\mathcal{e}$, $\perp$ $\delta$, $\perp$ $\mathcal{e}$), $e$ = $\perp$ $\delta$ $\mathcal{e}$, $\perp$ $\mathcal{v}$ $\mathcal{e}$ = $\perp$ $\delta$ $\sigma$; [$x$] $x$ = $\perp$ $\mathcal{v}$, pond($x$), $x$ = $\perp$ $\delta$

(3) The ant climbed up onto the leaf and, floating to the side of the pond, was saved.

Māi\:yi pá\:sháng yě\:zi, piāo.dào-le chǐ-biān, déjīù le.
ant climb.up\:E\:leaf, float.to\:E\:PNC pond-side, get.saved\:E\:PNC.
($T$[$s$] $x$ = $\top$ $s$, ant($x$), $x$ $\in$ $\top$ $\delta$); $e$ climb.up.on($e$, $\top$ $\delta$, $\perp$ $\delta$), $\mathcal{v}$ $e$ $\in$ $\top$ $\perp$ $\mathcal{v}$ $\delta$, $e$ = $\top$ $\delta$ $\sigma$;
[x] $x$ = $\perp$ $\mathcal{v}$, leaf($x$), $x$ $\in$ $\top$ $\mathcal{v}$ $\delta$); ($e$ float.to($e$, $\top$ $\mathcal{e}$, $\perp$ $\mathcal{e}$), $e$ = $\top$ $\perp$ $\mathcal{e}$, $e$ = $\perp$ $\delta$ $\sigma$;
[x] pond($x$), $x$ $\in$ $\top$ $\mathcal{v}$ $\delta$); [x] $x$ = $\perp$ $\mathcal{v}$, edge($x$, $\perp$ $\delta$)]; [$e$] get.saved($e$, $\top$ $\mathcal{e}$), $e$ $=$ $\perp$ $\mathcal{v}$;
[$\perp$ $\mathcal{v}$ $\mathcal{e}$ = $\perp$ $\delta$ $\sigma$])

(4) The ant remembered the dove’s kindness in saving his life.

Māi\:yi jí.zhù-le gē\:zi de jiū.míng zhī ēn.
ant remember\:S\:PNC dove $\mathcal{H}$ save.one's.life 3SG's kindness
($T$[$s$] $x$ = $\top$ $s$, ant($x$), $x$ $\in$ $\top$ $\delta$); [x] remember($x$, $\top$ $\delta$, $\perp$ $\delta$), $\perp$ $\mathcal{v}$ $\mathcal{e}$ = $\perp$ $\mathcal{v}$ $s$; [$\perp$ $\mathcal{v}$ $\mathcal{e}$ = $\top$ $\delta$ $\sigma$];
[x] $x$ = $\perp$ $\mathcal{v}$, dove($x$), $x$ $\in$ $\top$ $\mathcal{v}$ $\delta$); [$e$] save.life.of($e$, $\perp$ $\delta$, $\top$ $\sigma$), $e$ $\in$ $\top$ $\mathcal{v}$; kindness.by($\perp$ $\mathcal{v}$, $\top$ $\mathcal{v}$)$]

(5) After a long time, a hunter with a gun aimed at the dove on the tree, but the dove didn't notice.

Guò-le hēnjiù,pass-PNC long.time.
($T$[$s$ $t$] $\perp$ $\delta$ $\mathcal{v}$ $\mathcal{e}$ $\leftarrow$ $t$, long($\mu$($t$)), $t$ $\leftarrow$ $\delta$s);
lièrén yòng qīng miáo\:zhūn-le shù\:shàng de gē\:zi,
hunter use\:E\:gun aim.at\:E\:PNC tree-top $\mathcal{H}$ dove,
($T$[$x$] $x$ = $\top$ $\mathcal{v}$, hunter($x$)); [$e$] use($e$, $\top$ $\mathcal{v}$, $\perp$ $\mathcal{e}$), $\mathcal{v}$ $e$ $\in$ $\top$ $\mathcal{v}$ $\mathcal{v}$; [x] $x$ = $\perp$ $\mathcal{v}$, gun($x$);
[e] aim.at($e$, $\top$ $\mathcal{v}$, $\perp$ $\mathcal{e}$), $e$ = $\perp$ $\mathcal{v}$ $\mathcal{v}$; [$\perp$ $\mathcal{v}$ $\mathcal{e}$ = $\perp$ $\delta$ $\sigma$]; [x] tree($x$), $x$ $\in$ $\top$ $\mathcal{v}$ $\delta$); [x] top.of($x$, $\perp$ $\delta$),
x $\in$ $\top$ $\mathcal{v}$ $\delta$); [x] $x$ = $\perp$ $\mathcal{v}$, dove($x$), $x$ $\in$ $\top$ $\mathcal{v}$ $\delta$, in($x$, $\perp$ $\delta$)];
Maria Bittner (30 Sep., 2011)  http://www.rci.rutgers.edu/~mbittner

dànshí gēzi bù zhídào.
but dove NOT be.aware.of's
[x] dove(x), x ∈ ∩^=\(\delta\); [not|x] aware.of(s, ⊥ δ, T ∩), \(\varphi^\ast s \subseteq \vartheta T \sigma\)]

(6) The ant climbed up onto the hunter's foot, and gave him a nasty bite.
Mǎyǐ pāshàng lièren de jiāo,
ant climb.up\(\ast\) hunter foot
\(\forall [s x] x =. s, ant(x), x ∈ T^=\(\delta\); [e] climb.up(e, T ∩, ⊥ e), \(\vartheta e \subseteq \varphi^\ast \perp e\); [x] hunter(x), x ∈ T^=\(\delta\); [x] x = ⊥ e, foot.of(x, ⊥ \(\delta\)]

hěnhěn yǎo-le yi-kōu.
ferociously bite\(\ast\)PNC one-bite
[e] bite(e, T ∩, ⊥ e); [ferocious {⊥ e, ⊥ e|T,\(\delta\)}]; [⊥ e = \⊥ \(\delta\)]

(7) Feeling the pain of the bite, the hunter missed the shot.
Lièren bèi yāo tōng-le,
hunter AGT bite ache\(\ast\)PNC
\(\forall [s x] hunter(x), x ∈ \perp^=\(\delta\); [e] bite(e, ⊥ e, T ∩), e ∈ \perp^=\(\delta\); [s] feel.pain(s, T ∩), s = ⊥ e]; [⊥ e = \perp \(\delta\)]

jiù bā zīdān dā.wāi le.
then PAT bullet hit.askew\(\ast\)PNC
\(\forall [t t = \varphi^\ast \perp \vartheta T \sigma]; [x] bullet(x); [e] miss.with(e, T ∩, ⊥ \(\delta\)), \(\vartheta e = T \vartheta\); [⊥ e = \perp T \(\sigma\)]

(8) The dove was saved, and thus the ant repaid the dove's kindness.
Gēzi déjiū-le,
dove get.saved\(\ast\)PNC,
\(\forall [s x] x =. s, dove(x), x ∈ T^=\(\delta\); [e] get.saved(e, T ∩), \(\vartheta e = \perp \varphi^\ast\); [⊥ e = \perp T \(\sigma\)]

mǎyǐ yě bāodá-le gēzi de jiùmíng zhī ēn.
ant also repay\(\ast\)PNC dove save.one's.life 3SG's kindness
\(\forall [x] ant(x), x ∈ T^=\(\delta\); [e] repay(e, ⊥ \(\delta\), ⊥ e), \(\vartheta e = \perp \varphi^\ast\); [\(\varphi \perp e = \varphi^\ast T \sigma\)];
[x] x = ⊥ e, dove(x), x ∈ T^=\(\delta\); [e] save.life.of(e, ⊥ \(\delta\), T ∩), e ∈ \perp^=\(\delta\);
[kindness.by\(\ast\)⊥ e, ⊥ e]
[4] LITTLE MONKEY

(1) One day, a little monkey came down from the hills to play.
Yǒu yī tiān,
have\(\text{\`s}\) one day,
\(\uparrow\)\(\text{\`s} \| \text{\`day(\text{\`r})}, \text{\`s} = \text{\`r}\\)
yī-zhī xiǎo hóu zi xià-shān qù wán.
one-CL little monkey descend-hill\(\text{\`E}\) go\(\text{\`E}^1\) play\(\text{\`E}\\)
\(\uparrow\)\(x\| \text{\`l}ittle.m\o{}\text{n}k\o{}\text{y}(x)\}; \[\text{\`e} \ \text{\`descend}(\text{\`e}, \ \text{\`T} \ \text{\`δ}), \ \text{\`δ} \ \text{\`e} \ \text{\`\text{\`E} ⊆ \text{\`T} \ \text{\`σ}}; \[\text{\`e} \ \text{\`go}(\text{\`e}, \ 1 \ \text{\`e}), \ e = \ ^4 \ \text{\`⊥} \ \text{\`e}; \[\text{\`e} \ \text{\`play}(\text{\`e}, \ 1 \ \text{\`e}), \ \text{\`δ} = \ ^4 \ \text{\`⊥} \ \text{\`e}\\]

(2) Coming to a cornfield, he was delighted to see many big ears of corn.
Tā zōu.dào yì-piàn yǔmǐ dì-\l{}i,
3SG walk.to\(\text{\`E}^1\) one-M corn field-in,
\(\uparrow\)\(s\| \text{\`T} \ \text{\`δ}; \[\text{\`e} \ \text{\`walk.to}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ 1 \ \text{\`e}), \ e = \ ^5 \ \text{\`⊥} \ \text{\`e}; \[x \ \text{\`x} = 1 \ \text{\`⊥} \ \text{\`e}, \ \text{\`corn.\text{\`field}(x)}\]; \[\text{\`E} \ \text{\`\{ \ \text{\`⊥} \ \text{\`\text{\`δ}}\}_{\|\text{\`σ}}\}; \[\text{\`T} \ \text{\`σ} \ \text{\`\text{\`E} ⊆ \text{\`⊥} \ \text{\`e}}\\)

kàn.jiàn yǔmǐ-jié de yòu dà yòu duō,
see\(\text{\`E}\) corn-bear.\text{\`fruit} both big\(\text{\`s}\) and many\(\text{\`s}\),
\[\text{\`e} \ \text{\`see}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ 1 \ \text{\`e}), \ \text{\`δ} \ \text{\`e} \ \text{\`\text{\`E} ⊆ \text{\`T} \ \text{\`σ}}; \[x \ \text{\`s} \ \text{\`corn.\text{\`e}ar}(x), \ \text{\`in}(\text{\`s}, \text{\`x}, \ \text{\`⊥} \ \text{\`δ}), \ \text{\`⊥} \ \text{\`e} \ \text{\`\text{\`E} ⊆ \text{\`s}}; \[X \ \text{\`X} = \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\text{\`big}(\text{\`⊥} \ \text{\`δ})\}; \[\text{\`⊥} \ \text{\`δ} = \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\text{\`σ} = \text{\`\text{\`max}\{ \ \text{\`⊥} \ \text{\`σ}_{\|\text{\`σ}}\}\}; \[\text{\`many}(\text{\`⊥} \ \text{\`δ})\}; \[\ \text{\`⊥} \ \text{\`\text{\`\text{\`σ}} = \ \text{\`\text{\`∥} \ \text{\`\text{\`\text{\`δ}}\\]

fēicháng gāoxìng.
extremely happy\(\text{\`s}\)
\[s\| \text{\`extremely.happy}(s, \ 1 \ \text{\`s}), \ s = \ ^4 \ \text{\`⊥} \ \text{\`e}}\\]

(3) Breaking one off, he went on carrying it on his shoulder.
Tā jiù bāi-le yī-ge,
3SG then break.off\(\text{\`E}^1\)-PNC one-CL,
\(\uparrow\)\(\text{\`s} \ \text{\`s} = \ \text{\`T} \ \text{\`δ}; \[\text{\`T} \ \text{\`σ} \ \text{\`\text{\`E} ⊆ \text{\`⊥} \ \text{\`e}}; \[\text{\`e} \ \text{\`break.\text{\`off}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ 1 \ \text{\`e}), \ \text{\`δ} \ \text{\`e} \ \text{\`\text{\`E} < \text{\`T} \ \text{\`σ}}; \[x \ \text{\`x} = 1 \ \text{\`⊥} \ \text{\`e}, \ \text{\`x} \ \text{\`\text{\`T} \ \text{\`δ}}\]; \[\text{\`E} \ \text{\`\{ \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\text{\`T} \ \text{\`σ} \ \text{\`\text{\`E} ⊆ \text{\`⊥} \ \text{\`e}}\\)

kàng-zhe wàng-qián zōu.
carry.on.\text{\`shoulder}\(\text{\`E}^\text{\`DUR}\) toward-ahead walk\(\text{\`E}\\)
\[\text{\`e} \ \text{\`carry.on.\text{\`shoulder}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ \text{\`⊥} \ \text{\`δ}), \ \text{\`⊥} \ \text{\`\text{\`e} ∈ \text{\`\text{\`E} ⊆ \text{\`⊥} \ \text{\`e}}; \[\text{\`E} \ \text{\`\{ \ \text{\`\text{\`σ}} = \ \text{\`\text{\`∥} \ \text{\`\text{\`\text{\`δ}}\\]

(4) Then he came to a peach tree and was delighted to see big red peaches
Xiăo hóu zi zōu.dào yì-kē táo.shù xià,
little monkey walk.to\(\text{\`E}^1\) one-CL peach tree,
\(\uparrow\)\(\text{\`s} \ \text{\`X\o{}\text{\`l}ittle.m\o{}\text{n}k\o{}\text{y}(x)\}, \ \text{\`x} \ \text{\`\text{\`T} \ \text{\`δ}}\}; \[\text{\`s} \ \text{\`x} = \text{\`x}; \[\text{\`e} \ \text{\`walk.to}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ 1 \ \text{\`e}), \ e = \ ^5 \ \text{\`⊥} \ \text{\`e}; \[x \ \text{\`x} = 1 \ \text{\`⊥} \ \text{\`e}, \ \text{\`peach.\text{\`tree}(x)}\]; \[\text{\`E} \ \text{\`\{ \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\text{\`T} \ \text{\`σ} \ \text{\`\text{\`E} ⊆ \text{\`⊥} \ \text{\`e}}\\)

kàn.jiàn yòu dà yòu hóng de táo.zī,
see\(\text{\`E}\) both big\(\text{\`s}\) and red\(\text{\`s}\) \(\text{\`r}peach
\[\text{\`e} \ \text{\`see}(\text{\`e}, \ \text{\`T} \ \text{\`δ}, \ 1 \ \text{\`e}), \ \text{\`δ} \ \text{\`e} \ \text{\`\text{\`E} ⊆ \text{\`T} \ \text{\`σ}}; \[x \ \text{\`s} \ \text{\`peach}(x), \ \text{\`on}(\text{\`s}, \text{\`x}, \ \text{\`⊥} \ \text{\`δ}), \ \text{\`⊥} \ \text{\`e} \ \text{\`\text{\`E} ⊆ \text{\`s}}; \[X \ \text{\`X} = \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\text{\`big}(\text{\`⊥} \ \text{\`δ}), \ \text{\`red}(\text{\`⊥} \ \text{\`δ})\}; \[\ \text{\`⊥} \ \text{\`δ} = \ \text{\`⊥} \ \text{\`δ}_{\|\text{\`σ}}\}; \[\ \text{\`⊥} \ \text{\`\text{\`\text{\`σ}} = \ \text{\`\text{\`∥} \ \text{\`\text{\`\text{\`δ}}\\]
Dropping the corn, he went over to pick some peaches.

Tā jiǔ rèng-le yǔmǐ

3SG then drop\(\text{PNC}\) corn

\[\tau[s| s = T \delta]; [T \sigma \subseteq \downarrow \epsilon]; [e| drop(e, T \delta, \downarrow \epsilon), \forall \epsilon < \downarrow T \sigma]; [x| x = \downarrow \epsilon, corn.ear(x), x \in \downarrow \delta]; [1 \{ \downarrow \delta \| \tau \sigma \}; [T \sigma \subseteq \downarrow \epsilon];

\]

qù zhōi táozí.
go\(\text{P}\) pick\(\text{E}\) peach

\[e| go(e, \downarrow \epsilon), e = \downarrow T \sigma]; [e| pick(e, \downarrow \epsilon, \downarrow \epsilon), \downarrow \epsilon \subseteq \downarrow \epsilon]; [x| x = \downarrow \epsilon, x \subseteq \cup\text{peach}]

Carrying a handful of peaches, the little monkey headed back up.

Xiǎo hóuzi pēng-zhe jì-ge táozí,

little monkey hold\(\text{E}\) dur\(\text{E}\) a few\(\text{CL}\) peach,

\[\tau[s|x| little.monkey(x), x \in \downarrow \delta, \tau s = x]; [e| hold(e, T \delta, \downarrow \epsilon), \downarrow \epsilon \subseteq \downarrow \epsilon];

[s| s = \downarrow \epsilon]; [x| x = \downarrow \epsilon, x \subseteq \cup\text{peach}]; [\downarrow \delta = \max\{ \downarrow \delta\| \tau \sigma \}; [T \sigma \subseteq \downarrow \sigma];

wāng-huí zǒu.
toward-back walk\(\text{E}\)

\[e| walk.back(e, T \delta), \downarrow e = \downarrow T \sigma\]

Then he saw a little rabbit hopping around. It was really lovely.

Tā kànjian yì-zhī xiǎo tù bèng+bèng tiào+tiao de,

3SG see\(\text{E}\) one\(\text{CL}\) little rabbit spring+spring\(\text{E}\) hop+hop\(\text{E}\) SFP,

\[\tau[s| s = T \delta]; [e| see(e, T \delta, \downarrow \epsilon), \forall \epsilon \subseteq \downarrow \epsilon];

[s| s = \downarrow \epsilon]; [x| x = \downarrow \epsilon, little.rabbit(x)]; [1 \{ \downarrow \delta \| \tau \sigma \}; [e| hop(e, \downarrow \delta), \forall \epsilon \subseteq \downarrow \epsilon];

zhēn kěài.
really lovely\(\text{E}\)S

\[s| really.lovely(s, \downarrow \delta), \forall T \sigma \subseteq \downarrow s\]

Delighted, he dropped the peaches and went off to chase the rabbit.

Tā fēicháng gāoxíng,

3SG extremely happy\(\text{E}\)S,

\[\tau[s| s = T \delta]; [s| extremely.happy(s, T \delta), T \sigma \subseteq s \subseteq \downarrow \epsilon];

jiù rèng-le táozí qù zhūǐ xiǎo tù.
than drop\(\text{PNC}\) peach go\(\text{E}\) chase\(\text{E}\) little rabbit

\[T \sigma \subseteq \downarrow \epsilon]; [e| drop(e, T \delta, \downarrow \epsilon), \forall \epsilon \subseteq \downarrow T \sigma]; [1 \{ \downarrow \epsilon \}; \forall \epsilon < \downarrow T \epsilon];

[e| go(e, \downarrow \epsilon), e = \downarrow \epsilon]; [chase(e, \downarrow \epsilon, \downarrow \epsilon), e = \downarrow \epsilon]; [x| x = \downarrow \epsilon, little.rabbit(x), x \in \downarrow \delta]
The rabbit ran off into a wood and was seen no more.

(9) 

\[
\text{Xiăo tù păo-jìn línzi,} \\
\text{little rabbit run-into\textsuperscript{1} wood,} \\
\text{[s x| little.rabbit(x), x ∈ \perp \equiv \delta, \downarrow s = x]; [e| run.into(e, \top \delta, \downarrow e), \vartheta e = \downarrow e];} \\
\text{[x| x = \perp \equiv \epsilon, wood(x)]} \\
\text{bú jiàn le.} \\
\text{NOT see\textsuperscript{1} PNC} \\
\text{[s| s = \downarrow \equiv \epsilon, not[e| see(e, \top \delta, \top \delta), \vartheta e \subseteq \vartheta s]; [\downarrow \epsilon = \top \sigma]} \\
\text{(10) So the little monkey was forced to return home empty-handed.} \\
\text{Xiăo hóuzi zhī.hăo kōng-zhe shŏu huí-jiă qù le.} \\
\text{little monkey per.force empty\textsuperscript{1} hand return\textsuperscript{1} PNC} \\
\text{[s x| little.monkey(x), x ∈ \top \equiv \delta, \downarrow s = x]; [s| empty.handed(s, \top \delta), \downarrow \epsilon \equiv s];} \\
\text{[\top \sigma \equiv \perp \sigma]; [e| return.home(e, \top \delta), e = \downarrow \top \sigma]}
\]
[5] IT'S NEVER TOO LATE

(1) There was once a man who kept a few sheep.

There was once a man who kept a few sheep.

(2) One morning he noticed that one sheep had gone missing.

One day morning, he noticed that one sheep had gone missing.

(3) In fact, there was a hole in the sheep pen. During the night, a wolf had sneaked in through the hole, stolen the sheep and got away with it.

There was a hole in the sheep pen. During the night, a wolf had sneaked in through the hole, stolen the sheep and got away with it.

(4) A neighbor advised him to cover up the hole but he was too lazy.

A neighbor advised him to cover up the hole but he was too lazy.
The next morning, when he went to herd his sheep, he again found that one sheep was missing.

Dièrtiān zǎoshāng,
next.day morning,
[t| day(t), t \in \perp \delta]; [t| day(t), night.aft(\perp t) \prec t]; \overline{t}[t| t = morning.of(\perp t)];

tā qù fàng.yáng,
3SG go\textsuperscript{1} herd.sheep\textsuperscript{E},
\overline{t}[x| x = \perp \delta, \perp s \subseteq \perp \tau]; [e| go(e, \perp \delta), e = \perp \sigma]; [e| herd.sheep(e, \perp \delta), \perp e = \perp e];

fāxiàn yǒu shǎo-le yì-zhī yáng.
notice\textsuperscript{E} again be.missing-PNC one-CL sheep
[e s| notice(e, \perp \delta, s), e = \perp \perp \sigma]; [x| x \subseteq \perp sheep]; [s| missing.from(s, \perp \delta), loc \perp e, \perp \perp s]; [\perp \delta = \text{max}\{\perp \perp s\}|_{e}]; [1\{\perp \perp \sigma\}] [e| e = \perp \perp \sigma, e < \perp \perp \perp \sigma]

(7) Apparently the wolf had again got in through the hole,
Yuánlái lánɡ yòu cóng kūlong-ǐ zuǎn jìn lái
actually wolf again from hole-loc dig.in\textsuperscript{1} enter\textsuperscript{E}
grabbed a sheep and and got away with it.
bā yánɡ diāo.zǒu-le.
PAT sheep grab.away-PNC

(8) Tā hén hòuhuí , bù.gāi bù jiēshòu línjù de quāngào.
3SG very sorry\textsuperscript{S}, NOT.AM\textsuperscript{E} NOT follow\textsuperscript{E} [neighbour H advice]
The man was very sorry that he had not followed his neighbour's advice.

(9) Tā gānkuài dūshāng nà-gè kūlónɡ , bā yánɡ-juàn xiū-de-jìějiěshíshi de
3SG quickly cover.up\textsuperscript{1} that-CL hole, PAT sheep-pen fix-H-secure SFP
He immediately plugged up the hole and secured the sheep pen.

(10) Cóng-cǐ, tā-de yánɡ zài méiyǒu bèi lánɡ diāo.zǒu le.
from-then , 3SG-H sheep again NOT AGT wolf grab.leave\textsuperscript{E} SFP
From then on, no more of his sheep were stolen by wolves.
[6] Chinese New Year

(1) Long ago, there was a demon called the "Evil One".

Long ago, there was a demon named Evil One.

(2) He liked to touch children on the head with his hands on New Year's Eve.

He liked to touch children on the head with his hands on New Year's Eve.

(3) [A child touched by him] would cry loudly, ...

[A child touched by him] would cry loudly, ...

http://www.rci.rutgers.edu/~mbittner
Therefore, every New Year's Eve, every family ... 
Suōyī, měi nián chǔxī, měi yǐ-jíà therefore, every M yr New.Yr.Eve, every one-CL_fam

\[ t \in [\text{new.yr.eve}(t), t \in \Delta \tau]\; \text{and} \; T = \tau \delta; \; s = \tau \iota; \; S = \tau \sigma; \; \] 

stayed up with bright lights on.
dōu liàng-zhe dēng bù shuì.jiào.

DIS bright-DUR light NOT fall.asleep\[E^1

\[ x \in \text{light.of}(\tau \sigma), \; \tau \sigma \subseteq \iota \tau; \; [\not[e] \text{fall.asleep}(e, \tau \delta), \; \iota \sigma \subseteq \Delta \tau]; \; [\tau \sigma = \tau \sigma|_{\tau \sigma}]; \; [\tau \iota = \tau \tau]\]

• \[ \tau e_0: \text{e}_0\text{-speaker speaks up} \]

\[ \vdash \]

\[ s_2: s_1 \subseteq s_2, \text{demon x} \text{likes to e}_2 \]

\[ \vdash \]

\[ t_{2n}: t_{2n} \subseteq \iota s_{2n}, \text{New Year's Eve. dur. s} \]

\[ \vdash \]

\[ r t_{4n}: t_{4n} = t_{2n}, \text{New Year's Eve. dur. s} \]

\[ \vdash \]

\[ r s_{4n}: \iota s_{4n} = t_{4n}, \text{family !s}_{4n} \text{on New Yr's Eve. t}_{4n} \]

\[ \vdash \]

\[ s_{4n}: s_{4n} \subseteq s'_{4n}, \text{lights x} \text{of family !s}_{4n} \text{are bright,} \]

\[ \vdash \]

\[ s': s_{4n} \subseteq s'_{4n}, \text{family !s}_{4n} \text{doesn't fall asleep during t}_{4n} = \iota s_{4n} \]

There was one couple who cherished their little boy.

Yōu yǐ-jíà fūqī hěn bāo.bèi tāmen de xiǎo érzhī.
have's one-CL_fam couple POS cherish's 3PL H little son

\[ x \in [\text{couple}(\tau \delta), \; 1 \{\tau \delta|_{\tau \delta}\}; \; s \in \text{cherish}(s, \tau \delta, \iota s), \; \tau \sigma \subseteq s]; \; [\text{little.son.of}(x, \tau \delta)]\]

• \[ \tau e_0: \text{e}_0\text{-speaker speaks up} \]

\[ \vdash \]

\[ (\tau) s_{4n}: \iota s_{4n} = t_{4n}, \text{family !s}_{4n} \text{on New Yr's Eve. t}_{4n} \]

\[ \vdash \]

\[ s': s_{4n} \subseteq s'_{4n}, \text{lights x}_{4n} \text{of family !s}_{4n} \text{are bright,} \]

\[ \vdash \]

\[ s': s_{4n} \subseteq s'_{4n}, \text{family !s}_{4n} \text{doesn't fall asleep during t}_{4n} = \iota s_{4n} \]

One New Year's Eve, ...

Chūxī yèwān,
New.Yr.Eve evening,

\[ t \in [\text{new.yr.eve}(t), t \in \Delta \tau]\; \text{and} \; \]

they carelessly wrapped up eight coins in red paper ...
tāmēn bù.jīngyí-de jiāng bā-méi tóngqiàn yòng hóng zhī bāo.qīlái,
3PL careless-ADV PAT 8-CL coin with red paper wrap.up\[E^1

\[ [\text{co} \subseteq \text{coin}]\; \text{and} \; [\text{careless}(\tau \sigma, \iota \tau \sigma); \; [\text{use}(e, \tau \delta, x), \text{red.paper}(x), \text{wrap.up}(e, \tau \delta, \iota \tau \sigma)]\; e = \tau \sigma]; \]
At midnight, when the Evil One was about to touch the child on the head, …

Bànyè Suì găng yào qu mō háizi de tòu, midnight Evil One just AM> go\(\text{头}\) child \H head
\[ t_n \mid midnight.of(t, T \delta); [x] nm^s(x) = evil.one, x \in T \delta^\circ; [s] abt.to.touch(s, \bot \delta, l s), T \tau \propto \delta^s, T \tau \subseteq l s; [x] child.of(x, T \delta), x \in \bot \delta^\circ; [x] x = \bot \bot \sigma, head.of(\bot \delta); \]

the area around the pillow flashed with a bright flash, …
zhēntóu-biān jiù fāchū shānguāng,
pillow-side then emit\(\text{头}\) flash
\[ [x] pillow^s(x), x \in \bot \delta^\circ; [x] area.around(x, \bot \delta); [s] \delta s = T \tau; [e] emit(e, \bot \delta, l e), e = \delta \bot \sigma; [x] x = \bot \bot \epsilon, flash\langle x\rangle; \]

which scared the Evil One away.
xià dé Suì táo.pǎo le.
frighten\(\text{头}\) H Evil One run.away\(\text{头}\) SFP
\[ [e] frighten\langle e, T \delta, l e\rangle, e = \bot \bot e; [x] x = \bot \bot e, name\langle x\rangle = evil.one, x \in \bot \delta^\circ; ]
\[ [e] run.away\langle e, \bot \delta\rangle, \bot \bot e = \langle e\rangle; [\bot \bot e = \delta \bot \sigma] \]

\[ e_0: e_0^{\text{speaker speaks up}} \]

\[ e_6: e_6^{\text{put coins}} \]

\[ s_6: s_6^{\text{under pillow}} \]

\[ s_7: t_7 \triangleq \delta s_7, t_7 \subseteq \delta s_7, \text{ Evil One } x_1 \text{ just about to touch child } y_5 \text{ on the head} \]

\[ e_7: e_7^{\text{Evil One } x_1 \text{ runs away}} \]
(8) For in fact, the eight coins …

Yuánlái bā-méi tóngqián
prev./in.fact eight-CL coin

\[ \forall [s \in \text{X}] \; \exists \langle s, \downarrow_s, X \rangle, \; s \subseteq \mathcal{A} \cap \sigma; \; \exists [x \in \mathbb{R}], \; 8 \langle A, x \rangle, \; x \in \cup \text{coin}, \; x \in \downarrow \delta^n \];

were eight angels who had turned into coins and secretly come to protect children.

shì bā-xiān [biàn-de ànzhōng lái bāohù háizi] de.

be\$^1 eight-CL-angel turn-into secretly come\$^1 protect\$ child H

\[ \exists [s] \; \exists \langle s, \downarrow \delta, \uparrow \delta \rangle, \; s \subseteq \mathcal{A}; \; \exists [x] \; 8 \langle A, x \rangle, \; x \in \cup \text{angel}; \; \exists [e] \; \text{turn into} \langle e, \downarrow \delta, \{ \downarrow \delta \} \rangle, \; e \subseteq \mathcal{A} \cap \sigma; \; \exists [e] \; \text{secretly come} \langle e, 1e \rangle, \; \downarrow e = \langle e \rangle; \; \exists [e] \; \text{protect} \langle e, 1e, 1\delta \rangle, \; 1e \subseteq \cup \text{child}, \; \downarrow e = \langle e \rangle; \; [\downarrow \delta_i = \downarrow \delta] \]

\[ \uparrow e_6: e_6\text{-speaker speaks up} \]

\[ \circ \]

\[ \circ e_6': e_6' \subseteq \uparrow e_6, \text{couple} x_5 \text{ put coins } x_6 \text{ in space } y_6 \]

\[ \text{under pillow } z_6 \text{ of } x_5 \text{'s son } y_5 \]

\[ \circ \]

\[ \circ t_7: \text{midnight of New Yr. Eve } t_6 \]

\[ \circ \]

\[ s_7: t_7 \approx \uparrow \delta s_7, t_7 \subseteq \uparrow \delta s_7, \text{ Evil One } x_1 \text{ just about to touch child } y_5 \text{ on the head} \]

\[ \circ \]

\[ s_7': \uparrow \delta s' = t_7, \text{ area } x_7 \text{ around pillow } z_6 \text{ at midnight } t_7 \]

\[ e_7: e_7 = \uparrow \delta s_7, \text{ area } x_7 \text{ around pillow } z_6 \text{ emits flash } y_7 \]

\[ e_7': \uparrow \delta e_7 = \uparrow \delta s_7, \text{ flash } y_7 \text{ frightens the Evil One } x_1 \]

\[ e_7'': \uparrow \delta e_7' = \uparrow \delta e_7'' = \uparrow \delta s' = \text{ Evil One } x_1 \text{ runs away} \]

\[ s_8: s_8 \subseteq \mathcal{A} \cap s_7, \text{ 8 coins } x_6 \text{ are in } Y_8 \text{ (their orig. form)} \]

\[ s_8': s_8 \subseteq \mathcal{A} \cap s_8, \text{ 8 coins } x_6 \text{ are in } Y_8 \text{-set of 8 angels } y_8 \]

\[ s_8 \circ \]

\[ e_8: e_8 \subseteq \uparrow \delta s_8, \text{ 8 angels } y_8 \text{ turn into 8 coins } x_6 \]

\[ e_8': e_8' = \uparrow \delta e_8, \text{ 8 angels } y_8 \text{ secretly arrive} \]

\[ e_8'' \circ e_8'' = \uparrow \delta e_8'', \text{ 8 angels } y_8 \text{ protect child(ren)} \]