YUKATEK: MAYAN

Chan t'u'ul ichil le sahkabo'

"Little Rabbit in the Cave" (§2)

ONLINE UPDATE

Maria Bittner (4/24/2005)

TEXT: D. and A. Bolles, 1996, *A Grammar of the Yucatecan Mayan Language*/The Expoloits of Juan Thul, The Trickster Rabbit. *http://www.famsi.org/reports/96072/grammar/section42.html*.
GLOSSES & TRANSLATION: See the *text* pdf at *http://www.rci.rutgers.edu/~mbittner/ym.html*.
ONLINE UPDATE: See Bittner 2004 'Online Update: Quantified *de se* and polysynthesis'.
The following table lists some basic symbols of the semantic representation language to be used:

TABLE 1. Variables, demonstratives, and logical constants of *Logic of Centering*

Type	Abbr.	Name of objects	$^{\top}$Var	$^{\perp}$Var	$^{\top}$Dem	$^{\perp}$Dem	Con
t		truth values					
ω		worlds	**w**	w			
ε		events	**e**	e			
σ		states	**s**	s			
α		animates	**a**	a			
β		inanimates	**b**	b			
τ		times	**t**	t			
π		places	**l**	l			
ωt	Ω	ω-domains (propositions)	**p**	p			
εΩ		ε-dependent propositions	$\mathbf{p}_{\varepsilon}$	p_{ε}			
εt		ε-domains	**E**	E			
εε		ε-chains (processes)	**ee**	ee			
ωε	ə	ε-concepts	$\mathscr{E}$	$\mathscr{E}$			
əə		ε-concept chains	$\mathscr{E}\mathscr{E}$	$\mathscr{E}\mathscr{E}$			
ωτt	θ	τ-domain concepts	$\mathscr{D}$	$\mathscr{D}$			
ωτν	η^{ν}	ν-habits (ν ∈ {ε, σ, εε})	$\mathbf{h}^{\nu}$	h^{ν}			
ωνη	κ^{η}	η-kinds (η ∈ {α, β, τ, π})	$\mathbf{k}^{\eta}$	k^{η}			
⋮	⋮	⋮					
s		stacks (of dref objects)					
ω×s×s	s	information-and-attention states		i, j			
sα		α-demonstratives (α, dref type)			$\mathbf{da}_n$	$d\alpha_n$	
sst		updates					
ωσε		state onset					BG
ωεσ		result state					RS
ωεα		agent					AG
ωeα		dative (e ∈ {ε, σ})					DA
ωeβ		theme object (e ∈ {ε, σ})					OB
ωeτ		time (e ∈ {ε, σ})					ϑ
ωeπ		place (e ∈ {ε, σ})					Π

Form	*MB* gloss (stands for)	1st ex	Presuppositional test (^{P}); update; implicature (^{I})
NON-STATIVE markers:			
kéen	[DEP (inchoative dep.)	§1.6	$[\mid {}^{1}d\text{ə}\text{ə} \subseteq \vartheta_{\text{RS}}\ \mathbf{d}\text{ə}]$;
káa	DEP] (completive dep.)	§1.2	$[e \mid e \subseteq_{\mathbf{d}\Omega} \vartheta_{\text{RS}}\ d\varepsilon]$;
kap'	[V (inchoative)		$[e \mid e \subseteq_{\mathbf{d}\Omega} \mathbf{d}\tau]$; $[\mathscr{E}\mathscr{E} \mid d\varepsilon =_{\mathbf{d}\Omega} {}^{1}\mathscr{E}\mathscr{E}]$
h-	IV] (completive intr.)	§1.2	$[\mid d\varepsilon \subseteq_{\mathbf{d}\Omega} \mathbf{d}\tau]$; $[\mid \text{DA}\ d\varepsilon =_{\mathbf{d}\Omega} \mathbf{d}\alpha]$
t-	TV] (completive tr.)	§1.2	$[\mid d\varepsilon \subseteq_{\mathbf{d}\Omega} \mathbf{d}\tau]$; $[\mid \text{AG}\ d\varepsilon \neq_{\mathbf{d}\Omega} \text{OB}\ d\varepsilon]$
k-	V (verbal concept)	§1.5	$[\mathscr{E} \mid \mathscr{E} \subseteq \mathbf{d}\omega\tau]$ (or $[h^{\varepsilon} \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} h^{\varepsilon}]$)
STATE markers:			
ts'o'k	PRF (final result state)	§1.2	$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[e \mid d\sigma =_{\mathbf{d}\Omega} \text{RS}\ e]$
táan	PRG (initial res state)	§1.1	$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E}\mathscr{E} \mid d\sigma =_{\mathbf{d}\Omega} \text{RS}\ {}^{1}\mathscr{E}\mathscr{E}]$
òolak	ALM (penult. res state)		$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E}\mathscr{E} \mid d\sigma =_{\mathbf{d}\Omega} \text{RS}\ {}^{f-1}\mathscr{E}\mathscr{E},\ no_{\mathbf{d}\Omega}\ {}^{f}\mathscr{E}\mathscr{E}]$
táak	DES (state of desire)		$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E} \mid (d\sigma\text{: DA}\ want_{\mathbf{d}\Omega}\ \mathscr{E}),\ \mathscr{E} \subseteq \mathbf{d}\omega\tau]$
k'a'náan	NEED (state of need)		$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E} \mid (d\sigma\text{: DA}\ need_{\mathbf{d}\Omega}\ \mathscr{E}),\ \mathscr{E} \subseteq \mathbf{d}\omega\tau]$
he'	CRT (state of certainty)	§6.4	$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E} \mid (d\sigma\text{: DA}\ sure.of_{\mathbf{d}\Omega}\ \mathscr{E}),\ \mathscr{E} \subseteq \mathbf{d}\omega\tau]$
yan	EXP (st of expectation)	§1.5	$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mathscr{E} \mid (d\sigma\text{: DA}\ expect_{\mathbf{d}\Omega}\ \{d\text{ə}, \neg d\text{ə}\}),\ \mathscr{E} \subseteq_{d\text{ə}} \mathbf{d}\omega\tau]$
bíin	PRD (res st of prediction)		$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s,\ s =_{\mathbf{d}\Omega} \text{RS}\ d\varepsilon]$; $[\mathscr{E} \mid (d\varepsilon\text{: AG}\ predict_{\mathbf{d}\Omega}\ \mathscr{E}),\ \mathscr{E} \subseteq \vartheta_{\text{RS}}\ d\varepsilon]$
mukah	PRE ('be about to')	§1.7	$[s \mid \mathbf{d}\tau \subseteq_{\mathbf{d}\Omega} s]$; $[\mid d\text{ə}\text{ə} \subseteq \vartheta_{\text{RS}}\ \text{BG}\ d\sigma]$; $^{I}[\mid d\sigma\text{: DA}\ intend_{\mathbf{d}\Omega}\ d\text{ə}\text{ə}]$
STATE CONCEPT markers:			
ta'itak	PRE_1 ('be just about to')		$^{P}[\mid \mathbf{d}\omega\tau = \vartheta d\omega\sigma,\ \mathbf{d}\tau < d\text{ə} \subseteq \mathbf{d}\omega\tau]$; $[kk^{\tau} \mid \pm scale(kk^{\tau}, \vartheta d\omega\sigma, \mid\cdot\mid),\ \mathbf{d}\omega\tau = {}^{1}kk^{\tau}\{d\omega\sigma\}]$; $[s \mid s =_{\mathbf{d}\Omega} d\omega\sigma]$
táant	PRF_1 (short result state)		$^{P}[\mid \mathbf{d}\omega\tau = \vartheta_{\text{RS}}\ d\text{ə}]$; $[kk^{\tau} \mid \pm scale(kk^{\tau}, \vartheta_{\text{RS}}\ d\text{ə}, \mid\cdot\mid),\ \mathbf{d}\omega\tau =_{\mathbf{d}\Omega} {}^{1}kk^{\tau}\{d\text{ə}\}]$; $[s \mid s =_{\mathbf{d}\Omega} \text{RS}\ d\text{ə}]$
sáam	PRF_2 (mid result state)	§2.1	$^{P}[\mid \mathbf{d}\omega\tau = \vartheta_{\text{RS}}\ d\text{ə}]$; $[kk^{\tau} \mid \pm scale(kk^{\tau}, \vartheta_{\text{RS}}\ d\text{ə}, \mid\cdot\mid),\ {}^{1}kk^{\tau} <_{\mathbf{d}\Omega} \mathbf{d}\omega\tau <_{\mathbf{d}\Omega} {}^{f}kk^{\tau}]$; $[s \mid \text{BG}\ s \subseteq_{\mathbf{d}\Omega} {}^{f}\mathbf{d}\omega\tau]$
úuch	PRF_3 (long result state)		$^{P}[\mid \mathbf{d}\omega\tau = \vartheta_{\text{RS}}\ d\text{ə}]$; $[kk^{\tau} \mid \pm scale(kk^{\tau}, \vartheta_{\text{RS}}\ d\text{ə}, \mid\cdot\mid),\ \mathbf{d}\omega\tau =_{\mathbf{d}\Omega} {}^{f}kk^{\tau}\{d\text{ə}\}]$; $[s \mid \text{BG}\ s \subseteq_{\mathbf{d}\Omega} {}^{f}\mathbf{d}\omega\tau]$

MOOD-CENTERING inflection ('status'):

IND	$^{P}[\mid \vartheta_{\mathbf{d}\Omega}\, d\varepsilon < \vartheta_{\mathbf{d}\omega}\ \mathbf{d}\varepsilon]$;	IV_{A}	$[\mid \text{AG}\ d\varepsilon =_{\mathbf{d}\Omega} \mathbf{d}\alpha]$
ELA]	$[\mathbf{I} \mid {}^{f}d\text{ə}\text{ə} \subseteq \vartheta_{\text{RS}}\ \text{BG}\ d\sigma]$;	IV_{U}	$[\mid \text{DA}\ d\varepsilon =_{\mathbf{d}\Omega} \mathbf{d}\alpha]$
ELA	$[\mathbf{I} \mid \text{BG}\ d\sigma \subseteq \vartheta_{\text{RS}}\ {}^{1}d\text{ə}\text{ə}]$;	TV_{A}	$[\mid \text{AG}\ d\text{ə}\text{ə} = \mathbf{d}\alpha,\ \text{DA}\ d\text{ə}\text{ə} = d\alpha]$;
		TV_{U}	$[\mid \text{DA}\ d\text{ə}\text{ə} = \mathbf{d}\alpha,\ \text{AG}\ d\text{ə}\text{ə} = d\alpha]$

Clause-final TOPIC UPDATE:

=e'	$\text{TM}^{\top}$ (new tmp or mod topic)	§1.1	$[\mathbf{t} \mid \mathbf{t} =_{\mathbf{d}\Omega} \vartheta_{\text{RS}}\ d\varepsilon]$	§1.8	$[\mathbf{p}_{\omega} \mid \mathbf{p}_{\omega} = d\omega\Omega]$
=i'	$\text{LM}^{\top}$ (new loc or mod topic)	§1.2	$[\mathbf{l} \mid \mathbf{l} = d\pi]$	§2.1	$[\mathcal{T} \mid \mathcal{T} = \vartheta_{\text{RS}}\ d\text{ə}]$
=o'	$\text{DT}^{\top}$ (topicalize *that*)	§1.9	$[\mathbf{t} \mid \mathbf{t} =_{\mathbf{d}\Omega} \vartheta_{\text{RS}}\ d\varepsilon]$	§1.7	$[\mathcal{T} \mid \mathcal{T} = \vartheta\ \text{RS}\ {}^{1}d\text{ə}\text{ə}]$
=a'	$\text{DS}^{\top}$ (topicalize *this*)	§1.8	$[\mathbf{k}^{\beta} \mid \mathbf{k}^{\beta} = d\kappa^{\beta}]$	§1.3	$[\mathbf{p}_{\varepsilon} \mid \mathbf{p}_{\varepsilon} = d\varepsilon\Omega]$

END OF §1. *Hunted Rabbit finds a cave*

§1.9 "
(shift back to narrator's voice)
[**p**| **p** = $\mathbf{d}\Omega_2$]; [**t**| **t** $=_{\mathbf{d}\Omega}$ ϑRS **d**ε]; [**e**| **e** = $\mathbf{d}\varepsilon_2$];

So then he began to hold up the cave.
káa *if*
DEP]
[*e*| *e* $\subseteq_{\mathbf{d}\Omega}$ ϑRS ^{f}**d**εε];

túun
then
[| **d**τ $=_{\mathbf{d}\Omega}$ ϑRS ^{f}**d**εε];

t- -u *ib*
TV]- -3s
[| *d*ε $\subseteq_{\mathbf{d}\Omega}$ **d**τ]; [| AG *d*ε $\neq_{\mathbf{d}\Omega}$ OB *d*ε]; P[| $3s_{\mathbf{d}\Omega}$ **d**α]; [| AG *d*ε $=_{\mathbf{d}\Omega}$ **d**α]

lat- *mf*
hold.up-
P[| *d*ЭЭ: AG *hold.up* OB]; [| *d*ε $=_{\mathbf{d}\Omega}$ ^{1}*d*ЭЭ];

-ah
-IND. .TV_A .3s
P[| $\vartheta_{\mathbf{d}\Omega}$ *d*ε < $\vartheta_{\mathbf{d}\omega}$ **d**ε]; P[| AG *d*ε $=_{\mathbf{d}\Omega}$ **d**α, OB *d*ε $=_{\mathbf{d}\Omega}$ *d*β]; [| *3s d*β];

le sahkab =o' *fb*
the *cave* =DT$^\top$
P[| *d*β $=_{\mathbf{d}\Omega}$ $\mathbf{d}\kappa^\beta$\{*d*ε\}]; [| *cave* $\mathbf{d}\kappa^\beta$]; [**t**| **t** $=_{\mathbf{d}\Omega}$ ϑRS *d*ε];

Diagram with temporal counter *reset to 0*:

$w_0 \in {}^\top p_0$ (story worlds)
⋮ ⋮
====== s_0: rabbit a_0 intends to realize (all of) $\mathscr{EE}_0$
||||||||||||| ${}^\top t_0 = \vartheta_{w0}$ RS_{w0} ${}^f ee_0$: after ee_0-thinking
▬ $e_0 = {}^1\mathscr{EE}_0 w_0$: 1st stage of $\mathscr{EE}_0$-plan,
rabbit a_0 begins to hold up cave b_2
||| ${}^\top\mathscr{T}_0 w_0 = \vartheta_{w0}$ RS_{w0} ${}^1\mathscr{EE}_0 w_0$: after 1st $\mathscr{EE}_0$-stg

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$w_7 \in \text{Dom } \mathscr{E}_{-2} = {}^\top p_{\varepsilon,0}({}^2 ee_0) \cap \text{Dom } {}^f\mathscr{EE}_0$ (RS ${}^2 ee_0$-belief worlds w. ${}^f\mathscr{EE}_{-1}$-chase = $\mathscr{E}_{-2}$-entry)
▬…▬ $\langle {}^1\mathscr{EE}_0 w_7, \ldots, {}^f\mathscr{EE}_0 w_7\rangle$: rab a_0 holds up cave b_2
• $\mathscr{E}_{-2}(w_7)$: man a_1 enters interior ${}^\top l_2$ of cave b_2
|||||| $\mathscr{T}_{-1} w_7 = \vartheta_{w7}$ RS_{w7} $\mathscr{E}_{-2} w_7$: result tm of $\mathscr{E}_{-2}$-entry
• $\mathscr{E}_{-1}(w_7)$: rab a_0 tells man a_1 they are in ${}^\top p_{\omega,0} w_7$
(where he's been $\mathscr{EE}_0$-holding since birth)
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§2. *Hunter wants to shoot Rabbit*

§2.1 After a while…[1]

sáam *if*
PRF_2
^{P}[| **d**ωτ = RS ^{1}dəə];
[kk^{τ}| ±*scale*(kk^{τ}, ϑRS ^{1}dəə, |·|), $^{1}kk^{\tau}$ <$_{\mathbf{d}\Omega}$ **d**ωτ <$_{\mathbf{d}\Omega}$ $^{f}kk^{\tau}$]; [s| BG s ⊆$_{\mathbf{d}\Omega}$ ^{f}**d**ωτ];

le'l- =o'
that- =$DT^{\top}$
^{P}[| $d\varepsilon$ =$_{\mathbf{d}\Omega}$ ^{1}dəə]; [**t**| **t** =$_{\mathbf{d}\Omega}$ ϑBG $d\sigma$];

…the hunter did come.
k- *ib*
V-
[| də$_2$ ⊆$_{\mathbf{d}\Omega}$ **d**τ]; [$\mathscr{E}$| $\mathscr{E}$ = də$_2$];

-u
-3s
^{P}[| $3s_{\mathbf{d}\Omega}$ $d\alpha$]; [| DA də = $d\alpha$]; [**a**| **a** = $d\alpha$];

tà(al)- *mf*
come-
^{P}[| də: DA *come.to* **d**π];

-al
-ELA. .IV_U
[| də ⊆ ϑRS ^{1}dəə]; [| DA də = **d**α];

le h- ts'òon- =o' *fb*
the M- *hunter-* =$DT^{\top}$
^{P}[| **d**α = $d\kappa^{\alpha}${də}]; [| *male* $d\kappa^{\alpha}$]; [| *hunter* $d\kappa^{\alpha}$]; [$\mathscr{T}$| $\mathscr{T}$ = ϑRS də];

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[1] • kk^{τ} is a symmetric scale ranking result state times of initial stages of dəə-processes by their duration
±*scale*(kk^{τ}, ϑRS ^{1}dəə, |·|) := $\lambda i.\ \exists k^{\tau}_{-n}\ldots k^{\tau}_{0}\ldots k^{\tau}_{n}$: $kk^{\tau} = \chi\langle k^{\tau}_{-n}, \ldots k^{\tau}_{0}, \ldots k^{\tau}_{n}\rangle$
∧ $k^{\tau}_{0} = \{\langle w, e, \vartheta_{w\ \mathrm{RS}_w}\ e\rangle$: $w \in \mathrm{Dom}\ ^{1}d$əə$_i$ ∧ $e = {}^{1}d$əə$_i w\}$
∧ ∀m: $-n \le m < 0$: $k^{\tau}_{m} \subset k^{\tau}_{m+1}$
∧ **max**{|t|: ∃$w \in \mathrm{Dom}\ k^{\tau}_{m}(t \in \mathrm{Ran}\ k^{\tau}_{m}w)$}
< **max**{|t|: ∃$w \in \mathrm{Dom}\ k^{\tau}_{m+1}(t \in \mathrm{Ran}\ k^{\tau}_{m}w)$}
∧ ∀m: $0 \le m < n$: $k^{\tau}_{m+1} \subset k^{\tau}_{m}$
∧ **min**{|t|: ∃$w \in \mathrm{Dom}\ k^{\tau}_{m}(t \in \mathrm{Ran}\ k^{\tau}_{m}w)$}
< **min**{|t|: ∃$w \in \mathrm{Dom}\ k^{\tau}_{m+1}(t \in \mathrm{Ran}\ k^{\tau}_{m}w)$}

• In **d**Ω, **d**ωτ instantiates medium kk^{τ}-degrees, neither the bottom degree, $^{1}kk^{\tau}$, nor the top, $^{f}kk^{\tau}$.
$^{1}kk^{\tau}$ <$_{\mathbf{d}\Omega}$ **d**ωτ <$_{\mathbf{d}\Omega}$ $^{f}kk^{\tau}$:= $\lambda i.\ \forall w \in \mathrm{Dom}\ \mathbf{d}\Omega_i$: $\{k^{\tau} \in kk^{\tau}$: **d**ω$\tau_i \in \mathrm{Ran}\ k^{\tau}w\} \neq \{\}$
∧ **d**$\tau_i \notin \mathrm{Ran}\ ^{1}kk^{\tau}w$ ∧ **d**ω$\tau_i \notin \mathrm{Ran}\ ^{f}kk^{\tau}w$

• In **d**Ω, state s begins with the final instant of **d**ωτ. (Assume periods are chains of instants).
BG s ⊆$_{\mathbf{d}\Omega}$ ^{f}**d**ωτ := $\lambda i.\ \forall w \in \mathbf{d}\Omega_i$: $\vartheta_{w\ \mathrm{BG}_w}\ s = {}^{f}\mathbf{d}\omega\tau_i w$

$w_0 \in {}^{\top}p_0$ (story worlds)

⋮ ⋮

▬ $e_0 = {}^1\mathscr{E}\mathscr{E}_0 w_0$: 1st stage of $\mathscr{E}\mathscr{E}_0$-plan,

||| $\mathscr{T}_0 w_0 = \vartheta_{w0}\ \mathrm{RS}_{w0}\ {}^1\mathscr{E}\mathscr{E}_0 w_0$: rs-time of ${}^1\mathscr{E}\mathscr{E}_0$

medium kk^{τ}_1-duration for ${}^1\mathscr{E}\mathscr{E}_0$-rs times

== s_1: state beginning with the end of ${}^{\top}\mathscr{T}_0 w_0$

|| ${}^{\top}t_1 = \vartheta_{w0}\ \mathrm{BG}_{w0}\ s_1$: time of s_1-beginning

• $\mathscr{E}_1 w_0$: hunter a_1 comes to ${}^{\top}l_2$ (inside cave b_2)

|||| ${}^{\top}\mathscr{T}_1 w_0 = \vartheta_{w0}\ \mathrm{RS}_{w0}\ \mathscr{E}_1 w_0$: result tm of $\mathscr{E}_1$-entry

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$w_7 \in \mathrm{Dom}\ \mathscr{E}_1 = {}^{\top}p_{\varepsilon,0}({}^2ee_0) \cap \mathrm{Dom}\ {}^f\mathscr{E}\mathscr{E}_0$ (RS ${}^2ee_0$-belief worlds w. ${}^f\mathscr{E}\mathscr{E}_{-1}$-chase = $\mathscr{E}_1$-entry)

▬…▬ $\langle {}^1\mathscr{E}\mathscr{E}_0 w_7, \ldots, {}^f\mathscr{E}\mathscr{E}_0 w_7\rangle$: rab a_0 holds up cave b_2

• $\mathscr{E}_1(w_7)$: man a_1 enters interior ${}^{\top}l_2$ of cave b_2

|||||| ${}^{\top}\mathscr{T}_1 w_7 = \vartheta_{w7}\ \mathrm{RS}_{w7}\ \mathscr{E}_1 w_7$: result tm of $\mathscr{E}_1$-entry

• $\mathscr{E}_{-1}(w_7)$: rab a_0 tells man a_1 they are in ${}^{\top}p_{\omega,0}w_7$

(where he's been $\mathscr{E}\mathscr{E}_0$-holding since birth)

§2.2 And (sure enough) he said:

k- *ib*
V-
$[\mathscr{E}|\ \mathscr{E} \subseteq_{\mathbf{d}\Omega} \mathbf{d}\tau]$;

-u
-3s
${}^{\mathrm{P}}[|\ 3s_{\mathbf{d}\Omega}\ \mathbf{d}\alpha]$; $[|\ \mathrm{AG}\ d\ni =_{\mathbf{d}\Omega} \mathbf{d}\alpha]$;

y- *mf*
3s-
${}^{\mathrm{P}}[|\ 3s_{\mathbf{d}\Omega}\ \mathbf{d}\alpha]$; $[|\ \mathrm{AG}\ d\ni = \mathbf{d}\alpha]$;

a'l-
say-
$[|\ 3\mathrm{s}\ \mathrm{AG}\ d\ni]$; $[p_\omega|\ d\ni\text{: AG } say\ p_\omega]$;

-ik
-ELA. .$\mathrm{TV_A}$ .3s
$[|\ d\ni \subseteq \vartheta\mathrm{RS}\ d\ni_1]$; $[|\ \mathrm{AG}\ d\ni = \mathbf{d}\alpha, \mathbf{d}\alpha \neq d\omega\Omega]$; $[|\ 3s\ d\omega\Omega]$

bèey- =a' *fb*
thus- $=\mathrm{DS}^{\top}$
${}^{\mathrm{P}}[|\ d\ni\text{: AG } say_{\mathbf{d}\Omega}\ d\omega\Omega]$; $[\mathbf{p}_\omega|\ \mathbf{p}_\omega = d\omega\Omega]$;
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$w_0 \in {}^{\top}p_0$: (story worlds)

$e_0 = {}^{1}\mathscr{E}\mathscr{E}_0 w_0$: 1st stage of $\mathscr{E}\mathscr{E}_0$-plan,

$\mathscr{E}_1 w_0$: hunter a_1 comes to ${}^{\top}l_2$ (inside cave b_2)

${}^{\top}\mathscr{T}_1 w_0 = \vartheta_{w0}\, \mathrm{RS}_{w0}\, \mathscr{E}_1 w_0$: result tm of $\mathscr{E}_1$-entry

$\mathscr{E}_2(w_0)$: hunter a_1 claims to be in ${}^{\top}p_{\omega,2}(w_0)$

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$w_7 \in \mathrm{Dom}\ \mathscr{E}_1 = {}^{\top}p_{\varepsilon,0}({}^{2}ee_0) \cap \mathrm{Dom}\ {}^{f}\mathscr{E}\mathscr{E}_0$ (RS ${}^{2}ee_0$-belief worlds w. ${}^{f}\mathscr{E}\mathscr{E}_{-1}$-chase = $\mathscr{E}_1$-entry)

$\langle {}^{1}\mathscr{E}\mathscr{E}_0 w_7, \ldots, {}^{f}\mathscr{E}\mathscr{E}_0 w_7 \rangle$: rab a_0 holds up cave b_2

$\mathscr{E}_1(w_7)$: man a_1 enters interior ${}^{\top}l_2$ of cave b_2

${}^{\top}\mathscr{T}_1 w_7 = \vartheta_{w7}\, \mathrm{RS}_{w7}\, \mathscr{E}_1 w_7$: result tm of $\mathscr{E}_1$-entry

$\mathscr{E}_{-1}(w_7)$: rab a_0 tells man a_1 they are in ${}^{\top}p_{\omega,0} w_7$
(where he's been $\mathscr{E}\mathscr{E}_0$-holding since birth)

§2.3 "Ah, Little Rabbit.

"
(shift to hunter's voice)
[**e**| **e** $=_{\mathbf{d}\Omega}$ *d*∋];

Ah
(gleeful voice)
[| **d**ε: AG *express.glee*$_{\mathbf{d}\Omega}$];

chan t'u'l
little rabbit
$^{\mathrm{P}}$[| *little.rabbit*$_{\mathbf{d}\Omega}$ **d**α_1]; [| DA **d**ε $=_{\mathbf{d}\Omega}$ **d**α_1]; [*a*| *a* = **d**α_1];

§2.4 I've found you.
ts'o'k *ib*
PRF
[*s*| **d**ωτ $\subseteq_{\mathbf{d}\omega\Omega}$ *s*]; [*e*| *d*σ $=_{\mathbf{d}\omega\Omega}$ RS *e*];

in
1s
$^{\mathrm{P}}$[| *1s* **d**α]; [| AG *d*ε $=_{\mathbf{d}\omega\Omega}$ **d**α];

kaxt- *mf*
find-
[| *d*ε: AG *find*$_{\mathbf{d}\omega\Omega}$ DA];

-ik
-ELA. .TV$_{\mathrm{A}}$
[| BG *d*σ $\subseteq_{\mathbf{d}\omega\Omega}$ ϑRS *d*ε]; [| AG *d*ε $=_{\mathbf{d}\omega\Omega}$ **d**α, DA *d*ε $=_{\mathbf{d}\omega\Omega}$ *d*α];

-ech
-2s
$^{\mathrm{P}}$[| *2s* *d*α]; [| DA *d*ε $=_{\mathbf{d}\omega\Omega}$ *d*α];
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$w_0 \in {}^{\top}p_0$: (story worlds)

⋮ ⋮

$e_0 = {}^{1}\mathscr{E}\mathscr{E}_0 w_0$: 1st stage of $\mathscr{E}\mathscr{E}_0$-plan,

⋮ ⋮

• $\mathscr{E}_1 w_0$: hunter a_1 comes to ${}^{\top}l_2$ (inside cave b_2)

||| ${}^{\top}\mathscr{T}_1 w_0 = \vartheta_{w0}$ RS$_{w0}$ $\mathscr{E}_1 w_0$: result tm of $\mathscr{E}_1$-entry

• ${}^{\top}e_3 = \mathscr{E}_2(w_0)$: hntr a_1 claims to be in ${}^{\top}p_{\omega,2}(w_0)$, he's speaking to rabbit a_0 & expresses glee

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$w_2 \in {}^{\top}p_{,\omega,2}(w_0)$ (worlds conforming to e_3-claims)

• e_4: e_3-spkr (hunter a_1) finds e_3-dat (rabbit a_0)

=== $s_4 =$ RS$_{w2}$ e_4: result state of e_4-finding

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$w_7 \in$ Dom $\mathscr{E}_1 = {}^{\top}p_{\varepsilon,0}({}^{2}ee_0) \cap$ Dom ${}^{f}\mathscr{E}\mathscr{E}_0$ (RS ${}^{2}ee_0$-belief worlds w. ${}^{f}\mathscr{E}\mathscr{E}_{-1}$-chase = $\mathscr{E}_1$-entry)

▬…▬ $\langle {}^{1}\mathscr{E}\mathscr{E}_0 w_7,\ldots, {}^{f}\mathscr{E}\mathscr{E}_0 w_7\rangle$: rab a_0 holds up cave b_2

• $\mathscr{E}_1(w_7)$: man a_1 enters interior ${}^{\top}l_2$ of cave b_2

|||||| ${}^{\top}\mathscr{T}_1 w_7 = \vartheta_{w7}$ RS$_{w7}$ $\mathscr{E}_1 w_7$: result tm of $\mathscr{E}_1$-entry

• $\mathscr{E}_{-1}(w_7)$: rab a_0 tells man a_1 they are in ${}^{\top}p_{\omega,0}w_7$ (where he's been $\mathscr{E}\mathscr{E}_0$-holding since birth)

§2.5 Now I'm going to shoot you.

be′òora *if*
now
[**t**| **t** $=_{\mathbf{d}\Omega}$ ϑ**d**ε];

kin *ib*
[DEP (kéen) .1s (in)
[$\mathscr{E}\mathscr{E}$| ${}^{1}\mathscr{E}\mathscr{E} \subseteq_{\mathbf{d}\omega\Omega}$ **d**τ]; P[| 1s **d**α]; [| AG *d*ɘɘ $=_{\mathbf{d}\omega\Omega}$ **d**α];

in
1s
P[| 1s **d**α]; [| AG *d*ɘɘ = **d**α];

ts'on- *mf*
shoot-
P[| *process d*ɘɘ]; [| ^{f}*d*ɘɘ: AG *shoot* DA];

-∅
-ELA]. .TV$_A$
[| ${}^{f}d$ɘɘ ⊆ ϑRS ${}^{1}d$ɘɘ]; [| AG *d*ɘɘ = **d**α, DA *d*ɘɘ = *d*α];

-ech
-2s
P[| 2*s d*α];

=a'
=DS$^{\top}$
[$\mathscr{T}$| $\mathscr{T}$ = ϑRS ${}^{1}d$ɘɘ]

$w_0 \in {}^{\top}p_0$: (story worlds)

⋮ ⋮

▬ $e_0 = {}^{1}\mathscr{E}\mathscr{E}_0 w_0$: 1st stage of $\mathscr{E}\mathscr{E}_0$-plan,

⋮ ⋮

• $\mathscr{E}_1 w_0$: hunter a_1 comes to ${}^{\top}l_2$ (inside cave b_2)

||| ${}^{\top}\mathscr{T}_1 w_0 = \vartheta_{w0}\ \mathrm{RS}_{w0}\ \mathscr{E}_1 w_0$: result tm of $\mathscr{E}_1$-entry

• ${}^{\top}e_3 = \mathscr{E}_2(w_0)$: hntr a_1 claims to be in ${}^{\top}p_{\omega,2}(w_0)$,
he's speaking to rabbit a_0 & expresses glee

|| ${}^{\top}t_5 = \vartheta_{w0}\ e_3$: ${}^{\top}e_3$-speech act now

~~~~~~

$w_2 \in {}^{\top}p_{,\omega,2}(w_0)$ (worlds conforming to ${}^{\top}e_3$-claims)

• e_4: e_3-spkr (hunter a_1) finds e_3-dat (rabbit a_0)

=== $s_4 = \mathrm{RS}_{w3}\ e_4$: e_4-result state

• ${}^{1}\mathscr{E}\mathscr{E}_5 w_2$: 1st stage of $\mathscr{E}\mathscr{E}_5$-process

|| $\mathscr{T}_5 w_2 = \vartheta_{w2}\ \mathrm{RS}_{w2}\ {}^{1}\mathscr{E}\mathscr{E}_5 w_2$: aft 1st $\mathscr{E}\mathscr{E}_5$-stage,
frame for 2nd-&-final stage

~ ~

$w_5 \in \mathrm{Dom}\ {}^{f}\mathscr{E}\mathscr{E}_5$: ($\mathscr{E}\mathscr{E}_5$-process successfully realized)

• ${}^{1}\mathscr{E}\mathscr{E}_5 w_5$: 1st stage of $\mathscr{E}\mathscr{E}_5$-process

|| $\mathscr{T}_5 w_2 = \vartheta_{w2}\ \mathrm{RS}_{w2}\ {}^{1}\mathscr{E}\mathscr{E}_5 w_2$: aft 1st $\mathscr{E}\mathscr{E}_5$-stage,
frame for 2nd-&-final stage

• ${}^{f}\mathscr{E}\mathscr{E}_5 w_5$: 2nd-&-final stage of $\mathscr{E}\mathscr{E}_5$-process,
e_3-spkr (hunter a_1) shoots e_3-dat (rabbit a_0)

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$w_7 \in \mathrm{Dom}\ \mathscr{E}_1 = {}^{\top}p_{\varepsilon,0}({}^{2}ee_0) \cap \mathrm{Dom}\ {}^{f}\mathscr{E}\mathscr{E}_0$ ($\mathrm{RS}\ {}^{2}ee_0$-belief worlds w. ${}^{f}\mathscr{E}\mathscr{E}_{-1}$-chase = $\mathscr{E}_1$-entry)

▬…▬ $\langle {}^{1}\mathscr{E}\mathscr{E}_0 w_7, \ldots, {}^{f}\mathscr{E}\mathscr{E}_0 w_7 \rangle$: rab a_0 holds up cave b_2

• $\mathscr{E}_1(w_7)$: man a_1 enters interior ${}^{\top}l_2$ of cave b_2

|||||| ${}^{\top}\mathscr{T}_1 w_7 = \vartheta_{w7}\ \mathrm{RS}_{w7}\ \mathscr{E}_1 w_7$: result tm of $\mathscr{E}_1$-entry

• $\mathscr{E}_{-1}(w_7)$: rab a_0 tells man a_1 they are in ${}^{\top}p_{\omega,0} w_7$
(where he's been $\mathscr{E}\mathscr{E}_0$-holding since birth)