

Attitudes and anaphora crosslinguistically (3)

1. TWO PHENOMENA IN THREE LANGUAGES

- Revision of *de re* belief

We left Bergen on May 3, 1721, and reached Greenland on July 3.

(1_K)a¹. *Nuna qani-lir-lu-gu* **Kalaallisut**
 land.sg be.close-begin-ELA_T-3s_⊥
 Getting close to land,...

a². ...*qaanna-t pingasu-t naapip-pa-vut.*
 ...kayakman-pl three-pl meet-IND.TV-1p.3s
 ...we met three kayakmen.

b¹. *Taku-qaar-a-tsigik...*
 see-first-FCT_T-1p.3p
 When we first saw them...

b^{2,3}. ...*puisi-t pingasu-u-suri-galuar-pa-vut.*
 ...seal-pl three-be-believe-but...-IND.TV-1p.3s
 ...we mistook them for three seals (*lit.* believed them to be three seals but...)

(1_E)a¹. *Approach-ing the shore ...* **English**
 approach-PRG the_⊥ shore.sg...

a². ...*we met three kayakmen.*
 ...1p_T meet.PST three_⊥ kayakman.pl

b¹. *When we first saw them...*
 when 1p_T first see.PST 3p_⊥...

b². ...*we thought...*
 ...1p_T think.PST

b³. ... *(that) they were three seals.*
 ...(that) 3p_T be.PST.pl three_⊥ seal.pl

(1_P)a¹. *Zbliża-jąc=się do lądu* **Polish**
 IPF.approach-DUR=*se* to land.GEN_{sm} IPF = imperfective

a². ...*napotka-l-i=śmy trzech kajakarzy.* PFV = perfective
 ...PFV.meet-PST-pm=1p three.ACC_{pm} kayakman.ACC_{pm}

b¹. *W pierwszej chwili gdy=śmy ich zobaczy-l-i*
 in first.LOC_{sf} moment.LOC_{sf} when=1p 3pm.ACC PFV.see-PST-pm

b². ...*pomyśle-l-i=śmy*
 ...PFV.think-PST-pm=1p

b³. ...*że to (sq) trzy foki.*
 ...that that.NOM_{sn} (be.NPST_{se}.3p) three.NOM_{pf} seal.NOM_{pf}

• Anaphora across attitudes: Desire of one, fear of another

During an outing, Pippi, Tommy, and Annika discover that Mr. Nilsson, Pippi's monkey, is missing.

(2_K)a¹. *Pippi, Tommy, Annika=lu hr. Nilsson ujar-niar-lu-gu Kalaallisut*
 Pippi Tommy Annika=and Mr. Nilsson seek-try-ELA_T-3s_↓

a². *aallar-pu-t.*
 set.out-IND.IV-3p
 Pippi, Tommy, and Annika set out to hunt for Mr. Nilsson.

b¹. *Tommy siunirsu-i-vu-q*
 Tommy propose-apass₁-IND.IV-3s
 Tommy_T proposed...

b². *avissaar-lu-tik* b³. *ujar-li-ssa-llu-tik*
 separate-ELA_T-3p_T seek-apass₂-prospect-ELA_T-3p_T
 ...they (= we_T) split up and ...hunt.

c¹. *Annika annilaanga-ga-mi* c². *taama=(i)liu-rusu-nngi-la-q.*
 Annika be.afraid-FCT_T-3s_T thus=do-wish-not-IRR-3s
 Annika_T was afraid so ...she_T didn't want to do that.

(2_E)a¹. *Pippi, Tommy, and Annika went off...* **English**
 Pippi_T, Tommy_T, and Annika_T go.PST off

a². *...to hunt for Mr. Nilsson.*
 ...INF hunt for Mr. Nilsson_↓

b¹. *Tommy suggest-ed...*
 Tommy_T suggest-PST...

b². *...they all three go in different direction-s* b³. *...and hunt.*
 ...3p_T all_T three_T go in different direction-pl ...and hunt

c¹. *Annika didn't want to...* c². *...because she was afraid.*
 Annika_T do.PST=not want INF ...because 3sf_T be.PST.3s afraid

(2_P)a¹. *Pippi, Tommy i Annika wyruszy-l-i* **Polish**
 P.NOM_{sf} T.NOM_{sm} and A.NOM_{sf} PFV.set.out-PST-pm

a². *na poszuk-iwa-nie Pana Nilssona.*
 on PFV.seek-ITR-v\N.ACC_{sn} Mr.GEN_{sm} Nilsson.GEN_{sm}

b¹. *Tommy zaproponowa-ł...*
 T.NOM_{sm} PFV.propose-PST.sm

b². *...aby każ-d-e z nich posz-ł-o* b³. *...szuka-ć w inną stronę.*
 ...that_↓ each-NOM_{sn} of 3pm.GEN PFV.go-PST_{se}-sn ...IPF.seek-INF in different direction

c¹. *Annika tego nie=chcia-ł-a...* c². *...bo się=ba-ł-a.*
 A.NOM_{sf} that.GEN_{sn} not=IPF.want-PST-sf ...because se=IPF.be.afraid-PST-sf

2. BASIC MEANINGS FOR OU ANALYSIS

• *Kalaallisut* (v. 3)

Class	Item	Basic meaning	Example
<u>v- & n- roots</u>			
¹ S-iv	‘be.afraid-’	[s pl s: EXP afraid.of _{do} p]	(2 _K)
S-tv	‘be.close.to-’	[s s: EXP be.close.to _{do} dk ^π]	(1 _K)
² E-iv	‘say-’ (<i>uqar-</i>)	[e pl e: AGT say _{do} p]	TOP 1
E-tv	‘meet-’	[e e: EXP meet _{do} dk ^α]	(1 _K)
³ P-iv	‘play.chess-’	[ee ee: AGT play.chess _{do}]	TOP 1
P-tv	‘seek-’	[ee ee: AGT seek dk ^α]	(2 _K)
¹ B-cn	‘knife-’	[k ^β ^D knife k ^β]	
B-rn	‘kayak.of-’	[k ^β _α k ^β _α kayak.of α]	
² A-cn	‘seal-’	[k ^α ^D seal k ^α]	(1 _K)
A-rn	‘parent.of-’	[k ^α _α k ^α _α ^D parent.of α]	TOP 1
³ L-cn	‘land-’	[k ^π land k ^π]	(1 _K)
L-rn	‘above-’	[k ^π _β k ^π _β above β]	

derivational suffixes

v.<•	RETROSPECTIVE: v-habit/episode realized in the past, viewed from v\ v-episode		
n.<•	RETROSPECTIVE: n-kind instantiated in the past, viewed from n\ v-episode		
v\ v	- <i>sima</i> ‘prf’	[s (s = _{do} RES dε), (EXP s = _{do} AGT dε)]	TOP 1
v.se•	CONCURRENT: v-concept is part of v\ v-se’s idea of now		
n.se•	CONCURRENT: n-kind instantiated in n\ v-se’s idea of now		
v\ iv	- <i>suri</i> ‘believe (de se)’	[s pl (s: EXP believe _{do} p), (∅s ⊆ _p dσ), (EXP s = _p EXP dσ)]	TOP 1
v\ tv	- <i>suri</i> ‘believe (de ⊥)’	[s pl (s: EXP believe _{do} p), (∅s ⊆ _p dσ), (dk ^α _{do} s = _p EXP dσ)]	(1 _K)
v\ iv	- <i>nirar</i> ‘say (de se)’	[e pl (e: AGT say _{do} p), (∅e ⊆ _p dσ), (AGT e = _p EXP dσ)]	TOP 1, 2
v\ tv	- <i>nirar</i> ‘say (de ⊥)’	[e pl (e: AGT say _{do} p), (∅e ⊆ _p dσ), (dk ^α _{do} e = _p EXP dσ)]	TOP 1, 2
v.se>	PROSPECTIVE: v-concept is a future prospect of v\ v-se		
n.se>	PROSPECTIVE: n-kind instantiated in n\ v-se’s idea of n\ v-result		
v\ v	- <i>iartur</i> ‘go to v’	^{p3} [pl Dom dε = p]; [ee (dε ⊆ _{dΩ} ∅RES ^f ee), (AGT ee = _{dΩ} AGT dε), (Π RES ^f ee = _{dΩ} Π dε), (process ee)]	TOP 1

Class	Item	Basic meaning	Example	
<u>MOOD infl</u>				
¹ mtx	-IND (σ -base)	$P[\text{BEG } d\sigma <_{d\omega} \mathbf{d}\varepsilon]; [\mathbf{d}\tau \subseteq_{d\omega} d\sigma]$	(1 _K)	
	(ε -base)	$P[\text{BEG } d\sigma <_{d\Omega} \mathbf{d}\varepsilon]; [\mathbf{d}\tau \subseteq_{d\Omega} d\sigma]$	(1 _K)	
	($\varepsilon\varepsilon$ -base)	$P[d\varepsilon <_{d\omega} \mathbf{d}\varepsilon]; [d\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]$	TOP 1	
	($\varepsilon\varepsilon$ -base)	$P[{}^1 d\varepsilon\varepsilon <_{d\omega} \mathbf{d}\varepsilon]; [{}^1 d\varepsilon\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]$	TOP 1	
	.IV (σ -base)	$P[\text{EXP } d\sigma =_{d\omega} \mathbf{d}\alpha]$		
	(ε -base)	$P[\text{EXP } d\sigma =_{d\Omega} \mathbf{d}\alpha]$		
	(ε -base)	$P[\text{AGT } d\varepsilon =_{d\omega} \mathbf{d}\alpha]$		
	($\varepsilon\varepsilon$ -base)	$P[\text{AGT } d\varepsilon\varepsilon =_{d\omega} \mathbf{d}\alpha]$		
	.TV (σ -base)	$P[\text{EXP } d\sigma =_{d\omega} \mathbf{d}\alpha, \neg_{d\omega}(\mathbf{d}\alpha \circ d\kappa^\alpha\{d\sigma\})]$	(1 _K)	
	(ε -base)	$P[\text{AGT } d\varepsilon =_{d\omega} \mathbf{d}\alpha, \neg_{d\omega}(\mathbf{d}\alpha \circ d\kappa^\alpha\{d\varepsilon\})]$	(1 _K)	
($\varepsilon\varepsilon$ -base)	$P[\text{AGT } d\varepsilon\varepsilon =_{d\omega} \mathbf{d}\alpha, \neg_{d\omega}(\mathbf{d}\alpha \circ d\kappa^\alpha\{d\varepsilon\varepsilon\})]$	TOP 1		
² dep	-FCT _T (<i>de T</i>)	$P[\text{AGT } d\varepsilon =_{d\omega} \mathbf{d}\alpha]; [d\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} =_{d\omega} \vartheta\text{RES } d\varepsilon])_{if, ib}$	(1 _K)	
	-FCT _T (<i>de se</i>)	$P[\text{AGT } d\varepsilon =_{d\omega} \text{AGT } \mathbf{d}\varepsilon]; [d\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} =_{d\omega} \vartheta\text{RES } d\varepsilon])_{if, ib}$	TOP 1	
	-FCT _⊥	$P[\text{AGT } d\varepsilon =_{d\omega} d\alpha]; [d\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} =_{d\omega} \vartheta\text{RES } d\varepsilon])_{if, b}$	TOP 1	
	-ELA _T (<i>de T</i>)	$P[\text{EXP } d\varepsilon =_{d\omega} \mathbf{d}\alpha]; [d\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} = \vartheta\text{RES } d\varepsilon])_{if, ib}$	(1 _K)	
	-ELA _T (<i>v.dbl</i>)	$P[\text{AGT}_{d\Omega} d\varepsilon = \text{AGT}_{d\omega} d\varepsilon]; [d\varepsilon \subseteq_{d\Omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} = \vartheta\text{RES } d\varepsilon])_{if, ib}$	TOP 1	
	-ELA _T (<i>de se</i>)	$P[\text{AGT } d\varepsilon =_{d\Omega} \text{AGT } \mathbf{d}\varepsilon]; [d\varepsilon \subseteq_{d\Omega} \vartheta d\varepsilon]; ([\mathbf{t}l \mathbf{t} = \vartheta\text{RES } d\varepsilon])_{if, ib}$	TOP 1	
	-ELA _⊥	$P[\text{EXP } d\varepsilon =_{d\Omega} d\alpha]; [d\varepsilon \subseteq_{d\Omega} \mathbf{d}\tau]; ([\mathbf{t}l \mathbf{t} = \vartheta\text{RES } d\varepsilon])_{if, ib}$	TOP 1	
<u>AGR infl</u>				
¹ iv.agr	(-IND.IV)-3s	$P[3s_{d\omega, d\varepsilon} \mathbf{d}\alpha]$		
	-3s _T	$P[3s_{d\omega, d\varepsilon} \mathbf{d}\alpha]$		
	-3s _⊥	$P[3s_{d\omega, d\varepsilon} d\alpha]$		
	tv.agr	-3s.3s	$P[3s_{d\omega, d\varepsilon} \mathbf{d}\alpha]; P[3s_{d\omega, d\varepsilon} d\alpha, d\alpha =_{d\omega} d\kappa^\alpha\{d\varepsilon\}]$	
		-1s.3p _⊥	$P[sg_{d\omega, d\varepsilon} \text{AGT } \mathbf{d}\varepsilon]; P[3p_{d\omega, d\varepsilon} d\alpha, d\alpha =_{d\omega} d\kappa^\alpha\{d\varepsilon\varepsilon\}]$	
-3s _⊥	$P[3s_{d\Omega, d\varepsilon} d\alpha, d\alpha =_{d\Omega} d\kappa^\alpha\{d\varepsilon\}]$			
² cn.agr	-sg	$P[sg d\kappa^\tau]$		
	rn.agr	-3s _T .pl	$P[3s_{d\omega, d\varepsilon} \mathbf{d}\alpha]; [k^\alpha pl k^\alpha, k^\alpha = d\alpha\kappa^\alpha(\mathbf{d}\alpha)]$	
		-1s.pl	$P[sg_{d\omega} \text{AGT } \mathbf{d}\varepsilon]; [k^\alpha pl k^\alpha, k^\alpha = d\alpha\kappa^\alpha(\text{AGT}_{d\omega} \mathbf{d}\varepsilon)]$	
<u>CASE infl</u>				
¹ dir	(-n.agr) _T	$[a \mathbf{a} =_{d\omega} d\kappa^\alpha\{\mathbf{d}\varepsilon\}]$		
	(-n.agr) _⊥	$[a a =_{d\omega} d\kappa^\alpha\{\mathbf{d}\varepsilon\}]$		
	(-n.agr).ERG _T	$[a \mathbf{a} =_{d\omega} d\kappa^\alpha\{\mathbf{d}\varepsilon\}]$		
² obl	(-n.agr).LOC _{if}	$[t \mathbf{t} \subseteq_{d\omega} d\kappa^\tau\{\mathbf{d}\varepsilon\}]$		
<u>CLITICS</u>				
¹ CL*	= <i>guuq</i> 'x.SAY'	$P[e e \subseteq_{d\omega} \vartheta\text{RES } {}^1 d\varepsilon\varepsilon]; [p d\varepsilon: \text{AGT } say_{d\omega} \mathbf{p}]; [\neg_{d\omega}(\text{AGT } d\varepsilon \circ \text{AGT } d\varepsilon\varepsilon)]$	TOP 1	
	(adapted for vrb doubling)	$P[\mathbf{p} \mathbf{p} = d\Omega]; [\neg_{d\omega}(\text{AGT } d\varepsilon \circ \text{AGT } \mathbf{d}\varepsilon)]$	TOP 1	

- **Polish** (v. 1)

MB gloss (stands for)Basic meaning(s)

V-stem:

IPF.think-

[s pl s: EXP *believe*_{d_ω} p];
[h^ε k^Ω | h^ε: AGT *think*_{d_ω} k^Ω];

{PFV, PFV', ...}.think-

{[e pl e: AGT *think*_{d_ω} p], [e pl e: AGT *think.up*_{d_ω} p], ...}
{[ee k^Ω | ee: AGT *think*_{d_ω} k^Ω], [ee k^Ω | ee: AGT *think.up*_{d_ω} k^Ω], ...}

IPF.say-

[s eel (ee: AGT *say*_{d_ω} dκ^Ω), (s =_{d_ω} RES ¹ee)]
[h^ε k^Ω | h^ε: AGT *say*_{d_ω} k^Ω];

{PFV, PFV', ...}..say-

{[e pl e: AGT *say*_{d_ω} p]; [el e: AGT *give.speech*_{d_ω}], ...}
{[ee k^Ω | ee: AGT *say*_{d_ω} k^Ω], [eel ee: AGT *give.speech*_{d_ω}], ...}

Complementizers

that

[t | Dom t = dΩ]

that_>[t | Dom t = dΩ, (t ⊆_{dΩ} RES dε)]

Speech-relative ('indexical') tense system:

• dε-past (tense infl)

-PST

^P[| dτ < ∅_{d_ω} dε]; [| dε ⊆_{d_ω} dτ]; [t | t =_{d_ω} ∅RES dε]
^P[| dτ < ∅_{d_ω} dε]; [| ¹dεε ⊆_{d_ω} dτ]; [t | t =_{d_ω} ∅RES ¹dεε]
^P[| dτ < ∅_{d_ω} dε]; [| dτ ⊆_{d_ω} dσ];
^P[| dτ < ∅_{d_ω} dε]; [| dτ ⊆_{d_ω} dη];

• dε-nonpast (tense infl)

-NPST

^P[| ∅_{d_ω} dε < dτ]; [| dε ⊆_{d_τ} dτ]; [t | t = (∅RES dε | Dom dτ)]
^P[| ∅_{d_ω} dε < dτ]; [| dεε ⊆_{d_τ} dτ]; [t | t = (∅RES ¹dεε | Dom dτ)]
^P[| ∅_{d_ω} dε ⊆ dτ]; [| dτ ⊆_{d_ω} dσ];
^P[| ∅_{d_ω} dε ⊆ dτ]; [| dτ ⊆_{d_ω} dη];

Se-relative tense system:

• se's past (tense infl)-PST_{se}

^P[| dτ <_{d_τ} ∅dε]; [| dε ⊆_{d_τ} dτ]; [t | t = (∅RES dε | Dom dτ)]
^P[| dτ <_{d_τ} ∅dε]; [| ¹dεε ⊆_{d_τ} dτ]; [t | t = (∅RES ¹dεε | Dom dτ)]
^P[| dτ <_{d_τ} ∅dε]; [| dτ ⊆_{d_τ} dσ];
^P[| dτ <_{d_τ} ∅dε]; [| dτ ⊆_{d_τ} dη];

• se's nonpast (tense infl)-NPST_{se}

^P[| ∅dε <_{d_τ} dτ]; [| dε ⊆_{d_τ} dτ]; [t | t = (∅RES dε | Dom dτ)]
^P[| ∅dε <_{d_τ} dτ]; [| dεε ⊆_{d_τ} dτ]; [t | t = (∅RES ¹dεε | Dom dτ)]
^P[| ∅dε ⊆_{d_τ} dτ]; [| dτ ⊆_{d_τ} dσ];
^P[| ∅dε ⊆_{d_τ} dτ]; [| dτ ⊆_{d_τ} dη];

Case & Agreement system, e.g.:

NOM

[a | a =_{d_ω} dκ^α{dε}]

ACC

[a | a =_{d_ω} dκ^α{dε}]

-pm

^P[| pm_{d_ω} dα]; [| AGT dε =_{d_ω} dα]; [¹ | 3rd_{d_ω, dε} dα]

=1p

^P[| 1p_{d_ω} dα];

3. REVISION OF *De Re* BELIEF ONLINE• *Kalaallisut* (1_K)

We left Bergen on May 3, 1721, and(^Tt₁) reached(e₁) Greenland(k^π₁, l₁) on July 3.

^Tw_i

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• ^Te₀: e₀-agt speaks up

⋮

^Tt₁ ⊆ 3.july.1721

e₁: e₀-we ^Ta₀ reach k^π₁-Greenland at l₁

(1_K)a¹. land- -sg_⊥
[l land dκ^π]; ^P[l sg dκ^π]; [l dπ =_{dω} dκ^π{dε}]

be.close-
[s| s: EXP be.close.to_{dω} dκ^π];

-begin
[el (e =_{dω} BEG dσ), (EXP e =_{dω} EXP dσ),
(dκ^π{e} =_{dω} dκ^π{dσ})]

-ELA_T
^P[l EXP dε =_{dω} dα]; [l dε ⊆_{dω} dτ]; [tl t =_{dω} ΘRES dε]

-3s_⊥
^P[l 3s_{dω, dε} dπ]; [l dπ =_{dω} dκ^π{dε}];

a². kayakman- -pl_⊥
[k^αl ^Dkayakman k^α]; ^P[l pl dκ^α]; [al a =_{dω} dκ^α{dε}]

three- -pl_⊥
[l three dκ^α]; ^P[l pl dκ^α]; [l dα =_{dω} dκ^α{dε}]

meet-
[el e: EXP meet_{dω} dκ^α];

-IND.
^P[l dε <_{dω} dε]; [l dε ⊆_{dω} dτ];

.TV
^P[l EXP dε =_{dω} dα, ¬_{dω}(dα ○ dκ^α{dε})]

-1p. .3p
^P[l 1p_{dω, dε} dα]; ^P[l 3p_{dω, dε} dα]; [l dα =_{dω} dκ^α{dε}];

^Tw_i

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Remarks

l₁ = k^π₁w_ie₁

be.close.to_{wi}(s₂, EXP_{wi} s₂, k^π₁w_is₂)

e₂ = BEG_{wi} s₂

EXP_{wi} e₂ = EXP_{wi} s₂

k^π₁w_ie₂ = k^π₁w_is₂

EXP_{wi} e₂ = ^Ta₀ ^P(e₂-exp)

Θ_{wi} e₂ ⊆ ^Tt₁, ^Tt₂ := ΘRES_{wi} e₂

[⊥]l₁ = k^π₁w_ie₂ (e₂-theme)

∀w ∈ Dom k^α₃ ∀e' ∈ Dom k^α₃w:
^Dkayakman_w k^α₃w e' ∧ three k^α₃w e'

[⊥]a₁ = k^α₃w_ie₂ (k^α₃w_i-res of e₂)

meet_{wi}(e₃, EXP_{wi} e₃, k^α₃w_ie₃)

Θ_{wi} e₃ < Θ_{wi} ^Te₀ ^P(^Tw_i, ^Te₀-fact)

Θ_{wi} e₃ ⊆ ^Tt₂

EXP_{wi} e₃ = ^Ta₀ ^P(e₃-exp)

¬(^Ta₀ ○ k^α₃w_ie₃) ^P(^T vs. [⊥])

AGT_{wi} e₀ < ^Ta₀ ^P(^Te₀-1p)

[⊥]a₁ = k^α₃w_ie₃ (e₃-theme)

• ^Te₀: e₀-agt speaks up

⋮

^Tt₁ ⊆ 3.july.1721

e₁: ^Ta₀ reach k^π₁-Greenland at l₁

s₂: ^Ta₀ are close to l₁

e₂ = BEG_{wi} s₂

^Tt₂ = Θ_{wi} RES_{wi} e₂

e₃: ^Ta₀ meet k^α₃-3.kayakmen ^Ta₁

(1_k)b¹. see-

[*e* | *e*: EXP *see*_{d_ω} *dk*^α];

-first

^P[*eel process*_{d_ω} *ee*, *dε* = ¹*ee*]; ¹[| *dε*₁ = ^f*dεε*];

-FACT_↑

^P[| EXP *dεε* =_{d_ω} **dα**]; [| ¹*dεε* ⊆_{d_ω} **dτ**]; [| **t** =_{d_ω} ∅RES ¹*dεε*]

-1p.

.3p_↓

^P[| *1p*_{d_ω, d_ε} **dα**]; [| *3p*_{d_ω, d_ε} *dα*]; [| *dα* =_{d_ω} *dk*^α{*dε*}];

b^{2,3}.seal-

-pl_↓

[*kk*^α ^D*seal* *kk*^α]; ^P[| *pl* *dkκ*^α];

three-

-be

[| *three* *dkκ*^α]; [| *ϑ* EXP *ϑ* = *dkκ*^α{*dk*^α, *ϑ*}];

-believe

[*s pl* (*s*: EXP *believe*_{d_ω} *p*), (*∅s* ⊆_p *dσ*)
(*dk*^α_{d_ω} *s* = EXP_p *dσ*)];

-but

[| **dω** ∉ *dΩ*];

-IND.

^P[| BEG *dσ* <_{d_ω} *dε*]; [| **dτ** ⊆_{d_ω} *dσ*];

.TV

^P[| EXP *dσ* =_{d_ω} **dα**, [¬]_{d_ω}(**dα** ∘ *dk*^α{*dσ*});

-1p.

.3p

^P[| *1p*_{d_ω, d_ε} **dα**]; ^P[| *3p*_{d_ω, d_ε} *dα*]; [| *dα* =_{d_ω} *dk*^α{*dσ*}];

Remarks

*see*_{w_i}(*e*₄, EXP_{w_i} *e*₄, *k*^α₃*w_ie*₄)

*ee*₄ = ⟨*e*₄, ..., ¹*e*₃⟩

EXP_{w_i} *ee*₄ = [↑]*a*₀ ^P(*ee*₄-exp)
∅_{w_i} *e*₄ ⊆ [↑]*t*₂, [↑]*t*₄ := ∅_{w_i} RES_{w_i} *e*₄

EXP_{w_i} *e*₄ = [↑]*a*₀ (*e*₄ = ¹*ee*₄)
[↓]*a*₁ = *k*^α₃*w_ie*₄ (*e*₄-theme)

∀*w* ∈ Dom *kk*^α₅*k*^α₃ ∀*e* ∈ ...:
λa[^D*seal*_w *a* ∧ *three a*][*kk*^α₅*k*^α₃*w**e*]

∀*w* ∈ Dom *ϑ*₅ = Dom *kk*^α₅*k*^α₃:
EXP_w *ϑ*₅*w* = *kk*^α₅*k*^α₃*w*(*ϑ*₅*w*)

*believe*_{w_i}(*s*₅, EXP_{w_i} *s*₅, *p*₅)

∀*w* ∈ *p*₅: ∅_w *s*₅ ⊆ *ϑ*₅*w*
∧ *k*^α₃*w_is*₅ = EXP_w *ϑ*₅*w*

w_i ∉ *p*₅ (*p*₅ is *w_i*-nonfact)

- BEG_{w_i} *s*₅ < [↑]*e*₀ ^P([↑]*w_i*, [↑]*e*₀-fact)
- [↑]*t*₄ ⊆ ∅_{w_i} *s*₅

EXP_{w_i} *s*₅ = [↑]*a*₀ (*s*₅-exp)
[¬]([↑]*a*₀ ∘ *k*^α₃*w_is*₅) (↑ vs. ⊥)

[↓]*a*₁ = *k*^α₃*w_is*₅ (*s*₅-theme)

[↑]*w_i*

- [↑]*e*₀: *e*₀-agt speaks up

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- [↑]*e*₀: *e*₀-agt speaks up
- [↑]*t*₁
- e*₁: [↑]*a*₀-we reach *k*^α₁-Greenland at *l*₁
- s*₂: [↑]*a*₀-we are close to *l*₁
- e*₂ = BEG_{w_i} *s*₂
- t*₂ = ∅_{w_i} RES_{w_i} *e*₂
- e*₃ = ^f*ee*₄: [↑]*a*₀-we meet *k*^α₃-3.kayakmen [↓]*a*₁
- e*₄ = ¹*ee*₄: [↑]*a*₀-we see *k*^α₃-3.kaykmen [↓]*a*₁
- [↑]*t*₄ = ∅_{w_i} RES_{w_i} *e*₄
- s*₅: [↑]*a*₀-we believe *p*₅, **anch.**: [↓]*a*₁ = *k*^α₃*w_is*₅

*w*₅ ∈ *p*₅
w_i ∉ *p*₅

(*s*₅-belief,
w_i-nonfact)

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∅_{w₅} *s*₅: *p*₅-time of *s*₅
*ϑ*₅*w*₅: EXP_{w_i} *ϑ*₅*w*₅ are *kk*^α₅*k*^α₃-3.seals
EXP_{w_i} *ϑ*₅*w*₅ = *k*^α₃*w_is*₅ (**int. anch.**)

• **English** (1_E)(1_E)a¹. approach-[*eel ee*: AGT *approach* $d\kappa^\pi$];¹[| AGT $d\varepsilon\varepsilon =_{d\omega} \mathbf{d}\alpha$]; ¹[| $d\varepsilon \subseteq_{d\omega} \vartheta\text{RES}^f d\varepsilon\varepsilon$]

-PRG

if[| $s =_{d\omega} \text{RES}^1 d\varepsilon\varepsilon$]; [|\mathbf{t} \mathbf{t} =_{d\omega} \vartheta d\sigma]the_⊥^P[| $d\varepsilon\varepsilon:: (d\kappa^\pi\{\varepsilon\} =_{d\omega} d\pi)$];

shore.

.sg

[| *shore.point* $d\kappa^\pi$]; [|\mathbf{sg} \mathbf{d}\kappa^\pi]a². 1p_τ^P[| 1p_{dω, dε} $\mathbf{d}\alpha$];

meet-

[*e k^α e*: EXP *meet*_{dω} k^α];¹[| EXP $d\varepsilon =_{d\omega} \mathbf{d}\alpha$];

-PST

^P[| $\mathbf{d}\tau < \vartheta_{d\omega} \mathbf{d}\varepsilon$]; [|\mathbf{d}\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; [|\mathbf{t} \mathbf{t} =_{d\omega} \vartheta\text{RES} d\varepsilon]three_⊥[| *three* $d\kappa^\alpha$]; [|\mathbf{a} \mathbf{a} =_{d\omega} d\kappa^\alpha\{d\varepsilon\}]

kayakman.

.pl

[|\mathbf{D}kayakman \mathbf{d}\kappa^\alpha]; [|\mathbf{pl} \mathbf{d}\kappa^\alpha];

(1_K)b¹. when

[|\mathbf{t} \mathbf{t} =_{d\omega} \vartheta^1 d\varepsilon\varepsilon];

1p_τ^P[| 1p_{dω, dε} $\mathbf{d}\alpha$];

first

^P[*eel process*_{dω} *ee*, $d\varepsilon =^f ee$]; [|\mathbf{e} \mathbf{e} =^1 d\varepsilon\varepsilon];

see-

[|\mathbf{d}\varepsilon: EXP *see*_{dω} $d\kappa^\alpha$];¹[| EXP $d\varepsilon =_{d\omega} \mathbf{d}\alpha$];

-PST

^P[| $\mathbf{d}\tau < \vartheta_{d\omega} \mathbf{d}\varepsilon$]; [|\mathbf{d}\varepsilon \subseteq_{d\omega} \mathbf{d}\tau]; [|\mathbf{t} \mathbf{t} =_{d\omega} \vartheta\text{RES} d\varepsilon]3p_⊥^P[| 3p_{dω, dε} $\mathbf{d}\alpha$]; [|\mathbf{d}\alpha =_{d\omega} d\kappa^\alpha\{d\varepsilon\}];Remarks $\forall e \in ee_2$: AGT_{wi} $e = {}^\top a_0$ (ee_2 -agt) $\vartheta_{wi} e_1 \subseteq \vartheta_{wi} \text{RES}_{wi}^f ee_2$ (e_1 -elab.) $s_2 = \text{RES}_{wi}^1 ee_2$ ${}^\top t_{21} := \vartheta_{wi} s_2$ $\forall e \in ee_2$: $k^\pi_1 w_i e = l_1$ AGT_{wi} ${}^\top e_0 < {}^\top a_0$ ^P(${}^\top e_0$ -1p)*meet*_{wi}(e_3 , EXP_{wi} e_3 , $k^\alpha_3 w_i e_3$)EXP_{wi} $e_3 = {}^\top a_0$ (e_3 -exp)• ${}^\top t_{21} < \vartheta_{wi} e_0$ ^P(${}^\top e_0$ -past)• $\vartheta_{wi} e_3 \subseteq {}^\top t_{21}$, ${}^\top t_{22} := \vartheta_{wi} \text{RES}_{wi} e_3$ ${}^\perp a_1 = k^\alpha_3 w_i e_3$ (e_3 -theme) $\forall w \in \text{Dom } k^\alpha_3 \forall e' \in \text{Dom } k^\alpha_3 w$:
three $k^\alpha_3 w e' \wedge {}^D \text{kayakman}_w k^\alpha_3 w e'$ ${}^\top t_{41} = \vartheta_{wi}^1 ee_2$ *see*_{wi}(e_4 , EXP_{wi} e_4 , $k^\alpha_3 w_i e_4$)EXP_{wi} $e_4 = {}^\top a_0$ (e_4 -exp)• ${}^\top t_{41} < \vartheta_{wi} {}^\top e_0$ ^P(${}^\top e_0$ -past)• $\vartheta_{wi} e_4 \subseteq {}^\top t_{41}$, ${}^\top t_{42} := \vartheta_{wi} \text{RES}_{wi} e_4$ ${}^\perp a_1 = k^\alpha_3 w_i e_4$ (e_4 -theme)

• **Polish** (1_p)

(1_p)a¹. IPF. approach-
 [s eel (ee: AGT approach dκ^π), (s =_{dω} RES¹ ee)];

¹[| dε ⊆_{dω} ∅RES^f dεε]

-DUR

^P[| EXP dσ =_{dω} dα]; [tl t =_{dω} ∅dσ]

=se

[| dεε:: AGT ε =_{dω} EXP RES ε]

to

[| dεε:: dκ^π{ε} =_{dω} dκ^π{^fdεε}];

land.

.GEN_{sm}

[| land dκ^π]; [| sg dκ^π, (dκ^π{^fdεε} =_{dω} dπ)]

a². PFV.meet-

[e k^α | e: EXP meet_{dω} k^α];

-PST

^P[| dt < ∅_{dω} dε]; [| dε ⊆_{dω} dt]; [tl t =_{dω} ∅RES dε]

-pm

^P[| pm_{dω} dα]; [| EXP dε =_{dω} dα]; ¹[| 3rd_{dω, dε} dα];

=1p

^P[| Ip_{dω, dε} dα];

three.

.ACC_{pm}

[| three dκ^α]; [al a =_{dω} dκ^α{dε}]]

kayakman.

.ACC_{pm}

[| ^Dkayakman dκ^α]; [| dα =_{dω} dκ^α{dε}]]

^Tw_i

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Remarks

PFV ~ eventive (e, ee), IPF ~ other

s₂ = RES_{wi}¹ ee₂

∅_{wi} e₁ ⊆ ∅_{wi} RES_{wi}^f ee₂ (e₁-elab.)

EXP_{wi} s₂ = ^Ta₀ (s₂-exp)

^Tt₂₁ := ∅_{wi} s₂

complex action on se:

∀ e ∈ ee₂: AGT_{wi} e = EXP_{wi} RES_{wi} e

goal-oriented:

∀ e ∈ ee₂: k^π₁ w_i e = k^π₁ w_i^f ee₂

k^π₁ w_i^f ee₂ = l₁

meet_{wi}(e₃, EXP_{wi} e₃, k^α₃ w_i e₃)

• ^Tt₂₁ < ∅_{wi} e₀ ^P(^Te₀-past)

• ∅_{wi} e₃ ⊆ ^Tt₂₁, ^Tt₂₂ := ∅_{wi} RES_{wi} e₃

∃ a (a < a₀ ∧ male_{wi} a) ^P(^Tw_i-pm)

EXP_{wi} e₃ = ^Ta₀ (e₃-exp)

AGT_{wi} ^Te₀ < ^Ta₀ ^P(^Te₀-1p)

[⊥]a₁ = k^α₃ w_i e₃ (e₃-theme)

∀ w ∈ Dom k^α₃ ∅ e[•] ∈ Dom k^α₃ w:
 three k^α₃ w e[•] ∧ ^Dkayakman_w k^α₃ w e[•]

• ^Te₀: e₀-agt speaks up

⋮

t₁ ⊆ 3.july.1721

e₁: ^Ta₀-we reach k^π₁-Greenland at l₁

ee₂: ^Ta₀-we approach k^π₁-G.shore l₁

s₂ = RES_{wi}¹ ee₂

t₂₁ = ∅_{wi} s₂

e₃: ^Ta₀-we meet k^α₃-3.kayakmen [⊥]a₁

t₂₂ = ∅_{wi} RES_{wi} e₃

b¹. in

[t k^r t ⊆_{dω} k^r{dε}];

first.LOC_{sf} moment.LOC_{if}
^p[eel proc_{dω} ee, dε = ^fee]; [l dk^r ~ ϑ_{dω}¹dεε];

when

^p[l dτ =_{dω} ϑ¹dεε]; [¹el e = ¹dεε]

=1p

^p[l Ip_{dω, dε} dα];

3p_⊥

^p[l 3p_{dω, dε} dα]; [l dα =_{dω} dk^α{dε}];

PFV.see-

[l dε: EXP see_{dω} dk^α];

-PST

^p[l dτ < ϑ_{dω} dε]; [l dε ⊆_{dω} dτ]; [tl t =_{dω} ϑRES dε]

-pm

^p[l pm_{dω} dα]; [l EXP dε =_{dω} dα]; [¹l 3rd_{dω, dε} -dα];

b². PFV.think-

[e pl e: AGT think_{dω} p];

-PST

^p[l dτ < ϑ_{dω} dε]; [l dε ⊆_{dω} dτ]; [tl t =_{dω} ϑRES dε]

-pm

^p[l pm_{dω} dα]; [l AGT dε =_{dω} dα]; [¹l 3rd_{dω, dε} -dα];

=1p

^p[l Ip_{dω, dε} dα];

[⊥]w_i

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[⊥]t₄₁ ⊆ k^r₄w_ie₃

ee₄ = ⟨¹ee₄, ..., e₃⟩

∀w ∈ Dom k^r₄: Ran k^r₄w = {ϑ_{w_i}¹ee₄}

[⊥]t₄₁ = ϑ_{w_i}¹ee₄

e₄ = ¹ee₄

AGT_{w_i}[⊥]e₀ < [⊥]a₀

^p([⊥]e₀-1p)

[⊥]a₁ = k^α₃w_ie₄

(e₄-theme)

see_{w_i}(e₄, EXP_{w_i} e₄, k^α₃w_ie₄)

• [⊥]t₄₁ < ϑ_{w_i}[⊥]e₀ ^p([⊥]e₀-past)

• ϑ_{w_i} e₄ ⊆ [⊥]t₄₁; [⊥]t₄₂ := ϑ_{w_i} RES_{w_i} e₄

∃a(a < a₀ ∧ male_{w_i} a) ^p([⊥]w_i-pm)

EXP_{w_i} e₃ = [⊥]a₀ (e₃-exp)

think_{w_i}(e₅, AGT_{w_i} e₅, p₅)

• [⊥]t₄₂ < ϑ_{w_i}[⊥]e₀ ([⊥]e₀-past)

• ϑ_{w_i} e₅ ⊆ [⊥]t₄₂; [⊥]t₄₃ = ϑ_{w_i} RES_{w_i} e₅

∃a(a < a₀ ∧ male_{w_i} a) ^p([⊥]w_i-pm)

AGT_{w_i} e₅ = [⊥]a₀ (e₅-agt)

AGT_{w_i}[⊥]e₀ < [⊥]a₀

^p([⊥]e₀-1p)

[⊥]e₀: e₀-agt speaks up

⋮

t₁ ⊆ 3.july.1721

e₁: [⊥]a₀-we reach k^r₁-Greenland at l₁

ee₂: [⊥]a₀-we approach k^r₁-G.shore l₁

s₂ = RES_{w_i}¹ee₂

t₂₁ = ϑ_{w_i} s₂

e₃: [⊥]a₀-we meet k^α₃-3.kayakmen [⊥]a₁

t₂₂ = ϑ_{w_i} RES_{w_i} e₃

t₄₁ = ϑ_{w_i}¹ee₂

e₄ = ¹ee₄ = ¹⟨e₄, ..., e₃⟩

[⊥]a₀-we see k^α₃-3.kaykmen [⊥]a₁

t₄₂ = ϑ_{w_i} RES_{w_i} e₄

e₅: [⊥]a₀-we think p₅

[⊥]t₅ = ϑ_{w_i} RES_{w_i} e₅

b³. that_C

[**t** | Dom **t** = $d\Omega$];

that.NOM_{sn}

^P[| 3rd_{dω, dε} $d\alpha$]; [**k**^α | $d\alpha =_{d\bar{t}} \mathbf{k}^\alpha \{d\varepsilon_1\}$];

three.

.NOM_{pf}

[k^α | three k^α]; [**d** $k^\alpha = dk^\alpha$]

seal-

NOM_{pf}

[^Dseal dk^α]; [**d** $k^\alpha = dk^\alpha$]

^Tw_i

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Dom ^Tt₅ = p₅

two res: [⊥]a₁ & [⊥]e₄

¬([⊥]a₁ ○ (AGT_{wi} e₀ + EXP_{wi} e₀))

∀w ∈ Dom ^Tt₅: a₁ = ^Tk^α₅₁w e₄

∀w ∈ Dom k^α₅₂ ∀e' ∈ Dom k^α₅₂w:

three k^α₅₂w e' ∧ ∧ ^Dseal_w k^α₅₂w e'

^Tk^α₅₁ = k^α₅₂

• ^Te₀: e₀-agt speaks up

⋮

t₁ ⊆ 3.july.1721

e₁: ^Ta₀-we reach k^π₁-Greenland at l₁

ee₂: ^Ta₀-we approach k^π₁-G.shore l₁

s₂ = RES_{wi} [⊥]ee₂

t₂₁ = [⊖]_{wi} s₂

e₃: ^Ta₀-we meet [⊥]a₁

[⊥]a₁ = [⊥]k^α₃w_ie₃

any instance of k^α₃ is 3 kayakmen

t₂₂ = [⊖]_{wi} RES_{wi} e₃

t₄₁ = [⊖]_{wi} [⊥]ee₂

e₄ = [⊥]ee₄ = [⊥]⟨e₄, ..., e₃⟩

^Ta₀-we see [⊥]a₁

[⊥]a₁ = [⊥]k^α₃w_ie₄ (w_i-*anchor*)

(any instance of k^α₃ is 3 kayakmen)

t₄₂ = [⊖]_{wi} RES_{wi} e₄

e₅: ^Ta₀-we think p₅

^Tt₅ = [⊖]_{wi} RES_{wi} e₅

w₅ ∈ p₅ = Dom ^Tt₅

(e₅-thought)

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e₄: [⊥]a₁ = ^Tk^α₅₁w₅e₄ (p₅-*anchor*)

any instance of ^Tk^α₅₁ is 3 seals

or b^3 . $that_C$

$[t \mid Dom \underline{t} = d\Omega];$

$that.NOM_{sn}$

$^p[\mid 3rd_{do, de} d\alpha]; [k^\alpha \mid d\alpha =_{d\underline{t}} k^\alpha \{d\varepsilon_1\}];$

be-

$[\underline{s} k^\alpha \mid EXP \underline{s} = dk^\alpha \{s\}];$

-NPST_{se}

$^p[\mid \vartheta d\varepsilon \subseteq_{d\underline{t}} d\underline{t}]; [\mid d\underline{t} \subseteq_{d\underline{t}} d\underline{t}];$

-3p

$^p[\mid 3p_{do, de} dk^\alpha \{d\varepsilon_1\}]; [\mid EXP d\underline{t} =_{d\underline{t}} dk^\alpha \{d\varepsilon_1\}];$

three.

.NOM_{pf}

$[\mid three dk^\alpha]; [\mid dk^\alpha = dk^\alpha]$

seal-

NOM_{pf}

$[\mid {}^D seal dk^\alpha]; [\mid dk^\alpha = dk^\alpha]$

${}^T w_i$

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$w_5 \in p_5 = Dom {}^T t_5$

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$Dom {}^T t_5 = p_5$

two res: ${}^{\perp} a_1 \ \& \ {}^{\perp} e_4$

$\neg({}^{\perp} a_1 \circ (AGT_{wi} e_0 + EXP_{wi} e_0))$

$\forall w \in Dom {}^T t_5: a_1 = {}^T k_{51}^\alpha w e_4$

$\forall w \in Dom \underline{s}_5 = Dom k_{52}^\alpha:$

• $EXP_w \underline{s}_5 w = k_{52}^\alpha w(\underline{s}_5 w)$

$\forall w \in Dom {}^T t_5:$

• $\vartheta_w e_5 \subseteq {}^T t_5 w$ (temp. *de se*)

• $t_5 w \subseteq \vartheta_w \underline{s}_5 w$

• $EXP_w \underline{s}_5 w = {}^T k_{51}^\alpha w e_4$

$\forall w \in Dom k_{52}^\alpha \forall e' \in Dom k_{52}^\alpha w:$

three $k_{52}^\alpha w e' \wedge \wedge {}^D seal_w k_{52}^\alpha w e'$

${}^T k_{51}^\alpha = k_{52}^\alpha$

• ${}^T e_0: e_0$ -agt speaks up

⋮

$t_1 \subseteq 3.july.1721$

$e_1: {}^T a_0$ -we reach k_{11}^π -Greenland at l_1

$ee_2: {}^T a_0$ -we approach k_{11}^π -G.shore l_1

$s_2 = RES_{wi} {}^1 ee_2$

$t_{21} = \vartheta_{wi} s_2$

$e_3: {}^T a_0$ -we meet ${}^{\perp} a_1$

${}^{\perp} a_1 = {}^{\perp} k_{33}^\alpha w_i e_3$

any instance of k_{33}^α is 3 kayakmen

$t_{22} = \vartheta_{wi} RES_{wi} e_3$

$t_{41} = \vartheta_{wi} {}^1 ee_2$

$e_4 = {}^1 ee_4 = {}^1 \langle e_4, \dots, e_3 \rangle$

${}^T a_0$ -we see ${}^{\perp} a_1$

${}^{\perp} a_1 = {}^{\perp} k_{33}^\alpha w_i e_4$ (w_i -*anchor*)

(any instance of k_{33}^α is 3 kayakmen)

$t_{42} = \vartheta_{wi} RES_{wi} e_4$

$e_5: {}^T a_0$ -we think p_5

${}^T t_5 = \vartheta_{wi} RES_{wi} e_5$

(e_5 -thought)

${}^T t_5 w_5 \supseteq \vartheta_{w_5} e_5$

$e_4: {}^{\perp} a_1 = {}^T k_{51}^\alpha w_5 e_4$ (p_5 -*anchor*)

any instance of ${}^T k_{51}^\alpha$ is 3 seals

$\underline{s}_5 w_5: EXP_{w_5} \underline{s}_5 w_5 = {}^T k_{51}^\alpha w_5 e_4$

4. ANAPHORA ACROSS ATTITUDES ONLINE

• *Kalaallisut* (2_K)

For simplicity, assume this is talk about the speech reality ($\top w_0$) and that the current input is of the form, where $e_{1.1}$ is the event of Mr. Nilsson (a_{3N}) running away, and $e_{1.2}$ the event of the children —Pippi (a_{0P}), Tommy (a_{1T}), and Annika (a_{2A})—noticing that he's gone.

$$i_0 = \langle \langle a_{0P}, t_1, \dots, t_0, e_0, w_0 \rangle, \langle e_2, a_{1T}, a_{2A}, e_1, a_{3N}, \dots \rangle \rangle$$

i -reality $\top w_0$:

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- $\top e_0$: e_0 -agt speaks up
- \vdots
- $e_{1.1}$: a_{3N} runs away
- $e_{1.2}$: $a_{0P} + a_{1T} + a_{2A}$ notice a_{3N} is gone
- $\top t_1 = \mathfrak{D}_{w_0} \text{RES}_{w_0} e_{1.2}$

(2_K) a¹. Pippi, Tommy, and Annika ...

Pippi. if (topic)
 $\text{Pippi.} \quad \text{.sg}_{\top}$
 $\text{P}[\text{I } \mathbf{d}\alpha = \text{pippi}]; [k^{\alpha} k^{\alpha} \sim \mathbf{d}\alpha]; \text{P}[\text{I } \text{sg}_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha}]; [\mathbf{a}\mathbf{a}^1 \mathbf{a}\mathbf{a} =_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha} \{d\varepsilon\}];$

Tommy. .sg_τ
 $\text{Tommy.} \quad \text{.sg}_{\top}$
 $\text{P}[\text{I } \mathbf{d}\alpha = \text{tommy}]; [k^{\alpha} k^{\alpha} \sim \mathbf{d}\alpha]; \text{P}[\text{I } \text{sg}_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha}]; [\text{I } ^2 \mathbf{d}\alpha\alpha =_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha} \{d\varepsilon\}];$

Annika .sg_τ
 $\text{Annika} \quad \text{.sg}_{\top}$
 $\text{P}[\text{I } \mathbf{d}\alpha_1 = \text{annika}]; [k^{\alpha} k^{\alpha} \sim \mathbf{d}\alpha_1]; \text{P}[\text{I } \text{sg}_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha}]; [\text{I } ^3 \mathbf{d}\alpha\alpha =_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha} \{d\varepsilon\}];$

=and²

$\text{P}[\text{I } ^3 \mathbf{d}\alpha\alpha = ^f \mathbf{d}\alpha\alpha]; [\mathbf{a} \mathbf{a} = \cup \mathbf{d}\alpha\alpha]$

1 • k^{α} is a kind-level equivalent of $\mathbf{d}\alpha$

$$k^{\alpha} \sim \mathbf{d}\alpha \quad := \quad \lambda i. \forall w \in \text{Dom } k^{\alpha}: \text{Ran } k^{\alpha} w = \{\mathbf{d}\alpha_i\}$$

- $\mathbf{a}\mathbf{a}$ is (the characteristic function of) an α -chain of 2 animates, $n + 1$ animates, some number of animates.

$$\text{chain.of.2 } \mathbf{a}\mathbf{a} \quad := \quad \exists a_1, a_2: \mathbf{a}\mathbf{a} = \{\langle a_1, a_2 \rangle\}$$

$$\text{chain.of.n+1 } \mathbf{a}\mathbf{a} \quad := \quad \exists a, a', \mathbf{a}\mathbf{a}': \text{chain.of.n } \mathbf{a}\mathbf{a}'$$

$$\wedge (\text{Ran } \mathbf{a}\mathbf{a}' - \text{Dom } \mathbf{a}\mathbf{a}') = \{a\} \wedge a' \notin (\text{Dom } \mathbf{a}\mathbf{a}' \cup \text{Ran } \mathbf{a}\mathbf{a}')$$

$$\wedge \mathbf{a}\mathbf{a} = \mathbf{a}\mathbf{a}' \cup \{\langle a, a \rangle\}$$

$$\text{chain } \mathbf{a}\mathbf{a} \quad := \quad \exists n: \text{chain.of.n } \mathbf{a}\mathbf{a}$$

- the 1st, $(n + 1)$ st, final coordinate of the α -chain $\mathbf{a}\mathbf{a}$

$$^1 \mathbf{a}\mathbf{a} \quad := \quad \iota a. (\text{Dom } \mathbf{a}\mathbf{a} - \text{Ran } \mathbf{a}\mathbf{a}) = \{a\}$$

$$^{n+1} \mathbf{a}\mathbf{a} \quad := \quad \mathbf{a}\mathbf{a} (^n \mathbf{a}\mathbf{a}) \quad \text{if this is defined}$$

$$^f \mathbf{a}\mathbf{a} \quad := \quad \iota a. (\text{Ran } \mathbf{a}\mathbf{a} - \text{Dom } \mathbf{a}\mathbf{a}) = \{a\}$$

- In $\mathbf{d}\omega$, the 1st coordinate of $\mathbf{a}\mathbf{a}$ instantiates $\mathbf{d}\kappa^{\alpha}$ in $d\varepsilon$

$$^1 \mathbf{a}\mathbf{a} =_{\mathbf{d}\omega} \mathbf{d}\kappa^{\alpha} \{d\varepsilon\} \quad := \quad \lambda i. \text{chain } \mathbf{a}\mathbf{a} \wedge ^1 \mathbf{a}\mathbf{a} = \mathbf{d}\kappa^{\alpha}_i \mathbf{d}\omega_i d\varepsilon_i$$

- 2 • $\mathbf{d}\alpha\alpha$ is a chain of 3 animates

$$^3 \mathbf{d}\alpha\alpha = ^f \mathbf{d}\alpha\alpha \quad := \quad \lambda i. (\text{Ran } \mathbf{d}\alpha\alpha_i - \text{Dom } \mathbf{d}\alpha\alpha_i) = \{^3 \mathbf{d}\alpha\alpha_i\}$$

- \mathbf{a} is the sum of the coordinates of $\mathbf{d}\alpha\alpha$

$$\mathbf{a} = \cup \mathbf{d}\alpha\alpha \quad := \quad \lambda i. \mathbf{a} = (^1 \mathbf{d}\alpha\alpha_i + \dots + ^f \mathbf{d}\alpha\alpha_i)$$

...set out to look for Mr. Nilsson.

Mr. Nilsson.

.sg₁

mf (comment beg.)

$P[| d\alpha_2 = nilsson]; [k^\alpha | k^\alpha \sim d\alpha_2]; P[| sg d\kappa^\alpha]; [a | a =_{d\omega} d\kappa^\alpha \{d\varepsilon_1\}]$

seek⁻¹

$[ee | ee: AGT seek d\kappa^\alpha];$

-try²

$P[| p | p = \text{Dom } ^f d\varepsilon\varepsilon];$

$[ee | (^1 d\varepsilon\varepsilon \subseteq_{d\Omega} \text{RES } ^f ee), (AGT ee =_{d\Omega} AGT d\varepsilon\varepsilon),$

$(d\kappa^\alpha \{ee\} =_{d\Omega} d\kappa^\alpha \{^f d\varepsilon\varepsilon\}), (ee: AGT intend d\Omega)]$

-ELA_T

-3s₁

$P[| AGT d\varepsilon\varepsilon =_{d\Omega} d\alpha]; [| ^1 d\varepsilon\varepsilon \subseteq_{d\Omega} d\tau]; P[| 3s_{d\Omega, d\varepsilon} d\alpha, d\alpha =_{d\Omega} d\kappa^\alpha \{d\varepsilon\varepsilon\}]$

a². set.out-

fb (comment ctd.)

$P[| d\varepsilon\varepsilon: AGT travel]; [e | e =_{d\omega} ^1 d\varepsilon\varepsilon];$

-IND.

.IV

-3p

$P[| d\varepsilon <_{d\omega} d\varepsilon]; [| d\varepsilon \subseteq_{d\omega} d\tau]; [| AGT d\varepsilon =_{d\omega} d\alpha]; P[| 3p_{d\omega, d\varepsilon} d\alpha]$

i-reality $\top w_0$:

• $\top e_0: e_0$ -agt speaks up

⋮

$e_{1.1}: a_{3N}$ runs away

$e_{1.2}: a_{0P} + a_{1T} + a_{2A}$ notice a_{3N} is gone

$\top t_1 = \text{RES}_{w_0} e_{1.2}$

$e_2 = ^1 ee_{2.2} w_0$: beg. of $ee_{2.2}$ -travel

$w_2 \in p_2 = \text{Dom } ^f ee_{2.1}$

($ee_{2.1}$ -search completed)

$\langle ^1 ee_{2.2} w_2, \dots, ^f ee_{2.2} w_2 \rangle: \top a_4 = \cup aa_2 = (a_0 + a_1 + a_2)$

travel with the intent of realizing $^f ee_{2.1}$

$^1 ee_{2.1} w_2: \top a_4 = \cup aa_2 = (a_{0P} + a_{1T} + a_{2A})$ begin to

look for a_{3N} dur. result time of $^f ee_{2.2} w_2$

$^f ee_{2.1} w_2$: end of $ee_{2.1}$ -search,

$\top a_4 = \cup aa_2 = (a_{0P} + a_{1T} + a_{2A})$ find a_{3N}

1 • ee is a process-chain of stage concepts of a search for an instance of $d\kappa^\alpha$

$ee: AGT seek d\kappa^\alpha$

:= λi . process ee

$\wedge \forall e \in \text{Dom } ee \forall w \in \text{Dom } e: search_{for_w}(ew, AGT_w ew, d\kappa^\alpha_i)$

$\wedge \forall w \in \text{Dom } ^f ee \exists e: e = ^f ew \wedge find_w(e, AGT_w e, d\kappa^\alpha_i w)$

2 • In $d\Omega$, $d\varepsilon\varepsilon$ begins during the result state of the end of ee

$^1 d\varepsilon\varepsilon \subseteq_{d\Omega} \text{RES } ^f ee := \lambda i. \forall w \in d\Omega_i \exists e, e': e = ^f ew \wedge e' = ^1 d\varepsilon\varepsilon_w \wedge \text{RES}_w e' \subseteq \text{RES}_w e$

• In $d\Omega$, the agent of ee is the agent of $d\varepsilon\varepsilon$

$AGT ee =_{d\Omega} AGT d\varepsilon\varepsilon := \lambda i. \forall w \in d\Omega_i \forall e \in ee \forall e' \in d\varepsilon\varepsilon_i: AGT_w ew = AGT_w e'$

• In $d\Omega$, $d\kappa^\alpha$ is instantiated in ee by the same animate(s) as in the final stage of $d\varepsilon\varepsilon$

$d\kappa^\alpha \{ee\} =_{d\Omega} d\kappa^\alpha \{^f d\varepsilon\varepsilon\} := \lambda i. \forall w \in d\Omega_i \forall e \in ee \exists e': e' = ^f d\varepsilon\varepsilon_w \wedge d\kappa^\alpha_i w(ew) = d\kappa^\alpha_i w e'$

• ee is a process-chain of stage concepts of actions whose agent intends to realize $d\Omega$

$ee: AGT intend d\Omega := \lambda i$. process ee

$\wedge \forall e \in ee \forall w \in \text{Dom } e \exists s:$

$\text{RES}_w e \subseteq \text{RES}_w s \wedge AGT_w ew = \text{EXP}_w s \wedge intend_w(s, \text{EXP}_w s, d\Omega_i)$

(2_k)b¹. Tommy_T...

Tommy.

.sg_T*if* (topic) $P[{}^2\mathbf{d}\alpha\alpha = \text{tommy}]; [k^\alpha | k^\alpha \sim {}^2\mathbf{d}\alpha\alpha]; P[{}^1sg_{\mathbf{d}\omega} dk^\alpha]; [\mathbf{a} | \mathbf{a} = dk^\alpha\{d\varepsilon\}];$

...proposed

propose⁻¹*fb* (comment) $[e k^\alpha | (e: \text{AGT } \text{propose}_{\mathbf{d}\omega} k^\alpha), (k^\alpha \subseteq \text{RES } e)];$ -apass₁² $[{}^1\text{AGT } d\varepsilon \leq \text{SUB } dk^\alpha];$

-IND.

.IV

 $P[{}^1d\varepsilon <_{\mathbf{d}\omega} \mathbf{d}\varepsilon]; [{}^1d\varepsilon \subseteq_{\mathbf{d}\omega} \mathbf{d}\tau]; [{}^1\text{AGT } d\varepsilon =_{\mathbf{d}\omega} \mathbf{d}\alpha]$

-3s

 $P[{}^13s_{\mathbf{d}\omega} \mathbf{d}\alpha]$ *i*-reality ${}^T w_0$:

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• ${}^T e_0$: *e*₀-agt speaks up

⋮

 $e_{1.1}$: *a*_{3N} runs away $e_{1.2}$: *a*_{0P} + *a*_{1T} + *a*_{2A} notice *a*_{3N} is gone ${}^T t_1 = \text{RES}_{w_0} e_{1.2}$ $e_2 = {}^1\text{ee}_{2.2}w_0$: beg. of *ee*_{2.2}-travel e_3 : ${}^T a_{1T}$ proposes instantiating k^α_3 $w_3 \in \text{Dom } k^\alpha_3$

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*(e*₃-proposal) $\text{RES}_{w_3} e_3$: result time of *e*₃Ran $k^\alpha_3 w_3$: time frame for proposed acts $w_2 \in p_2 = \text{Dom } {}^f\text{ee}_{2.1}$

••

•

...•

*(ee*_{2.1}-search completed) $({}^1\text{ee}_{2.2}w_2, \dots, {}^f\text{ee}_{2.2}w_2)$: ${}^T a_4 = \cup a a_2 = (a_0 + a_1 + a_2)$ travel with the intent of realizing ${}^f\text{ee}_{2.1}$ ${}^1\text{ee}_{2.1}w_2$: ${}^T a_4 = \cup a a_2 = (a_{0P} + a_{1T} + a_{2A})$ begin tolook for *a*_{3N} dur. result time of ${}^f\text{ee}_{2.2}w_2$ ${}^f\text{ee}_{2.1}w_2$: end of *ee*_{2.1}-search, ${}^T a_4 = \cup a a_2 = (a_{0P} + a_{1T} + a_{2A})$ find *a*_{3N}¹ • In $\mathbf{d}\omega$, *e* is an action whose agent proposes realizing a k^α -time $e: \text{AGT } \text{propose}_{\mathbf{d}\omega} k^\alpha \quad := \quad \lambda i. \text{propose}_{\mathbf{d}\omega}(e, \text{AGT}_w e, \text{Dom } k^\alpha)$ $\wedge \forall w \in \text{Dom } k^\alpha \forall e, s \in \text{Dom } k^\alpha w: \text{RES}_w e \subseteq k^\alpha w e \wedge k^\alpha w s \subseteq \text{RES}_w s$ • In any dk^α -world, any dk^α -time is a subinterval of the result time of *e* $k^\alpha \subseteq \text{RES } e \quad := \quad \lambda i. \forall w \in \text{Dom } k^\alpha \forall t \in \text{Ran } k^\alpha w: t \subseteq \text{RES}_w e$ ² • In any dk^α -world *dε*-agent is part of the agt of any dk^α -action and of the exp of any dk^α -state or change of state $\text{AGT } d\varepsilon \leq \text{SUB } dk^\alpha \quad := \quad \lambda i. \forall w \in \text{Dom } dk^\alpha \forall e^* \in \text{Dom } dk^\alpha w:$ $((\exists a: a = \text{AGT}_w e^*) \rightarrow \text{AGT}_w d\varepsilon_i \leq \text{AGT}_w e^*)$ $\wedge (\neg \exists a: a = \text{AGT}_w e^*) \rightarrow \text{AGT}_w d\varepsilon_i \leq \text{EXP}_w e^*)$

(1_K)b². ...that they (= we_T) split up
separate-¹

[e] e: AGT *separate.into* **dαα**];

ff: if

-ELA_T²

^P[| AGT dε = (AGT dε + EXP dε)]; [| dε ⊆ dk^r{dε}]; [**t**] **t** = Θ RES dε]

-3p_T³

^P[| 3p_{dω} Udαα]; [| Udαα =_{dω} (AGT dε + EXP dε)];

i-reality ^Tw₀:

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• ^Te₀: e₀-agt speaks up

⋮

e_{1.1}: a_{3N} runs away

e_{1.2}: a_{0P} + a_{1T} + a_{2A} notice a_{3N} is gone

^Tt₁ = Θ _{w₀} RES_{w₀} e_{1.2}

e₂ = ¹e_{e_{2.2}}w₀: beg. of e_{e_{2.2}}-travel

e₃: ^Ta_{1T} proposes instantiating k₃^r

w₃ ∈ Dom k₃^r

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(e₃-proposal, Dom k₃^r = Dom e₄)

Θ _{w₃} RES_{w₃} e₃: result time of e₃

Ran k₃^rw₃: time frame for proposed acts

e₄w₃: (e₃-agt + e₃-exp) separate into

^Taa₂ = ⟨a_{0P}, a_{1T}, a_{2A}⟩

^Tt₄w₃ = Θ _{w₃} RES_{w₃} e₄w₃

¹ • Any realization of e is an event whose agent group Udαα separates into coordinates of **dαα**

e: AGT *separate.into* **dαα** := λ*i*. $\forall w \in \text{Dom } \underline{e}$: AGT_w ew = **dαα**_{*i*}

∧ *separate.into*_w(ew, AGT_w ew, **dαα**_{*i*})

² • dε is an action by the group consisting of the agent and the experiencer (= addressee) of dε-(proposal)

AGT dε = (AGT dε + EXP dε) := λ*i*. $\forall w \in \text{Dom } \underline{d\varepsilon}$: AGT_w dε_{*i*}w = (AGT_w dε_{*i*} + EXP_w dε_{*i*})

• dε is realized during its dk^r-(proposed) time

dε ⊆ dk^r{dε} := λ*i*. Dom dε_{*i*} = Dom dk^r_{*i*}

∧ $\forall w \in \text{Dom } \underline{d\varepsilon}$: Θ _w dε_{*i*}w ⊆ dk^r_{*i*}w(dε_{*i*}w)

• **t** is the concept of the result time of dε

t = Θ RES dε := λ*i*. **t** = ⟨ Θ _w RES_w dε_{*i*}w: w ∈ Dom dε_{*i*}⟩

³ • The sum of the coordinates of **dαα** is an α-plurality disjoint both from the **dε**-speaker and the **dε**-addressee

3p_{dω} Udαα := λ*i*. *pl* Udαα_{*i*} ∧ ¬(Udαα_{*i*} ∘ AGT_{dω} **dε**) ∧ ¬(Udαα ∘ EXP_{dω} **dε**)

(2) b³. ...and hunt.seek⁻¹ $P[k_\alpha^\alpha | k_\alpha^\alpha \sim d\alpha]; [\underline{ee}_\alpha | \underline{ee}_\alpha: \alpha \text{ seek } d\alpha\kappa^\alpha];$

ff: fb

-apass₂² $[| \text{AGT } d\alpha\underline{ee} \leq \text{SUB } d\alpha\kappa^\alpha];$ -prospect³ $P[|p| p = \text{Dom } d\kappa^\alpha];$ $[\underline{s}_\alpha | (\underline{s}_\alpha =_{d\Omega} (\text{RES } d\underline{e} | \alpha)), ({}^1d\alpha\underline{ee} \subseteq_{d\Omega} \vartheta_{\underline{s}_\alpha}), (\text{EXP } \underline{s}_\alpha =_{d\Omega} \text{AGT } {}^1d\alpha\underline{ee})];$ -ELA_T⁴ $P[| \mathbf{d}\alpha\alpha:: \text{EXP } d\alpha\underline{\sigma} =_{d\Omega} \alpha]; [| \mathbf{d}\alpha\alpha:: \mathbf{d}\underline{\tau} \subseteq_{d\Omega} d\alpha\underline{\sigma}];$ -3p_T $P[| 3p_{d\omega} \cup \mathbf{d}\alpha\alpha]$

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- 1 • $\forall a \in \text{Dom } k_\alpha^\alpha, k_\alpha^\alpha a$ is a kind-level equivalent of $d\alpha$
 $k_\alpha^\alpha \sim d\alpha \quad := \lambda i. \forall a \in \text{Dom } k_\alpha^\alpha \forall w \in \text{Dom } k_\alpha^\alpha a: \text{Ran } k_\alpha^\alpha a w = \{d\alpha_i\}$
 - $\forall a \in \text{Dom } \underline{ee}_\alpha, \underline{ee}_\alpha a$ is a process-chain of stage concepts of a search by α for $d\alpha\kappa^\alpha$
 $\underline{ee}_\alpha: \alpha \text{ seek } d\alpha\kappa^\alpha \quad := \lambda i. \forall a \in \text{Dom } \underline{ee}_\alpha:$
 $\text{process } \underline{ee}_\alpha a$
 $\wedge \forall \underline{e} \in \text{Dom } \underline{ee}_\alpha \forall w \in \text{Dom } \underline{e}: \text{AGT}_w \underline{e} w = a \wedge \text{search.for}_w(\underline{e} w, a, d\alpha\kappa^\alpha_i a)$
 $\wedge \forall w \in \text{Dom } {}^f \underline{ee}_\alpha a \exists e: e = {}^f \underline{ee}_\alpha a w \wedge \text{AGT}_w e = a \wedge \text{find}_w(e, a, d\alpha\kappa^\alpha_i a w e)$
 - 2 • $\forall a \in \text{Dom } d\alpha\underline{ee}_i = \text{Dom } d\alpha\kappa^\alpha$, the agent of any completed $d\alpha\underline{ee}$ -process of a is part of the subject of $d\alpha\kappa^\alpha$
 $\text{AGT } d\alpha\underline{ee} \leq \text{SUB } d\alpha\kappa^\alpha \quad := \lambda i. \text{Dom } d\alpha\underline{ee}_i = \text{Dom } d\alpha\kappa^\alpha_i$
 $\wedge \forall a \in \text{Dom } d\alpha\underline{ee}_i \forall w \in \text{Dom } (d\alpha\underline{ee}_i a) \forall e^* \in \text{Dom } d\alpha\kappa^\alpha_i a w:$
 $(\exists a: a = \text{AGT}_w e^*) \rightarrow \text{AGT}_w (d\alpha\underline{ee}_i a) w \leq \text{AGT}_w e^*$
 $\wedge (\neg \exists a: a = \text{AGT}_w e^*) \rightarrow \text{AGT}_w (d\alpha\underline{ee}_i a) w \leq \text{EXP}_w e^*$
 - 3 • $\forall a \in \text{Dom } \underline{s}_\alpha$, in $d\Omega$, $\underline{s}_\alpha a$ is the result state of $d\underline{e}$ restricted to a
 $\underline{s}_\alpha =_{d\Omega} (\text{RES } d\underline{e} | a) \quad := \lambda i. \forall a \in \text{Dom } \underline{s}_\alpha \forall w \in d\Omega_i:$
 $\vartheta_w \underline{s}_\alpha a w = \vartheta_w \text{RES}_w d\underline{e}_i w \wedge a \leq \text{EXP}_w d\underline{e}_i w \wedge \text{EXP}_w \underline{s}_\alpha a w = a$
 - $\forall a \in \text{Dom } \underline{s}_\alpha = \text{Dom } d\alpha\underline{ee}$, in $d\Omega$, the $d\alpha\underline{ee}$ -process of a begins during the \underline{s}_α -state of a
 ${}^1d\alpha\underline{ee} \subseteq_{d\Omega} \vartheta_{\underline{s}_\alpha} \quad := \lambda i. \text{Dom } d\alpha\underline{ee} = \text{Dom } \underline{s}_\alpha$
 $\wedge \forall a \in \text{Dom } \underline{s}_\alpha \forall w \in d\Omega_i: \vartheta_w (d\alpha\underline{ee} a) w \subseteq \vartheta_w \underline{s}_\alpha a w$
 - $\forall a \in \text{Dom } \underline{s}_\alpha = \text{Dom } d\alpha\underline{ee}$, in $d\Omega$, the experiencer of $\underline{s}_\alpha a$ is the agent of stage 1 of the $d\alpha\underline{ee}$ -process of a .
 $\text{EXP } \underline{s}_\alpha =_{d\Omega} \text{AGT } {}^1d\alpha\underline{ee} \quad := \lambda i. \text{Dom } \underline{s}_\alpha = \text{Dom } d\alpha\underline{ee}_i$
 $\wedge \forall a \in \text{Dom } \underline{s}_\alpha \forall w \in d\Omega_i: \text{EXP}_w \underline{s}_\alpha a w = \text{AGT}_w (d\alpha\underline{ee}_i a) w$
 - 4 • a is a coordinate of the chain (characterized by) aa
 $a \in aa \quad := a \in (\text{Dom } aa \cup \text{Ran } aa)$
 - $\forall a \in \mathbf{d}\alpha\alpha$, in $d\Omega$, the experiencer of the $d\alpha\underline{\sigma}$ -state of a is a
 $\mathbf{d}\alpha\alpha:: \text{EXP } d\alpha\underline{\sigma} =_{d\Omega} \alpha \quad := \lambda i. \forall a \in \mathbf{d}\alpha\alpha_i \forall w \in d\Omega_i: \text{EXP}_w d\alpha\underline{\sigma}_i a w = a$
 - $\forall a \in \mathbf{d}\alpha\alpha$, in $d\Omega$, the $d\alpha\underline{\sigma}$ -state of a holds at $\mathbf{d}\underline{\tau}$
 $\mathbf{d}\alpha\alpha:: \mathbf{d}\underline{\tau} \subseteq_{d\Omega} d\alpha\underline{\sigma} \quad := \lambda i. \forall a \in \mathbf{d}\alpha\alpha_i \forall w \in d\Omega_i: \mathbf{d}\underline{\tau}_i w \subseteq \vartheta_w d\alpha\underline{\sigma}_i a w$

i -reality $\top w_0$:

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- $\top e_0$: e_0 -agt speaks up
- \vdots
- $e_{1.1}$: a_{3N} runs away
- $e_{1.2}$: $a_{0P} + a_{1T} + a_{2A}$ notice a_{3N} is gone
- $\top t_1 = \vartheta_{w_0} \text{RES}_{w_0} e_{1.2}$
- $e_2 = {}^1 \underline{ee}_{2.2} w_0$: beg. of $\underline{ee}_{2.2}$ -travel
- e_3 : $\top a_{1T}$ proposes p_3

$w_3 \in p_3$

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- (e_3 -proposal, $p_3 = \text{Dom } k^t_3 = \text{Dom } \underline{e}_4$)
- $\vartheta_{w_3} \text{RES}_{w_3} e_3$: result time of e_3
- Ran $k^t_3 w_3$: time frame for proposed acts
- $\underline{e}_4 w_3$: (e_3 -agt + e_3 -exp) separate into
- $\top a a_2 = \langle a_{0P}, a_{1T}, a_{2A} \rangle$
- $\top \underline{t}_4 w_3 = \vartheta_{w_3} \text{RES}_{w_3} \underline{e}_4 w_3$
- $[\underline{s}_{\underline{a}}]_3 a_{0P} w_3$: state of a_{0P} at $\vartheta_{w_3} \text{RES}_{w_3} \underline{e}_4 w_3$,
 a_{0P} 's proposed prospect
- ${}^1 [\underline{ee}_{\underline{a}}]_3 a_{0P} w_3$: a_{0P} begins to look for a_{3N}
- $[\underline{s}_{\underline{a}}]_3 a_{1T} w_3$: state of a_{1T} at $\vartheta_{w_3} \text{RES}_{w_3} \underline{e}_4 w_3$,
 a_{1T} 's proposed prospect
- ${}^1 [\underline{ee}_{\underline{a}}]_3 a_{1T} w_3$: a_{1T} begins to look for a_{3N}
- $[\underline{s}_{\underline{a}}]_3 a_{2A} w_3$: state of a_{2A} at $\vartheta_{w_3} \text{RES}_{w_3} \underline{e}_4 w_3$,
 a_{2A} 's proposed prospect
- ${}^1 [\underline{ee}_{\underline{a}}]_3 a_{2A} w_3$: a_{2A} begins to look for a_{3N}

(2_k)c¹. Annika_T...

Annika.

.sg_T

if (topic)

P[¹ ³ dαα = annika]; [k^α k^α ~ ³ dαα]; P[¹ sg_{dω} dk^α]; [al a = dk^α{dε}];

...was afraid,

be.afraid-

P[¹ dε ⊆_{dΩ} ΘRES dε]; [s| s: EXP afraid.of_{dω} dΩ];-FCT_TP[¹ EXP dσ =_{dω} dα]; [¹ ΘBEG{RES dε} ⊆_{dω} dσ]; [tl t =_{dω} Θdσ]-3s_TP[¹ 3s_{dω} dα];*i*-reality ^Tw₀:

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- ^Te₀: e₀-agt speaks up
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- e_{1.1}: a_{3N} runs away
- e_{1.2}: a_{0P} + a_{1T} + a_{2A} notice a_{3N} is gone
- ^(T)t₁ = Θ_{w₀} RES_{w₀} e_{1.2}
- e₂ = ¹ee_{2.2}w₀: beg. of ee_{2.2}-travel
- e₃: ^Ta_{1T} proposes p₃
- s₅: a_{2A} is afraid of p₃ (just aft. e₃)
- ^Tt₅ = Θ_{w₀} s₅

w₃ ∈ p₃

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(e₃-proposal, p₃ = Dom k^r₃ = Dom e₄)Θ_{w₃} RES_{w₃} e₃: result time of e₃Ran k^r₃w₃: time frame for proposed actse₄w₃: (e₃-agt + e₃-exp) separate into^Taa₂ = ⟨a_{0P}, a_{1T}, a_{2A}⟩^Tt₄w₃ = Θ_{w₃} RES_{w₃} e₄w₃[s_α]₃a_{0P}w₃: state of a_{0P} at Θ_{w₃} RES_{w₃} e₄w₃,
a_{0P}'s proposed prospect¹[ee_α]₃a_{0P}w₃: a_{0P} begins to look for a_{3N}[s_α]₃a_{1T}w₃: state of a_{1T} at Θ_{w₃} RES_{w₃} e₄w₃,
a_{1T}'s proposed prospect¹[ee_α]₃a_{1T}w₃: a_{1T} begins to look for a_{3N}[s_α]₃a_{2A}w₃: state of a_{2A} at Θ_{w₃} RES_{w₃} e₄w₃,
a_{2A}'s proposed prospect¹[ee_α]₃a_{2A}w₃: a_{2A} begins to look for a_{3N}

(1_K)c². ...so she didn't want to do that.

thus=

fb (comment)

[e | e = dε];

do-

[| SUB dε = AGT dε];

-wish

^P[w | Ran w = Dom dε];

[| (dε ⊆_{dω} ∅RES{BEG dσ}), (EXP dσ ≤_{dω} AGT dε), (dσ: EXP *want*_{dω} Dom dω)];

-not

[| *no*(Dom dω, Ran dω)];

-IRR

^P[| ¬_{dω}(¹dεε < dσ), (EXP dσ =_{dω} **dα**)]; [| **dτ** ⊆_{dω} dσ];

-3s

^P[| 3s **dα**]

i-reality ^τw₀:

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- ||||

- ^τe₀: *e*₀-agt speaks up
- ^τe_{1.1}: *a*_{3N} runs away
- ^τe_{1.2}: *a*_{0P} + *a*_{1T} + *a*_{2A} notice *a*_{3N} is gone
- ^(τ)t₁ = ∅_{w0} RES_{w0} e_{1.2}
- e₂ = ¹ee_{2.2}w₀: beg. of ee_{2.2}-travel
- ^τe₃: *a*_{1T} proposes *p*₃
- s₅: *a*_{2A} is afraid of *p*₃ (just aft. e₃)
- *a*_{2A} wants Dom w₅ (disjoint from *p*₃)
- ^τt₅ = ∅_{w0} s₅

w₃ ∈ *p*₃

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- (*e*₃-proposal, *p*₃ = Dom *k*^τ₃ = Dom e₄ = **Ran w₅**)
- ∅_{w3} RES_{w3} e₃: result time of e₃
- Ran *k*^τ₃w₃: time frame for proposed acts
- e₄w₃: (*e*₃-agt + *e*₃-exp) separate into
- ^τaa₂ = ⟨*a*_{0P}, *a*_{1T}, *a*_{2A}⟩
- ^τt₄w₃ = ∅_{w3} RES_{w3} e₄w₃
- [s_α]₃*a*_{0P}w₃: *a*_{0P}'s proposed prospect
- [ee_α]₃*a*_{0P}w₃: *a*_{0P} begins to look for *a*_{3N}
- [s_α]₃*a*_{1T}w₃: *a*_{1T}'s proposed prospect
- [ee_α]₃*a*_{1T}w₃: *a*_{1T} begins to look for *a*_{3N}
- [s_α]₃*a*_{2A}w₃: *a*_{2A}'s proposed prospect
- [ee_α]₃*a*_{2A}w₃: *a*_{2A} begins to look for *a*_{3N}

w₅ ∈ Dom w₅

- (*s*₅-wish, **Dom w₅ ∩ *p*₃ = ∅**)
- no realization of e₄-separation