



### 1.2.2 Semantic Association

Nominals are interpreted as containing a **distinguished restriction variable R** (9a). R is abstracted over when TP and CP are combined (9d). The result is to “lower” the RC denotation into the nominal denotation:

- (9) a. *a man* →  $\lambda P \exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ P(x)]$   
 b. *a man came in* →  $\exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ \text{came-in}(x)]$   
 c. *who I didn't know* →  $\lambda y [\neg \text{know}(I, y)]$   
 d. *a man came in who I didn't know* →  
 $\lambda \mathbf{R} [ \exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ \text{came-in}(x)] ] (\lambda y [\neg \text{know}(I, y)])$   
 $\exists x [\text{man}(x) \ \& \ \neg \text{know}(I, x) \ \& \ \text{came-in}(x)]$
- (10)  $[_{TP} \ TP \ CP] \rightarrow \lambda \mathbf{R} [_{TP}] (\lambda x [_{CP}])$  Cooper (1975), Bach & Cooper (1978)

Even if this semantic analysis is applicable to Warlpiri adjoined CPs understood as RCs, what about ACs? (10) is plainly non-identical to either of (5a,b). What becomes of unification?

### 1.3 When-clauses as Temporal RCs?

Larson (1982) suggests assimilating some temporal Warlpiri ACs to RCs under the semantics in (10). Specifically:

- Analyze tenses as quantifiers with a similar restriction variable R.
- Take adjoined clauses to supply a temporal property for R.

Compare (7)/(11) and (9a)/(12a) and (10)/(13).

- (11) A man came in  $[_{CP} \ \text{when I was alone}]$ .
- (12) a. *PST* →  $\lambda T \exists t [t < t^* \ \& \ \mathbf{R}'(t) \ \& \ T(t)]$   
 b. *a man came in* →  
 $\exists t [t < t^* \ \& \ \mathbf{R}'(t) \ \& \ AT(t, \exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ \text{come-in}(x)])]$   
 c. *when I was alone* →  $\lambda t [t < t^* \ \& \ AT(t, \text{alone}(I))]$   
 d. *a man came in when I was alone* →  
 $\lambda \mathbf{R}' [ \exists t [t < t^* \ \& \ \mathbf{R}'(t) \ \& \ AT(t, \exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ \text{come-in}(x)])] ] (\lambda t [t < t^* \ \& \ AT(t, \text{alone}(I))])$   
 $\exists t [t < t^* \ \& \ AT(t, \text{alone}(I)) \ \& \ AT(t, \exists x [\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ \text{come-in}(x)])]$

- (13)  $[_{TP} \ TP \ CP] \rightarrow \lambda \mathbf{R} [_{TP}] (\lambda t [_{CP}])$  Larson (1982)

Combining (10) & (13) allows for interpretation of multiple peripheral clauses (14):

- (14) A man came in  $[_{CP} \ \text{when I was alone}]$   $[_{CP} \ \text{who I didn't know}]$ .

### 1.4 ACs as Quantifier Restrictions

The proposal in (13) converges with a view in semantics that (contra 5a,b) **adverbial clauses express restrictions on adverbial quantifiers**. Adverbial quantifications commonly have unexpressed restrictions, with content drawn from context (15a)/(15.i), or derived from the sentence itself (15b.ii-iv):

- (15) a. John usually talks too much.  
 “In most **contextually relevant situations**, John talks too much.”
- b. John usually steams Chinese dumplings.  
 i. “In most **contextually relevant situations**, John steams Chinese dumplings.”  
 ii. “In most **contextually relevant situations where John steams something**, John steams Chinese dumplings”  
 iii. “In most **contextually relevant situations where John steams dumplings**, John steams Chinese dumplings”  
 iv. “In most **contextually relevant situations where John deals with Chinese dumplings**, John steams Chinese dumplings”

Following Rooth (1985), sentence-internal restrictions like (15b.ii-iv) are assumed to arise by **focus** – i.e., adverbial Qs are focus-sensitive elements that associate with material in their scope. The restrictions in (15b.ii-iv) correspond to focal assignments (16a-c) (resp.):

- (16) a. Usually **John steams**  $[_{FOCUS} \ \text{Chinese dumplings}]$ .  
 b. Usually **John steams**  $[_{FOCUS} \ \text{Chinese}]$  **dumplings**.  
 c. Usually **John**  $[_{FOCUS} \ \text{steams}]$  **Chinese dumplings**.

Adverbial Qs show their full argument structure in conjunction with adverbial *if/when/before/after*-clauses (17a-d). The latter supply the restriction arg (18a-c):

- (17) a. Sometimes  $[_{CP} \ \text{if John is sleepy}]$  he drinks green tea.  
 b. Usually  $[_{CP} \ \text{when John cooked}]$  he steamed Chinese dumplings  
 c. John always shaves  $[_{CP} \ \text{when he is in the shower}]$ .  
 d. John never washed vegetables  $[_{CP} \ \text{before eating them}]$ .
- (18) a. SOMETIMES ( $\lambda e$ [**John is sleepy**]( $e$ )) ( $\lambda e$ [John drink green tea( $e$ )])  
 b. USUALLY ( $\lambda e$ [**John cooked**]( $e$ )) ( $\lambda e$ [John steamed C. dumplings( $e$ )])  
 c. ALWAYS ( $\lambda e$ [**John in the shower**]) ( $\lambda e$ [John shaves( $e$ )])

When *if/when/before/after*-clauses occur without an overt adverbial quantifier (19a), a covert one may be assumed (Heim 1982) (16b):

- (19) a. When John visited Paris, he ate in a café.  
 b. SOMETIME ( $\lambda e$ [John visited Paris( $e$ )]) ( $\lambda e$ [John ate in a café( $e$ )])

This permits ambiguity in (20). On reading (20a), the *when*-clause restricts *always* (21a); on reading (20b), the *when*-clause restricts a covert adverb; *always* quantifies over contextually relevant parts of the larger visitation-event (21b)

- (20) When John visited Paris, he always ate in a café.  
 a. “In all situations in which John visited Paris, he ate in a café.”  
 b. “At the time John visited Paris, in all relevant situations, John ate in a café.”
- (21) a. ALWAYS ( $\lambda e[\text{John visited Paris}(e)]$ ) ( $\lambda e[\text{John ate in a café}(e)]$ )  
 b. SOMETIME ( $\lambda e[\text{John visited Paris}(e)]$ )  
 ( $\lambda e[\text{ALWAYS } (\lambda e'[\text{C}(e) \ \& \ \Pi(e',e)])$ ] ( $\lambda e'[\text{John ate in a café}(e')]$ ))

(13) accords with this view: the adjoined temporal clause restricts a Q in the main TP. But the broader view seems necessary to accommodate additional Warlpiri examples where CP has conditional meaning (22), where CP can have locative meaning (23), (24b), and where CP has contrastive and ‘enabling’ meaning (25a,b), resp.

- (22) [<sub>CP</sub> **kaji**-lp-npa yangka warlu-ngka purra-- yi-ka-ju ]  
 COMP-PERF-2 that fire-LOC cook-IRR meat-E.G.  
 yinka kajika-npa watiya-rlu kuyu yurduyurduma-ni (= (17), Hale 1986)  
 that POTENTIAL-2 stick-INST meat turn-NPST  
 ‘if you were cooking meat on a fire, e.g., you might turn it over with a stick’
- (23) a. ya-ni ka-rna, [<sub>CP</sub> **kuja**-ka nyanungu nyin-mi ]  
 go-PST AUX-1.SG COMP-AUX him stay-NPST  
 I’m going where he lives’ (Hale nd, unpublished fieldnotes)  
 b. nya-ngu-rna, nyanungu-ju [<sub>CP</sub> warna **kuja**-npu pu-ngu ]  
 see-PST-1.SG him-OLDINFO snake COMP-AUX hit-PST  
 I saw him where you killed the snake’ (Hale nd, unpublished fieldnotes)
- (24) [<sub>CP</sub> yapa **kuja**-ka yangka yali-rlu pali ]  
 person COMP-PRES that that-LOC die(-NPST)  
 kula-ka-lu ngula-ngka nyina kutu  
 NEG-PRES-333 that-loc sit(-NPST) nearby  
 a. ‘When a person dies, they don’t stay closeby there’  
 b. ‘Where a person dies, they don’t stay closeby there’ (= (18), Hale 1986)
- (25) a. [<sub>CP</sub> **kuja**-ka-rlu yuwali nganti-ni julpu panu-kari-li kankalu watiya-rla ]  
 COMP-AUX nest build-NPST bird many-other-ERG up tree-LOC  
 mana-ngka ka-nyanu jinjiwanu-rlu nganti-ni yujuku padu  
 spinifex-LOC COMP-AUX jinjiwarnu-ERG build-NPST shelter-DIMIN  
 ‘Whereas many other birds build a nest up in a tree, the jinjiwarnu bird builds itself a small shelter in spinifex grass.’

- b. [<sub>CP</sub> nyampu **kuja**-ka-na junma mada-ni ngajulu-rlu ]  
 this COMP-AUX knife have-NPST I-ERG  
 ngula kapi-rna-ju ngajulu-rlu-lku paji-ni  
 so AUX-REFLEX I-ERG-NOW/THEN cut-NPST  
 ‘Now that I have this knife, I am going to cut myself’

## 1.6 Summary

Under the assumption that TP contains quantifiers ranging over individuals, times, and events with implicit restrictions (26a-c), the above observations can be unified as in (27) and (28):

- (26) a. *a man* →  $\lambda P\exists x[\text{man}(x) \ \& \ \mathbf{R}(x) \ \& \ P(x)]$  Nominal Q  
 b. *PST* →  $\lambda T\exists t [t < t^* \ \& \ \mathbf{R}'(t) \ \& \ T(t)]$  Tense  
 c. *come-in* →  $\lambda P\exists e [\text{come-in}(e) \ \& \ \mathbf{R}'(e) \ \& \ P(e)]$  Verbal Q  
*always* →  $\lambda Q\lambda P\forall e[[Q(e) \ \& \ \mathbf{R}'(e)] \rightarrow P(e)]$  Adverbial Q (approx.)
- (27) a. [<sub>TP</sub> TP CP] →  $\lambda R$  [[TP]] ( $\lambda x$ [[CP]]) RC-reading  
 b. [<sub>TP</sub> TP CP] →  $\lambda R$  [[TP]] ( $\lambda t$ [[CP]]) Temporal AC-reading  
 c. [<sub>TP</sub> TP CP] →  $\lambda R$  [[TP]] ( $\lambda e$ [[CP]]) Cond/Loc/Etc. AC-reading
- (28) [<sub>TP</sub> TP CP] →  $\lambda R$  [[TP]] ( $\lambda \alpha$ [[CP]])

## 2.0 Meaning and Form

Main clause-adjoined clause relations are marked according to different patterns.

### 2.1 Variable Typing

Hindi/Marathi correlatives (25) (from Bhatt and Lipták 2009) exhibit **variable typing**. The adjoined clause provides a property  $\lambda \alpha$ [[CP]] (29). Morphology marks **the type of  $\alpha$**  (30):

(29) Construction	Adjoined Clause	Main Clause
Relativization	[... <i>jo</i> ...] ‘who’	[... <i>vo</i> ...] ‘he/she’
Comparative	[... <i>jitnaa</i> ...] ‘how much’	[... <i>us-se jyaada</i> ...] ‘that-THAN more’
Equative	[... <i>jitnaa</i> ...] ‘how much’	[... <i>utnaa</i> ...] ‘that much’
Conditional	[... <i>dzar</i> ...] ‘if’	[... <i>tar</i> ...] ‘then’ <i>Marathi</i>
When-clause	[... <i>jab</i> ...] ‘when’	[... <i>tab</i> ...] ‘then’
Until-clause	[... <i>jab-tak</i> ...] ‘when-TILL’	[... <i>tab-tak</i> ...] ‘then-TILL’
Since-clause	[... <i>jab-se</i> ...] ‘when-SINCE’	[... <i>tab-se</i> ...] ‘then- SINCE’

(30) Construction	Adjoined Clause	Variable Type
Relativization	$\lambda x[[CP]]$ <i>-o</i>	Individuals
Comparative/ Equative	$\lambda d[[CP]]$ <i>-naa</i>	Degrees/Degree Intervals
Conditional	$\lambda w[[CP]]$ <i>-ar</i>	Worlds
When-clause	$\lambda t[[CP]]$ <i>-ab</i>	Times/Time Intervals
Until-clause	$\lambda i^1[[CP]]$ <i>-ab-tak</i>	Time Intervals [-] ??
Since-clause	$\lambda i^1[[CP]]$ <i>-ab-se</i>	Time Intervals [-] ??

The property composes with a main clause definite pronoun/pro-adverb, whose semantics involves a variable ( $\alpha$ ) of matching type (31).

$$(31) [{}_{TP} \dots \exists \alpha \forall \beta [[Q(\beta) \leftrightarrow \beta = \alpha] \& \mathbf{R}(\alpha) \& P(\alpha)] \dots] \quad \lambda \alpha [[CP]]$$

## 2.2 Subordinating Conjunctions

English uses the variable typing strategy with RCs, *when-/where-* clauses and possibly conditionals; the form of *wh-* (or C) marks the property type (32).

(32) Construction	Subordinate Clause	Variable Type
Relativization	$[{}_{CP} \textit{who/what/etc. C} [{}_{TP} \dots t \dots]]$	Individuals
When-clause	$[{}_{CP} \textit{when C} [{}_{TP} \dots t \dots]]$	Times/Time Intervals
Where-clause	$[{}_{CP} \textit{where C} [{}_{TP} \dots t \dots]]$	Locations
Conditional	$[{}_{CP} \textit{OP if} [{}_{TP} \dots]]$	Worlds

But English also exhibits a range of “subordinating conjunctions,” analyzed since Emonds (1976) as clause-selecting Ps (33).

(33) Construction	Subordinate Clause
Conditional	$[{}_{PP/CP} \dots \textit{if} [{}_{TP/CP} \dots]]$
Comparative	$[{}_{PP} \textit{than} [{}_{CP} \dots]]$
Equative	$[{}_{PP} \textit{as} [{}_{CP} \dots]]$
Until-/Since-clause	$[{}_{PP} \textit{until/since} [{}_{CP} \dots]]$
Because-clause	$[{}_{PP} \textit{because/although} [{}_{CP} \dots]]$

In semantic analyses, P encodes the inter-clausal relation: (34) from Dowty 1979) represents the meaning of *since* (where XN is the Extended Now predicate):

$$(34) \textit{since} \rightarrow \lambda \mathcal{P}_i \lambda \mathcal{P}_t \mathcal{P}_1 \{ \wedge t_1 [ \forall t_2 [ [ t_2 < t_1 \& \text{XN}(t_2) ] \rightarrow \mathcal{P}_1\{t_2\} ] ] \}$$

Here the type structure of *since* dictates how its complement must be interpreted (viz., as a property of times) not anything within the complement itself.

Warlpiri adjoined clause syntax does not seem to deploy either of these strategies.

- No variable typing (COMP is a constant form *kuja/kaji*)
- No overt subordinating conjunctions

**Question:** How does Warlpiri work?

## 2.3 Yungu/Yi- Clauses

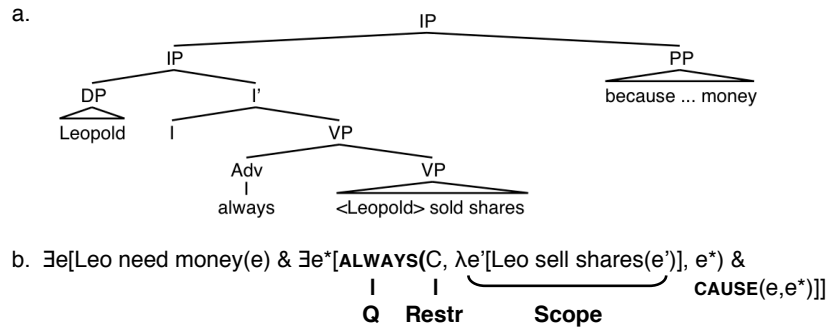
Hale (1986) notes a second set of  $[{}_{TP} TP CP]$  structures marked by *yungu/yi-* (vs. *kuja/kaji*). These are interpreted as rationale or purpose clauses, depending on tense (35a-c):

- (35) a. ngajulu-rlu kapi-na maliki yalumpu paka-rni  
 I-ERG AUX dog that strike-NPAST  
 $[{}_{CP} \textit{yungu-}\emptyset$  kurdu nyampu yalku-rnu ]  
 COMP-AUX child this bite-PAST  
 ‘I am going to strike that dog **because** it bit this child’ (= (9), Hale 1976)
- b. ngarka-jara-rlu ka-pala parlku pangi-ni  $[{}_{CP} \textit{yungu-}\emptyset$ -pala wawiri pura-mi]  
 man-DUAL-ERG AUX trench dig-NPST COMP-AUX kangaroo cook-NPST  
 ‘The two men are digging a cooking trench **in order to** cook the kangaroo’  
 (= (10), Hale 1976)
- c. Nyampu ka-rna-rla warru-nya-nyi watiya-ku  
 this pres-1-3SGDAT around-see-NPST tree-DAT  
 $[{}_{CP} \textit{yungu-rna}$  rdilykirdilyki-paka-rni ]  
 COMP- $\emptyset$ -1 broken-chop-NPST  
 ‘I am looking around for a tree **to** chop up’ (= (22), Hale 1986)

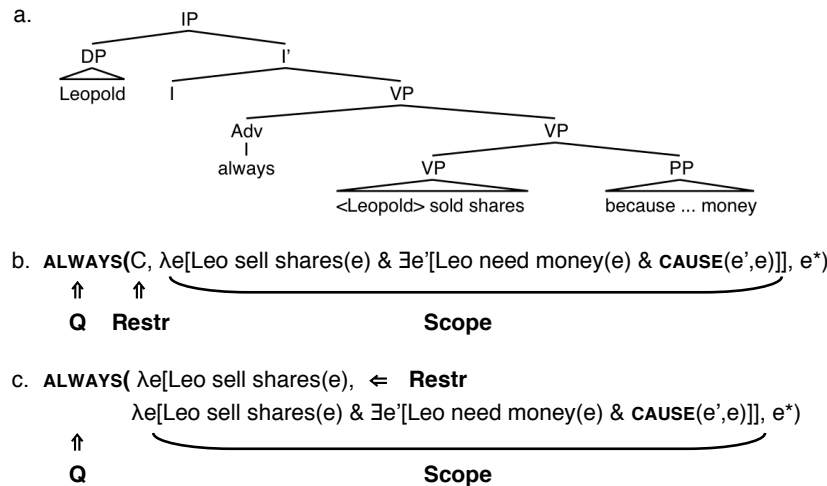
Interestingly, rationale/purpose clauses appear never to be interpreted as Q-restrictions (Johnston 1994). Consider (36a) with ambiguity (36b,c):

- (36) a. Leopold always sold shares because he needed money.  
 b. **Reading 1:** “On all relevant occasions, Leopold sold shares, and the reason for this pattern of behavior was that he needed money”  
 c. **Reading 2:** “On all occasions that Leopold sold shares, his reason for doing so was that he needed money”
- (37) a. Frankie always misses the bus because he is a slow runner. (R1)  
 b. Leopold always robs a bank because he needs to make money fast. (R2)

(38) High Attachment (R1)



(39) Low Attachment (R2)



In (36b)/(38), the Q-restriction is supplied contextually. In (36c)/(39), the Q-restriction is supplied by the smaller VP.

What we do not appear to get is a reading where the *because*-clause itself supplies the Q-restriction (40):

- (40)  $\text{ALWAYS}(\lambda e[\exists e'[\text{Leo need money}(e) \ \& \ \text{CAUSE}(e', e)]]], \lambda e[\text{Leo sell shares}(e)], e^*)$   
 “Every eventuality caused by the state of Leopold needing money is an eventuality of Leopold selling shares.”

Why? Larson & Sawada (2014) conjecture such readings are out because of **sortality**. Qs require sortal preds (= countable preds) as their restrictions.

- (41) a. Marty always shaves when he is in the shower.                    Ambiguous  
 b. Marty always SHAVES when he is in the shower.                    (Adjunct Restriction)  
 c. Marty always shaves when he is in the SHOWER.                    (MC Restriction)
- (42) a. Marty is always in the shower when he shaves.                    Unambiguous!  
 b. Marty is always in the SHOWER when he shaves.                    (Adjunct Restriction)  
 c. Marty is always in the shower when he SHAVES.                    (Adjunct Restriction!)

In (41) both Adjunct and Main Clause provide sortal predicate:

- Adjunct Clause provides a sortal predicate of times
- Main Clause provides a sortal predicate of events (*shaves* is telic)

In (42) only the Adjunct Clause provides a sortal predicate:

- Adjunct Clause provides a sortal predicate of times
- Main Clause provides a nonsortal predicate of events (*in the shower* is nontelic)

Compare also (43) (due to Westerstahl) to (44):

- (43) a. Many Norwegians have won the Nobel Prize                    Ambiguous  
 b. Many Norwegians have WON THE NOBEL PRIZE                    (NP Restriction)  
 c. Many NORWEGIANS have won the Nobel Prize                    (MC Restriction)
- (44) a. Many Norwegians are tall.                    Unambiguous  
 b. Many Norwegians are TALL.                    (NP Restriction)  
 c. Many NORWEGIANS are tall.                    (NP Restriction)

- CAUSE relates eventualities of all types (telic/non-telic)
- $\lambda e[\exists e'[\text{Leo need money}(e) \ \& \ \text{CAUSE}(e', e)]]$  is thus indeterminate wrt telicity
- $\lambda e[\exists e'[\dots \ \& \ \text{CAUSE}(e', e)]]$  cannot restrict a Q-adverb

**Implication:** If *kuja* marks Warlpiri clauses that (co-)restrict a main clause Q, then rationale /purpose meaning should not be expressed via *kuja*-clauses.

**Speculation:** *Kuja vs. yungu/yi*- choice represents a form of **obviation marking**.

- Adjoined restrictions end up sharing a variable with a quantifier in the main clause (*x, t, w, e*, etc.).
- Adjoined non-restrictions do not.
- *Kuja vs. yungu/yi* amounts to marking shared vs. non-shared reference (resp.).

## 2.4 Central vs. Non-Central Concidence (Hale 1986)

Hale (1986) offers a related, but somewhat different speculation:

- *kuja/kaji*-CPs express “a **central coincidence** of some aspect of the dependent clause with a corresponding aspect of the main clause” – e.g., “referential, temporal, circumstantial and condition”
- *yungu/yi*-CPs express **non-central coincidence**; denote “a sequential relation ...in which one event or process precedes or follows another.”

### (45) Local Cases

Central	Non-Central
~ngkal~rla LOC	~kurra ALL
~wana PERL	~ngurlu EL

### (46) Directional Deictics

Central	Non-Central
(~yi DURATIVE)	~rni HITHER
~mpa PERL	~rra THITHER

### (47) Finite Complementizers

Central	Non-Central
<i>kaji-∅</i> - NPAST	<i>yungu-∅</i> - NPAST
<i>kuja-∅</i> - PAST	<i>yungu-∅</i> - PAST
<i>kaji-∅</i> - IRREALIS	<i>yungu-∅</i> - IRREALIS
<i>kuja-ka</i> - NPAST	<i>yungu-ka</i> - NPAST
<i>kuja-lpa</i> - PAST	<i>yungu-lpa</i> - PAST
<i>kaji-lpa</i> - IRREALIS	<i>yungu-lpa</i> - IRREALIS
	<i>yungu-∅</i> - IMPERATIVE

Hale’s view is plausible for event relations. Rational clauses give e1 from which Main Clause e2 results (48a). Purpose clauses give e2 that the Main Clause e1 enables (48b). These are essentially ELATIVE/ALLATIVE (SOURCE/GOAL) relations.

- (48) a. John left **because** Mary arrived.      e1 |→ e2  
 b. John left **in order to** visit Mary.      e1 →| e2

What about temporal relations? *Since*-clauses left-bound Main Clause time (49a). *Until*-clauses right-bound the Main Clause time (49b). Both are paraphrasable by ELATIVE/ALLATIVE (SOURCE/GOAL) forms.

- (49) a. I have been here **since** Mary left/**from** the time Mary left.      t1 |→ t2  
 b. I will be here **until** Mary leaves/**up to** the time Mary leave.      t1 →| t2

We might expect Warlpiri to encode *since/until*-clauses via *yungu/yi*. But *since* is not encoded by an adjoined clause at all (50b); *until* is encoded by *kuja/kaji* (51b). (Mary Laughren p.c.)

- (50) a. We have been waiting at this soakage [ **since** Jangala left ]  
 b. Jangala yanu, ngula-jangka ka-rnalu nyampu-rla-lku  
 Jangala left, that-FROM AUX-1PL.ex.NOM here-LOC-THEN/NOW(changed state)  
 nyina-mi mulju-ngka.  
 sit-NPST soakage-LOC  
 'Jangala left, after that we are sitting at this soakage' (implied that we were not here before Jangala left)

- (51) a. Wait for me here [ **until** I return ]  
 b. Nyampu-rla-juku-ju nyina-ka **kaji**-rna kulpari ya-ni-rni.  
 HERE-LOC-still-1SG.DAT sit-IMP **kaji**-1SG.NOM return go-NPST-HITHER.  
 'Wait for me here until I come back.'

What is the prediction for the obviation analysis? *Until* clauses, like *before/after*-clauses, certainly restrict main clause adverbial-Qs (52-53). With *since* clauses, the situation is more subtle.

- (52) Marcia always drank a beer **before** she visited her uncle. (Johnston 1994)  
 a. \* <- Beer---Visit1--- Visit2---Visit3---...--->  
 b. \* <- Beer1--- Beer2--- Beer3---Visit---...--->  
 c. <- Beer1---Visit1--- Beer2---Visit2--- Beer3---Visit3---...--->

- (53) a. Marcia always stays inside **until** it is dark.  
 (---stay-inside---dark] (---stay-inside---dark] (---stay-inside---dark] ...  
 b. Marcia has always rejected spinach **since** eating it in 2005.

**Hypothesis:** *Since*-clauses seem only to restrict a higher Q, equivalent to (21b).

- (20) When John visited Paris, he always ate in a café.  
 a. “In all situations in which John visited Paris, he ate in a café.”  
 b. “At the time John visited Paris, in all relevant situations, John ate in a café.”

- (21) a. ALWAYS (λe[John visited Paris(e)]) (λe[John ate in a café(e)])  
 b. SOMETIME (λe[John visited Paris(e)])  
 (λe[ALWAYS (λe'[C(e) & Π(e',e)]) (λe'[John ate in a café(e')])

**Conclusion:** The obviation analysis seems compatible with these results.

## 3.0 Hindi Correlatives

Warlpiri adjoined clauses diverge syntactically & semantically from Hindi correlatives (Srivastav 1991, Dayal 1996 a.o.):

- (54) a.  $[_{CP}$  jo laRkii khaRii hai] vo (laRkii) lambii hai  
REL girl standing is that girl tall is  
'Which girl is standing, that one/girl is tall'/'The girl who is standing is tall'

## (55) Hindi Leading Correlatives

- Demonstrative required in the main clause
- Possibility of spelling out nominal head in both clauses
- "Maximalizing semantics"

- (56) a. vo laRkii lambii hai  $[_{CP}$  jo (\*laRkii) khaRii hai]  
that girl tall is REL girl standing is  
'That girl is tall who is standing'  
b. do laRkiyaaN lambii haiN  $[_{CP}$  jo khaRii haiN]  
two girls tall are REL standing is  
'Two girls are tall who are standing'

## (57) Hindi Trailing Correlatives

- Demonstrative not required in the main clause
- No possibility of spelling out nominal head in relative clause
- Normal restrictive semantics

Warlpiri trailing adjoined clauses show restrictive semantics, but allow spell out in either clause, including (for some speakers) with a non-identical nominal (59e)/(60):

- (58) a. ...NOM<sub>i</sub>...NOM<sub>j</sub>... (where NOM<sub>i</sub>, NOM<sub>j</sub> are formally identical)  
b. ...NOM<sub>i</sub>...PRO<sub>j</sub>...  
c. ...PRO<sub>i</sub>...NOM<sub>j</sub>...  
d. ...NOM<sub>i</sub>... $\emptyset$ <sub>j</sub>...  
e. ... $\emptyset$ <sub>i</sub>...NOM<sub>j</sub>...  
f. ...NOM<sub>i</sub>...NOM<sub>j</sub>'... (where NOM<sub>i</sub>, NOM<sub>j</sub>' are not formally identical)
- (59) a.  $[_{CP}$  marlu kuja-rna nya-ngu] ngajulu-rlu  $\emptyset$ -rna pantu-rnu marlu-ju  
'roo COMP-1SG see-PST 1.SG-ERG AUX-1SG spear-PST 'roo-OLDINFO  
'I speared the kangaroo that I saw'  
b.  $[_{CP}$  marlu kuja-rna nya-ngu] ngula-ju  $\emptyset$ -rna pantu-rnu ngajulu-rlu  
'roo COMP-1SG see-PST that-OLDINFO AUX-1SG spear-PST 1.SG-ERG  
c.  $[_{CP}$  ngula-ju kuja-rna nya-ngu] ngajulu-rlu  $\emptyset$ -rna pantu-rnu marlu  
that-OLDINFO COMP-1SG see-PST 1.SG-ERG AUX-1SG spear-PST 'roo  
d.  $[_{CP}$  marlu kuja-rna nya-ngu] ngajulu-rlu  $\emptyset$ -rna pantu-rnu  
'roo COMP-1SG see-PST 1.SG-ERG AUX-1SG spear-PST  
e.  $[_{CP}$  nya-ngu kuja-rna] ngajulu-rlu  $\emptyset$ -rna pantu-rnu marlu-ju  
see-PST COMP-1SG 1.SG-ERG AUX-1SG spear-PST 'roo-OLDINFO  
f.  $[_{CP}$  marlu kuja-rna nya-ngu] ngajulu-rlu  $\emptyset$ -rna pantu-rnu wawiri-ji  
'roo COMP-1SG see-PST 1.SG-ERG AUX-1SG spear-PST 'roo-OLDINFO  
'I speared the kangaroo that I saw'

- (60)  $[_{CP}$  pirli-ngawurrpa kuja-rna kuja-rna nya-ngu ]  
hill-dweller AUX-1SG see-PST 1.SG-ERG  
ngajulu-rlu  $\emptyset$ -rna pantu-rnu wakulyari-ji  
1.SG-ERG AUX-1SG spear-PST 'wallaby-OLDINFO  
'I speared the wallaby that I saw'

Warlpiri leading adjoined clauses show an obligatory demonstrative element (*ngula*) found in left-dislocations (61):

- (61) ngapiri yangka, ngula ka kari-mi wulpayi-la  
eucalyptus DEF it AUX stand-NPST creek-LOC  
'The red river gum, it grows in creeks' (= 43 Hale 1976)
- (62)  $[_{CP}$  maliki kuja- $\emptyset$  wanti-ja] ngula-kura  $\emptyset$ -rna yarda-paka-rnu ngajulu-rlu  
dog COMP-AUX fall-PST THEN-COMP AUX REP-strike-PST 1.SG-erg  
'When the dog fell, thereupon I struck it' (= 44a Hale 1976)
- (63)  $[_{CP}$  ngaju kuja- $\emptyset$  wanti-ja] ngula-kura  $\emptyset$ -ju maliki-rli-lki yarda-pu-ngu  
I COMP-AUX fall-PST THEN-COMP AUX dog-ERG-THEN REP-bite-PST  
'When I fell, thereupon the dog bit me' (= 44a Hale 1976)

But although CP in (61)/(62) has temporal semantics, the demonstrative is inflected with a complementizer reflecting object coreference between main and adjoined clauses. (see Simpson 1991). This is not paralleled in Hindi *when*-clauses (cf. 29).

**Conclusion:** Warlpiri adjoined clauses of both types appears to differ significantly in properties from Hindi correlatives.

## SUMMARY

- Warlpiri *kujalkaji* adjoined clauses appear to express a unified semantic concept: restriction on a main clause Q (nominal, tense, proadverb/AdvQ).
- Warlpiri *yungulyi*- adjoined clauses appear to express adjunct meanings not associated with Q-restriction.
- Hypothesis: *kujalkaji* vs. *yungulyi*- expresses overlap vs. obviation on main clauses variables. This contrasts with Hale's (1986) localist view, but is close to his 1976 view of *kujalkaji* as having "referential function".
- Warlpiri adjoined clauses do not seem to parallel correlatives of the Hindi sort studied by Srivastav (1991)/Dayal (1996).

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