Principles of Decompositionality

- Linguistic Constraints:
  - No additional representation or rules without additional semantic coverage (e.g., polysemy);
  - Modeling Selectional Constraints guides decomposition
- Reasoning Constraints:
  - Additional representations must be consistent with (manipulated by) broader models of inference.

Lecture 5. Extensions to the GL Theory of Selection

- Prepositional Selection
- Verbal Polysemy and Linking Theory
- Agency and Selection of Subject
- Conditions on Type Transformations

Selectional Origin of Agency

Little v and Subject Selection

1. John laughed.

- Agent Argument Hypothesis: the subject NP is a semantic argument of the relation denoted by the verb *laugh*.
- Little v Neodavidsonian Hypothesis: the subject NP is not an argument of the relation denoted by *laugh*. Agents are introduced via a silent predicate, v, Kratzer, 1996.

Little v Hypothesis:

1. [John [v [laughed]]]
2. laugh: $\lambda e[laugh(e)]$
3. v: $\lambda x \lambda e[\text{Agent}(x)(e)]$
4. Event Identification
5. $\lambda e[laugh(e) \wedge \text{Agent}(j)(e)]$

Supralexical Decomposition

$$\mathsf{Verb}(\mathsf{Arg}_1, \ldots, \mathsf{Arg}_n) \quad \Longrightarrow \lambda x_n \ldots \lambda x_1[\Phi]$$

$$v \Longrightarrow \lambda f_\sigma \lambda x_1[\mathcal{R}(f)(x_1)]$$

$$\Longrightarrow \lambda f_\sigma \lambda x_1[\mathcal{R}(f)(x_1)](\lambda x[\Phi])_\sigma$$

$$\Longrightarrow \ \lambda x_1[\mathcal{R}([\Phi])(x_1)]$$

Subject/Object Asymmetries (Marantz)

Idioms fix internal arguments but not external

1. kill a cockroach
2. kill a conversation
3. kill an evening watching American Idol
4. kill a bottle of wine
5. kill an audience

You don't find special meanings with subject specified and object open

1. Harry killed NP
2. Everyone is always killing NP
3. Silence certainly can kill NP

Subject is Selected Through Meaning Postulates

Meaning Postulates Impose Restrictions on Subject

1. If a is a time interval, then $kill(a, e) =$ true if e is an event of wasting a;
2. If a is animate, then $kill(a, e) =$ true if e is an event in which a dies; ...

Problems with this approach:

- Selection is performed off-line in the model;
- Doesn't really capture S/O asymmetries, since MPs can refer to objects too (Wechsler, 2005).

Accounting for Agency

1. Selection: x *assassinated/murdered* y
2. Accommodation: x *rolled down the hill*
3. Coercion: x *flies to Boston*

- Human is a complex type of rational animal.
- human: $anim \otimes_{\mathsf{A,T}} (\mathrm{E,E'})$

(121) a. The child /storm / tree killed the teacher.
b. The child /*storm / *tree murdered the teacher.

(122) a. *kill*: $anim \rightarrow (e_N \rightarrow t)$
b. *murder*: $anim \rightarrow (human \rightarrow t)$

Selection of Agency

John murdered Mary.

1. murder: $\lambda x[murder$(x,m)],
   $\langle m : anim, x : anim \otimes_{\mathsf{A,T}} (\mathrm{E,E'}) \rangle$
2. john: $anim \otimes_{\mathsf{A,T}} (\mathrm{E,E'})$
3. $\exists e[\text{murder}(e, j, m)]$, Intentional Act

Accommodation of Agency

John killed Mary (intentionally).

Co-Composition

Classic Co-composition cases:

(123)a. John baked a potato.

b. John baked a cake.

(124)a. The bottle is floating in the river.

b. The bottle floated under the bridge.

(125)
$$\begin{bmatrix} \textbf{float} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = \boxed{1}\begin{bmatrix}\textbf{physobj}\end{bmatrix} \end{bmatrix} \\ \text{EVENTSTR} = \begin{bmatrix} \text{E}_1 = \textbf{e}_1\textbf{:state} \end{bmatrix} \\ \text{QUALIA} = \begin{bmatrix} \text{AGENTIVE} = \textbf{float}(\textbf{e}_1, \boxed{1}) \end{bmatrix} \end{bmatrix}$$

(126)

$$\begin{bmatrix} \textbf{into the cave} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = \boxed{1}\begin{bmatrix}\textbf{physobj}\end{bmatrix} \\ \text{ARG2} = \boxed{2}\begin{bmatrix}\textbf{the\_cave}\end{bmatrix} \end{bmatrix} \\ \text{EVENTSTR} = \begin{bmatrix} \text{E}_1 = \textbf{e}_1\textbf{:process} \\ \text{E}_2 = \textbf{e}_2\textbf{:state} \\ \text{RESTR} = <_\propto \\ \text{HEAD} = \textbf{e}_2 \end{bmatrix} \\ \text{QUALIA} = \begin{bmatrix} \text{FORMAL} = \textbf{at}(\textbf{e}_2, \boxed{1}, \boxed{2}) \\ \text{AGENTIVE} = \textbf{move}(\textbf{e}_1, \boxed{1}) \end{bmatrix} \end{bmatrix}$$

(127)

$$\lambda x \lambda e_1 \exists e_2 [move(e_1, x) \wedge \circ(e_1, e_2) \wedge float(e_2, x)]$$

$\Rightarrow$ *while floating*

(128)

$$\begin{bmatrix} \textbf{float into the cave} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = \boxed{1}\begin{bmatrix}\textbf{physobj}\end{bmatrix} \\ \text{ARG2} = \boxed{2}\begin{bmatrix}\textbf{the\_cave}\end{bmatrix} \end{bmatrix} \\ \text{EVENTSTR} = \begin{bmatrix} \text{E}_1 = \textbf{e}_1\textbf{:state} \\ \text{E}_2 = \textbf{e}_2\textbf{:process} \\ \text{E}_3 = \textbf{e}_3\textbf{:state} \\ \text{RESTR} = <_\propto (e_2, e_3), \circ_\propto(e_1, e_2) \\ \text{HEAD} = \textbf{e}_3 \end{bmatrix} \\ \text{QUALIA} = \begin{bmatrix} \text{FORMAL} = \textbf{at}(\textbf{e}_3, \boxed{1}, \boxed{2}) \\ \text{AGENTIVE} = \textbf{move}(\textbf{e}_2, \boxed{1}), \textbf{float}(\textbf{e}_1, \boxed{1}) \end{bmatrix} \end{bmatrix}$$

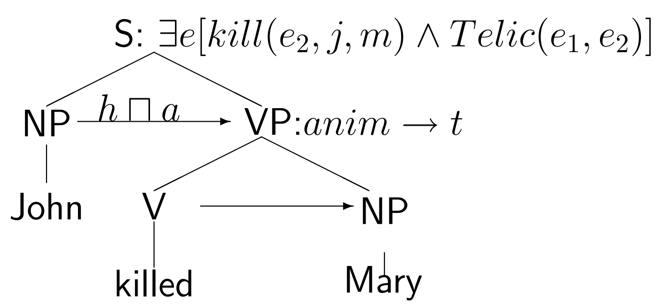
$$
\left[\begin{array}{ll}
\textbf{kill} & \\
\text{EVENTSTR} = & \left[\begin{array}{l}
\text{E}_0 = \textbf{e}_0\textbf{:state} \\
\text{E}_1 = \textbf{e}_1\textbf{:process} \\
\text{E}_2 = \textbf{e}_2\textbf{:state} \\
\text{RESTR} = <_{\propto} \\
\text{HEAD} = \textbf{e}_1
\end{array}\right] \\
\text{ARGSTR} = & \left[\begin{array}{ll}
\text{ARG1} = \boxed{1} & \left[\begin{array}{l} \textbf{ind} \\ \text{FORMAL} = \textbf{physobj} \end{array}\right] \\
\text{ARG2} = \boxed{2} & \left[\begin{array}{l} \textbf{animate\_ind} \\ \text{FORMAL} = \textbf{physobj} \end{array}\right]
\end{array}\right] \\
\text{QUALIA} = & \left[\begin{array}{l}
\textbf{cause-lcp} \\
\text{FORMAL} = \textbf{dead}(\text{e}_2, \boxed{2}) \\
\text{AGENTIVE} = \textbf{kill\_act}(\text{e}_1, \boxed{1}, \boxed{2}) \\
\text{PRECOND} = \neg\textbf{dead}(\text{e}_0, \boxed{2})
\end{array}\right]
\end{array}\right]
$$

$$
\left[\begin{array}{ll}
\textbf{kill} & \\
\text{EVENTSTR} = & \left[\begin{array}{l}
\text{E}_0 = \textbf{e}_0\textbf{:state} \\
\text{E}_1 = \textbf{e}_1\textbf{:process} \\
\text{E}_2 = \textbf{e}_2\textbf{:state} \\
\text{RESTR} = <_{\propto} \\
\text{HEAD} = \textbf{e}_1
\end{array}\right] \\
\text{ARGSTR} = & \left[\begin{array}{ll}
\text{ARG1} = \boxed{1} & \left[\begin{array}{l} \textbf{ind} \\ \text{FORMAL} = \textbf{physobj} \end{array}\right] \\
\text{ARG2} = \boxed{2} & \left[\begin{array}{l} \textbf{animate\_ind} \\ \text{FORMAL} = \textbf{physobj} \end{array}\right]
\end{array}\right] \\
\text{QUALIA} = & \left[\begin{array}{l}
\textbf{cause-lcp} \\
\text{FORMAL} = \textbf{dead}(\text{e}_2, \boxed{2}) \\
\text{AGENTIVE} = \textbf{kill\_act}(\text{e}_1, \boxed{1}, \boxed{2}) \\
\text{TELIC} = \textbf{P}(\text{e}_3, \boxed{1}) \\
\text{PRECOND} = \neg\textbf{dead}(\text{e}_0, \boxed{2})
\end{array}\right]
\end{array}\right]
$$

Accommodation of Agency

1. kill: $\lambda x[kill(\text{x,m})]$, $\langle m: anim, x: anim\rangle$
2. john: $anim \otimes_{\text{A,T}} (\text{E,E'})$
3. Agent Accommodation: $\lambda x[kill(\text{x,m})]$, $\langle m: anim, x: anim \otimes_{\text{A,T}} (\text{E,E'})\rangle$
4. Function Application:
5. $\exists e[\text{kill}(e, j, m)]$

(129)



(130) a. John killed the flowers accidently / intentionally.
b. John/the rock rolled down the hill.
c. John cooled off with an iced latte.

(131) a. John gave Mary a book.
b. John gave Mary a shower.
c. John gave the plants a spray.

Coercion of Agency

(132)a. We painted$_{R(i,j)}$ our house last summer.
We$_i$/They$_j$ used Benjamin Moore paints.
They$_j$/*We$_i$ even worked in the heat of the day.

b. I dry-cleaned$_{R(i,j)}$ my shirts before I left on the trip.
They$_j$/*I$_i$ stained the sleave, though.

e. I washed$_{R(i,j)}$ my car yesterday.
They$_j$/*I$_i$ waxed the exterior too.

(133)a. Lufthansa flies to Boston.

b. McDonalds has served 1 trillion burgers.

Contractual Co-composition

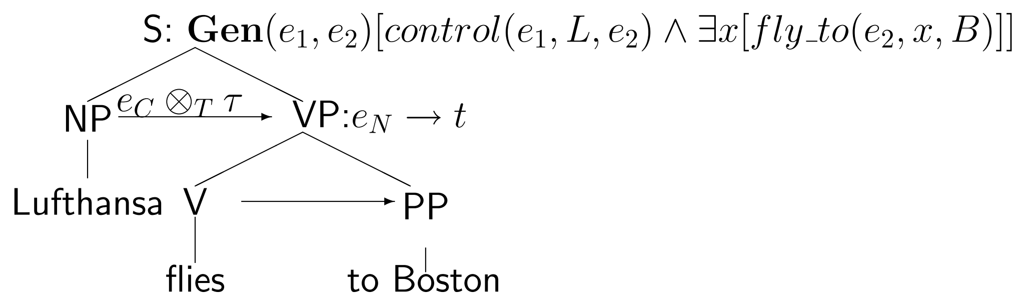
(a) Activities that are contractual between two parties, one in the service of the other; Primary agent A_1 performs an activity in the service of secondary agent A_2.

(b) The controlling (secondary) agent assumes grammatical prominence as subject. The primary agent is shadowed.

Agent Introduction

(134) Lufthansa flies to Boston.

(135)



Difficult Cases

There is no indirect (coerced) interpretation available for most predicates...

- Nixon bombed Hanoi.
- !Clinton kissed all the children.
- !John kicked the dog.
- !Clinton visited Hanoi.

Contractual Assension

(136)a. **publish**: “ x brings into print form an informational object y”

b. informational objects have creators;
e.g., $\lambda^{*} z \lambda y.human[letter(y) \wedge author(z, y)]$

(137)a. The New York Times$_i$ publishes a daily newspaper$_i$.

b. The New York Times published Chomsky’s letter.

(138)a. Chomsky published yet another book recently.

b. Eno has finally released a new album.

c. McCartney has issued a new version of "Blackbird."

WordNet synset under: *bring out, issue, release, publish*

(139) a. Chomsky published every early book with Mouton.

b. Mouton published every early Chomsky book.

c. *Mouton and Chomsky published every early book.

d. *Mouton published every early book Chomsky published.

Instrument Control

(a) Activities performed by a tool or instrument, that are controlled by an agent; Primary instrument I performs an activity under control of agent A.

(b) The controlling agent assumes grammatical prominence as subject. The instrument is shadowed.

(140) a. I visited your webpage yesterday to download a file.

b. My students crawled the CNN.com site and indexed the newsfeed headers.

Licensing Purpose and Rationale Clauses

(141) a. Mary$_j$ bought a pizza$_i$ e_j to eat e_i at home.
b. Roger$_i$ bought a Hummer e_i to impress his friends.

(142) What is the difference between purpose and rationale clauses?

a. PURPOSE CLAUSE:
1.. Adjunct is the TELIC of the matrix event.
2. Object argument coherence is required.
3. Subject control.

b. RATIONALE CLAUSE:
1. Adjunct is TELIC for the matrix event.

2. No object argument coherence.
3. Subject control.

(143) a. Everyone bought a book to read to a child.
b. Everyone bought a car to impress a friend.

Licensing Adjunction

(144) $$\lambda x \lambda e \exists y \begin{bmatrix} \textbf{VP} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = x \\ \text{ARG2} = y : \mathit{pizza} \end{bmatrix} \\ \text{EVENTSTR} = \begin{bmatrix} \text{E}_0 = e : \mathit{transition} \end{bmatrix} \\ \text{QUALIA} = \begin{bmatrix} \text{FORMAL} = \textbf{have(x,y)} \\ \text{TELIC} = \textbf{eat(x,y)} \\ \text{AGENTIVE} = \textbf{buy-act(x,y)} \end{bmatrix} \end{bmatrix}$$

(145) The "outer TELIC" relation is Asher and Lascarides' *Elaboration* relation.

(146)

π, π_1

π : j, bmw, e

buy(e, j, bmw)

π_1 : e',y

impress(e', j, y)

friend(y)

Elab(π, π_1)

(147) Inner TELIC can be embedded within outer TELIC:

Roger bought a Hummer$_i$ to drive e_i to work to impress his teammates.

Predication of Naturals

---

(148)a. That is a dog and an animal.
(true by type subsumption)
b. *That is a dog and a cat.
c. !This substance is sand and dirt.

(149)a. That is a pen and a knife.
b. That is a stimulant and an anti-inflammatory.

(150) Observation:
Natural kinds do not allow co-predication.

Modification of Naturals

---

(151) ADJECTIVAL MODIFICATION

a. old gold

b. new tree

c. young tiger

d. beautiful flower

Observation:

Natural kinds allow only a unique attribution.

Coercion of Naturals

(152) No *default context*:

a. I began the tree.

b. John finished his water.

c. Sophie continued her rock.

d. We'll have lunch after the tigers.

Observation:

Naturals take on the coerced meaning of the context.

Co-Predication of Non-Natural Kinds

(153)a. That is a pen and a knife.

b. That is a stimulant and an anti-inflammatory.

b. She is a teacher and a mother.

Observation:

Non-Natural kinds allow Co-predication by Level.

Modification of Non-Naturals

(154) *Adjectival Modification*

a. bright bulb

b. long record/disk

c. good umbrella

(155) *Non-intersective adjectives*

a. good judge

b. beautiful pianist

Observation: Non-Naturals allow modification of incorporated relations.

Coercion of Non-Naturals

---

(156) They provide their own *default context*:

a. Mary finished her cigarette.

b. John started his book but only finished a chapter.

c. I'll meet you after my coffee.

Observation:

Non-Naturals provide a coerced meaning for the context.

Selection in Prepositions

Types of Locations

- Natural Location: defined by 3-D coordinates
- Functional Location: defined by Telic on Natural
- Complex Location: defined by coherence relation with Physical Entity

Natural Locations

From the abstraction of spatial coordinates, there are entities which have spatial denotations without entity extention. e_{NL} is structured as a join semi-lattice, $\langle e_{NL}, \sqsubseteq \rangle$;

(157)a. *point*, *spot*, *position*, *area*

b. *space*, *sky*

Functional Locations: e_{FL}

(158)a. $x : e_{NL} \otimes_T \tau$

b. $g \vdash x : e_{NL} \otimes_T \tau \;\; =_{df} \;\; g \vdash x : e_{FL}$

c. $g \vdash P : e_{NL} \otimes_T \tau \rightarrow \underline{t} \;\; =_{df} \;\; g \vdash P : e_{FL} \rightarrow \underline{t}$

Examples of types in e_{FL}.

(159)a. $seat$: $loc \otimes_T sit$

b. $home$: $loc \otimes_T live\_in$

Complex Locations: e_{CL}

(160)a. $g \vdash x : \sigma \bullet \tau \;\; =_{df} \;\; g \vdash x : e_{CL}$

b. $g \vdash P : (\sigma \bullet \tau) \rightarrow \underline{t} \;\; =_{df} \;\; g \vdash P : e_C \rightarrow \underline{t}$)

Examples of types in e_{CL}.

(161)a. $door$: $phys \bullet loc \otimes_T walk\_through$

b. $window$: $phys \bullet loc \otimes_T see\_through$

Closer Look at the Data

Consider the physical objects from $\mathcal{E}$:

1. Natural Types (No Selection):
   rock, tree, tiger
   We'll meet up with you at the tigers.
2. Functional Types (Partial Selection):
   blackboard, computer, table, bar, sink, stove, garage_1, station, park, museum, restaurant
3. Complex Types (Selection): door, window, room, pool

Non-selecting Functional Entities

1. train, chair, phone, garage$_2$, kitchen, sofa, bed
2. But...
   on the sofa, in bed, on the phone, ...

Dot Objects with Functions

Consider the objects from $\mathcal{C}$:
school, work, hospital

1. Stage-level: at (the) school
2. Individual-level: in school, in the army

Events as Containers

Consider the events from $\mathcal{R}$:

1. Symmetric:
   party, conference, workshop, meeting, battle, breakfast
2. Asymmetric:
   lecture, talk, concert

Degree of Involvement

Symmetric event in the container:

(162) a. John is at a meeting
b. Mary is at an appointment.

Asymmetric event in the container:

(163) a. John is at a lecture. (he's not giving it).
b. * John is at his lecture.
c. John is at a concert. (He's not performing).

The Selective Force of Locative AT

---

(164) a. Any Locative Type from Entity Domain:

b. Some physical objects from Entity Domain:

c. Some Events from Relation Domain:

The Semantics of Locative AT

(165) a. Locative Relation is proximity along horizontal dimension.
b. Telic property of the location or object is exploited.

(166)a. $x : e_{NL} \otimes_T \tau$
b. $g \vdash x : e_{NL} \otimes_T \tau \ =_{df} \ g \vdash x : e_{FL}$
c. $g \vdash P : e_{NL} \otimes_T \tau \rightarrow \underline{t} \ =_{df} \ g \vdash P : e_{FL} \rightarrow \underline{t}$

Functional Locative Relations

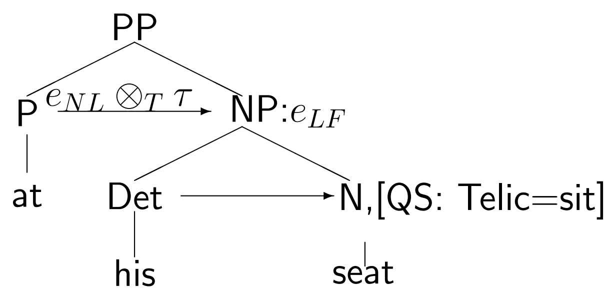
(167) *at*: $e_{FL} \rightarrow (e \rightarrow \underline{t})$

Locative Selection

Location Types:

at his seat

(168)



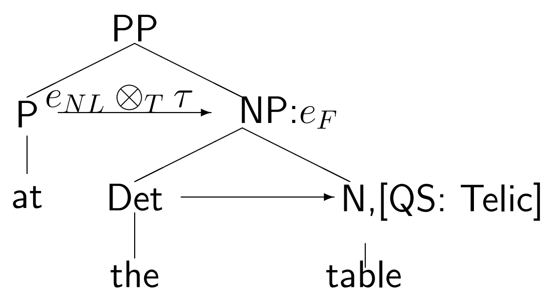
(169) $\lambda x \lambda e \exists y[loc(x, y) \wedge sit(e, x, y) \wedge seat(y)]$

Functional Locative Coercion

Objects are coerced to Locations

at the table

(170)



(171) $\Theta[phys \sqsubseteq loc] : phys \rightarrow loc$

(172) $\lambda x \lambda e (\iota y)[loc(x, y) \wedge Telic(e, x, y) \wedge table(y)]$

Violations of Selectional Constraints

- at the chair: locative relation is violated.
- at the tree: functional (Telic) constraint is violated.

Catalan Locatives (p.c. Roser Saurì)

(173) On són les claus?
where are-3pl the keys?

(174) Són a la cadira de lentrada.
Are-3pl at the chair of the hall.

(175) al despatx/cuina /menjador
in-the office /kitchen /dinning room

(176) al calaix.
in-the drawer.

(177) a /sobre la taula.
at/over the table.

(178) where is-3sg the cat?

(179) El gat sobre la taula.
*El gat a la taula.
The cat is on the table.

(180) where is-3sg the cup?

(181) sobre la taula.
a la taula.
on the table.

Qualia Selection and Default Arguments

(182) És al telfon (, parlant amb la Maria).
Is-IND.LEVEL at-the phone (, speaking with the-SG-FEM Mary)
He is on the phone.

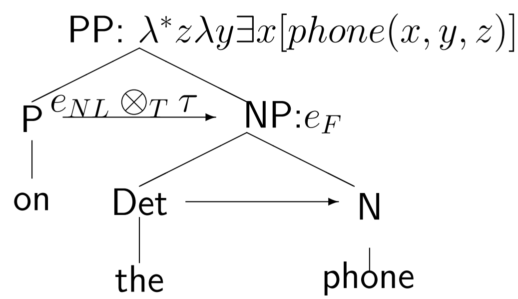
(183) Està parlant per telèfon (amb la Maria).
Is-STAGE.LEVEL speaking for phone (with the-SG-FEM Mary)
He is speaking through/by the phone .
*Est per telfon.

Qualia Selection and Default Arguments

(184)

$$\begin{bmatrix} \textbf{phone} \\ \text{QS} = \begin{bmatrix} \text{F} = phys(x) \\ \text{T} = [communicate(e,y,z) \wedge \textbf{with}(e,x)] \end{bmatrix} \end{bmatrix}$$

(185)



on the phone with Mary

Event Decomposition and Linking Theory
(Pustejovsky, 1995)

---

a. Event Headedness: Indicates foregrounding and backgrounding of sub-event. The arguments of a headed event must be expressed.

b. Argument Covering: Argument x is covered only if:

(i) x is linked to a position in s-structure; or

(ii) x is logically bound to a covered argument y; or

(iii) x is existentially closed by virtue of its type.

c. Qualia Saturation: A qualia structure is saturated only if all arguments in the qualia are $covered$.

Event Decomposition in GL

(186)a. Q_i: $R(e_1^*, x, y) \longrightarrow x$:SUBJ, y:OBJ

b. Q_j: $P(e_2, y) \longrightarrow$ shadowed

(187)a. Q_i: $R(e_1, x, y) \longrightarrow$ shadowed

b. Q_j: $P(e_2^*, y) \longrightarrow y$:SUBJ

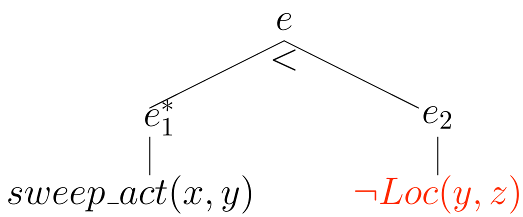
(188) a. John swept.
b. John swept the floor.
c. John swept the dirt into the corner.
d. John swept the dirt off the sidewalk.
e. John swept the floor clean.
f. John swept the dirt into a pile.

shovel, rake, shave, weed.

(189) a. What does sweep select for?
b. How do arguments get promoted?

(190) a. sweep:
$\lambda^* z\colon area\ \lambda y\colon p\ \lambda x\colon p[\textsf{sweep}(x, y, z)]$
b. Left-Headed Event: License x and y:
c. Right-Headed Event: License x and z.

(191) sweep



$Loc(y, z)$

(192)a. Q_i: $R(e_1^*, x, y) \longrightarrow x$:SUBJ, y:OBJ

b. $z \longrightarrow$ shadowed

(193)a. Q_i: $R(e_1, x, y) \longrightarrow x$:SUBJ

a. Q_i: $y \longrightarrow$ shadowed

b. Q_j: $P(e_2^* y, z) \longrightarrow z$:OBJ

Classifier Systems and Coercion

(Data from David Wilkins (2000))

(194) a. *thipe*: flying, fleshy creatures;

b. *yerre*: ants;

c. *arne*: ligneous plants;

d. *name*: long grasses;

e. *pwerte*: rock related entities.

(195) a. *kere*: game animals, meat creatures;

b. *merne*: edible foods from plants;

c. *arne*: artifact, usable thing;

d. *tyape*: edible grubs.

(196) a. *kere aherre*: kangaroo as food;

b. *merne langwe*: edible food from bush banana;

c. *pwerte athere*: a grinding stone

(197) a. SPECIFIC NOUN: sortal classification, a Natural type;

b. GENERIC NOUN: a Functional type;

c. CLASSIFIER CONSTRUCTION: the instantiation and binding of the qualia role from the Functional type onto the Natural Type.

(198) *Iwerre-ke anwerne <u>aherre</u> <u>arunthe-∅</u> are-ke.*

way/path-DAT 1plERG kangaroo many-ACC see-pc

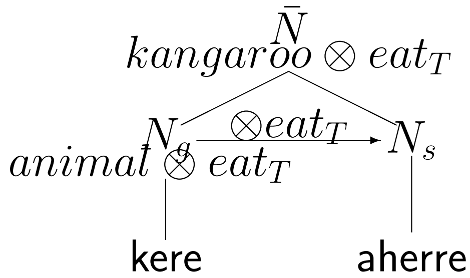
"On the way we saw some kangaroos."

(199) *the imarte arratye* <u>*kere*</u> <u>*aherre-∅*</u> *arlkwe-tye.lhe-me-le.*

1sgERG then truly meat kangaroo-ACC eat-GO&DO-npp-SS

'When I got there I ate some kangaroo meat."

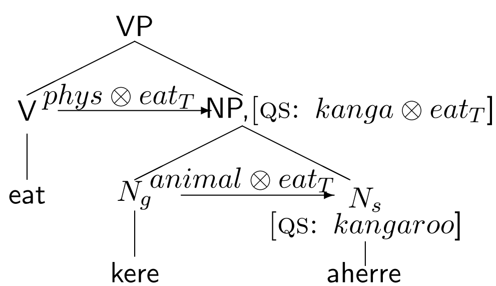
(200)



(201)
$$\begin{bmatrix} \textbf{see} \\ \text{CAT} = \textbf{verb} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = \mathit{animal} \\ \text{ARG2} = \mathit{phys} \end{bmatrix} \end{bmatrix}$$

(202)
$$\begin{bmatrix} \textbf{eat} \\ \text{CAT} = \textbf{verb} \\ \text{ARGSTR} = \begin{bmatrix} \text{ARG1} = \mathit{animal} \\ \text{ARG2} = \mathit{phys} \otimes \mathit{eat}_T \end{bmatrix} \end{bmatrix}$$

(203)



(204) $\Theta[kangaroo \sqsubseteq phys] : kangaroo \rightarrow phys$

Remaining Problems and Issues

1. Expressiveness of Type Composition for GL
2. Constraining the Application of Coercion Rules
3. Extending Linguistic Coverage of GL Explanation

Conclusion

- Lexical Typing is Structured Lexical Decomposition
- The Predicate has Structure:
  - Qualia Structure
  - Argument Structure
  - Event Structure
- Context is encoded by strong typing
- Distinction between selection, coercion, and exploitation
- Opposition Structure can be encoded in the predicate's type as a gate.

- Selection can be treated as typing rather than presupposition.

The End

Thank You!