# POSTGRADUATE COURSE ON FUNCTIONAL DISCOURSE GRAMMAR

THE REPRESENTATIONAL LEVEL

IPC-FDG-2018, Salvador da Bahía

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# Semantics in FDG

### Semantics in FDG (1)

- Deals with the relation that obtains between language and the non-linguistic world it describes: designation (ideation, Darstellung, representation).
- Restricted to the meanings of lexical units and complex units in isolation from the ways these are used in communication.
- Semantic categories are independent of interpersonal function.
- Universal semantics not presupposed.

### Semantics in FDG (2)

- We bought a lovely cottage.
- $(A_1: [(F_1: DECL (F_1)) (P_1) (P_2) (C_1: [(T_1) (R_1: [+S, -A] (R_1)) (-id R_2: [(T_2) (T_3)] (R_2))_{FOC}] (C_1))] (A_1))$
- All interpersonal information is provided at the IL
- Not provided at the IL:
  - which kinds of entity are being referred to
  - which properties are being ascribed (lexical information)
  - further information about the non-linguistic world described (tense, number, reality, etc.)
- This information is provided at the RL:
  - IL: Evocation
  - RL: Designation

### IL vs. RL (1)

- The relation that obtains between language and the world it describes: truth values
- A: Linsist that Sheila is ill.
  - B: a. That's not true. (She isn't.)  $\Rightarrow$  RL
    - b. \*That's not true. (You don't.)  $\Rightarrow$  IL
- A: Peter insisted that Sheila is ill.
  - B: a. That's not true. (She isn't.)  $\Rightarrow$  RL
    - b. That's not true. (He didn't.)  $\Rightarrow$  RL

### IL vs. RL (2)

- □ A: Frankly/Briefly/Finally, Sheila is ill.
  - B: a. No. (She isn't.)
    - b. \*No. (You are not being frank.)
    - c. \*No. (That isn't brief.)
    - d. \*No. (That isn't final.)
- A: Peter told me frankly that Sheila is ill.
  - B: a. That's not true. (She isn't.)
    - b. That's not true. (He didn't tell you.)
    - c. That's not true. (He was not being frank.)
- A: Hello!
  - B: That's not true.

### IL vs. RL (3)

John met a teacher

IL: T R R

RL:  $(e_1: [ (f_1) (x_1)_A (x_2)_U] (e_1))$ 

John is a teacher

IL:  $T_1 R_1$ 

RL:  $(e_1: [ (x_1) (x_2)_U] (e_1))$ 

# Semantic categories

### Basic semantic categories

Category	Variable	Example
Propositional Content	р	idea
State-of-affairs	е	meeting
Individual	Χ	chair
Property/relation	f	colour
(cf. Lyons 1977; Mackenzie 1992, 1998)		

- My dog is black/\*at ten/\*false.
- The meeting is at ten/\*black/\*false.
- The news turned out to be false/\*black/\*at ten.

## Further categories

Category	Variable	Example
Episode	ер	process, incident
Location	1	place, country, north (where)
Time	t	time, week, year (when)
Manner	m	way, manner (how)
Reason	r	reason (why)
Quantity	q	dozen, kilo, pint (how many/much)

### Subclasses of Individuals

Individuals:

• Set  $(^sx_1)$  A man was doing his job.

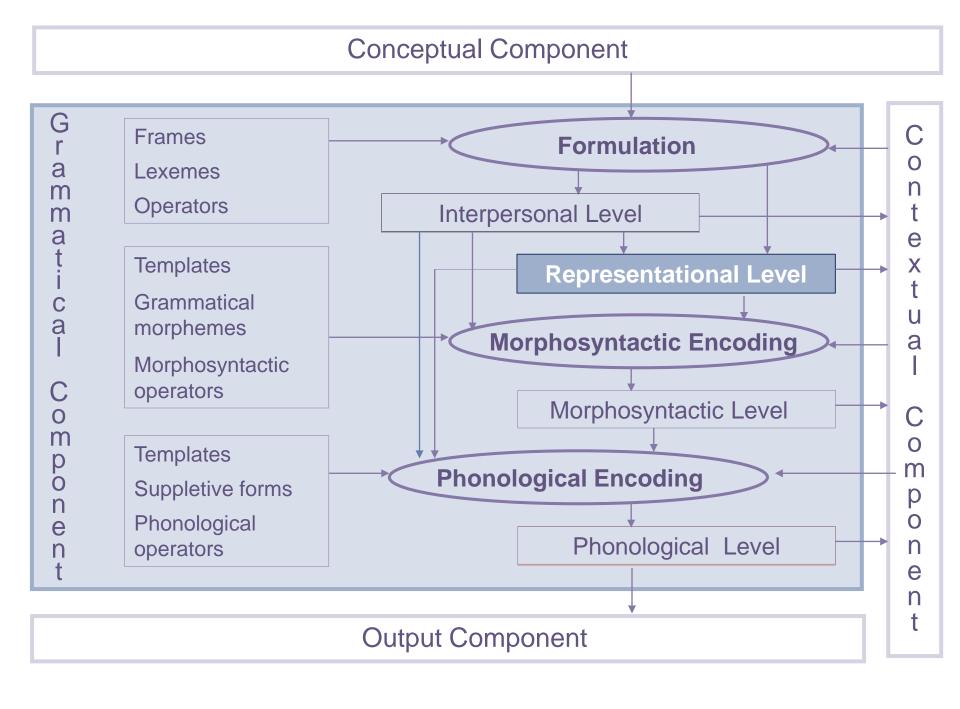
The men are doing their job.

Mass (<sup>m</sup>x<sub>1</sub>)
 Ø Water is scarce here.

- Collective ( $^{c}x_{1}$ ) The police are doing their job.

Subclasses of entity, not of nouns (lexemes)

### Hierarchical organization



### Representational Level

```
(\pi p_1:[
                                                                          ]: \sigma_p (p<sub>1</sub>) Propositional Content
      (\pi ep_1: [
                                                                 ]: \sigma_{ep}(ep_1))
                                                                                         Episode
                                                        ]: \sigma_{\rm e} (e_1))
              (\pi e_1: [
                                                                                         State-of-Affairs
                       (π f<sup>c</sup><sub>1:</sub>: [
                                                ]: \sigma_f(f^c_1))
                                                                                         Configurational Property
                                (\pi f_1: \sigma_f(f_1))
                                                                                         Lexical Property
                                (\pi x_1: \sigma_x(x^1))
                                                                                         Individual
                                (\pi I_1: \sigma_1(I_1))
                                                                                         Location
                                (\pi t_1: \sigma_t(t_1))
                                                                                         Time
```

### Internal structure of layers

```
(\pi x_1: \text{head } (x_1)_{\Phi}: \sigma (x_1)_{\Phi})^*
(\pi x_1: \text{head } (x_1)_{\Phi}: \sigma (x_1)_{\Phi}) Head
(\pi x_1: \text{head } (x_1)_{\Phi}: \sigma (x_1)_{\Phi}) Modifier
(\pi x_1: \text{head } (x_1)_{\Phi}: \sigma (x_1)_{\Phi}) Operator
```

<sup>\*</sup>Where x can be any other semantic category

### Types of representational head

#### Absent:

- e.g. (x<sub>1</sub>)
- The man cleaned the windows and he painted the door

#### Empty:

- e.g. (x<sub>1</sub>: (f<sub>1</sub>) (x<sub>1</sub>): (f<sub>2</sub>: blue) (x<sub>1</sub>))
- The green car and the blue one.

#### Lexical:

- e.g.  $(x_1: (f_1: car (f_1)) (x_1))$
- He sold the car.

#### Configurational:

- e.g.  $(x_1: [(f_1: car (f_1)) (x_2: (f_2: father (f_2)) (x_2))] (x_1))$
- He sold his father's car.

# Propositional Contents

### Propositional Contents (1)

- Propositional contents are mental constructs that do not exist in space or time but in the mind only.
- Propositional contents may be
  - factual: pieces of knowledge or reasonable belief about the actual world
  - non-factual: hopes or wishes with respect to an imaginary world.
- They may be qualified in terms of
  - propositional attitudes (certainty, doubt, disbelief)
  - their source or origin (shared common knowledge, sensory evidence, inference).
- $\Box$  ( $\pi p_1$ : [(e $p_1$ ) ... (e $p_{1+n}$ ):  $\sigma_p$ )

### Propositional Contents (2)

- [We hoped that] a local MP who was a leading sportsman would identify with our cause (BYU-BNC, written interview)
- [It is our hope that] these articles will pave the way for even more research on this subject. (COCA, written, academic)
- Unable to collect from the responsible party, the original cardholder, the credit grantor hopes that maybe the authorized user will pay to keep their credit record clean.
- He believes that maybe the effect of the PeptoBismol® is due to its color.
- maybe expresses the propositional attitude of an Individual referred to in the main clause (not of the Speaker!)

### Prop. Cont. vs. Comm. Cont (1)

- Communicated Contents are Speaker-bound, whereas Propositional Contents are not (at least not necessarily).
- reportedly indicates that the Speaker has obtained the Communicated Content from someone else (= IL).
- Unable to collect from the responsible party, the original cardholder, the credit grantor hopes that \*reportedly the authorized user will pay to keep their credit record clean.
- He believes that \*reportedly the effect of the PeptoBismol® is due to its color.

### Prop. Cont. vs. Comm. Cont (2)

- Modifiers at the layer of the Communicated Content can be combined with propositional modifiers:
- Allegedly the area stimulated for the upper plexus would presumably include C7.
- Even some of C.'s friends reportedly are suggesting maybe he ought to cut back.
- Note position: propositional modifier is situated within the scope of the Comm. Cont. modifier.

### The head of the Prop. Content

#### Absent:

- $(p_1)$
- John thinks Sheila is ill but that isn't true.

#### Empty:

- (p<sub>1</sub>: (f<sub>1</sub>): (f<sub>2</sub>: stupid))
- There's an idea -- a stupid one -- that only rich people have nannies.

#### Lexical:

- (p<sub>1</sub>: (f<sub>1</sub>: idea): (f<sub>2</sub>: crazy))
- That is a crazy idea.

#### Configurational:

- $(p_1: [(ep_1) (ep_2)])$
- [Sue came back yesterday] but [John is still in London].

### Propositional modifiers

- Lexical specification of propositional attitude; either
  - the kind and degree of commitment to the Propositional Content (subjective epistemic modality), or
  - the (non-verbal) source of the Propositional Content (evidential modality: inference, experience).
  - (11) a. Probably/evidently/hopefully Sheila stayed at home.
    - b. I see you got my message.
- $\Box$  ( $\pi p_1$ : [...] ( $p_1$ ):  $\sigma_p$  ( $p_1$ ))

### Propositional operators

- Grammatical specification of propositional attitude:
  - the kind and degree of commitment to the Propositional Content (subjective epistemic modality, e.g. hypothetical modality)
    - If he comes, (I'll leave)
    - If he came, (I would leave)
  - the (non-verbal) source of the Propositional Content (evidential modality).
    - I see you got my message.
- $\Box$  ( $\pi$   $p_1$ : [...] ( $p_1$ ):  $\sigma_p$  ( $p_1$ ))

### Other languages

- Pawnee (Parks 1976, cited in Bybee 1985):
  - subjective modality: dubitative marker (kur):
    - Kur-rau pi:ta a ku capat.
       DUB-was man or a woman
       'It was either a man or a woman.'
  - inferential modality (tir):
    - Tir-ra-ku:tik ku:ruks.
       INF-ABS-kill bear
       'He must have killed a bear.'

# Episodes

### **Episodes**

- By an Episode we mean a combination of States-of-Affairs that are thematically coherent, in the sense that they show unity or continuity of Time, Location, and Individuals.
- They may be modified by (lexical) expressions of absolute time.
- They are the locus for marking absolute tense distinctions
  - Coming out, stopping to check the mailbox, taking a look at the driveway and pausing to adjust his hat, he walked to his car.
  - Tomorrow he will go to London before lunch and she to Paris after dinner.
- α (π **ep**<sub>1</sub>: [(e<sub>1</sub>) ... (e<sub>1+N</sub>)] (ep<sub>1</sub>): σ<sub>ep</sub> (ep<sub>1</sub>))

### The head of the Episode

#### Absent:

- (ep<sub>1</sub>)
- How was the movie? The end was tragic; it was also disappointing.

#### Empty:

- (ep<sub>1</sub>: (f<sub>1</sub>): (f<sub>2</sub>: tragic (f<sub>2</sub>)) (ep<sub>1</sub>))
- The end was a rather tragic one.

#### Lexical:

- (ep<sub>1</sub>: (f<sub>1</sub>: end (f<sub>1</sub>)) (ep<sub>1</sub>)).
- The end was rather tragic.

#### Configurational:

- $(ep_1: [(e_1) (e_2)] (ep_1))$
- He will [first go to London] and [then to Paris].

### Modifiers/Operators of Episodes

#### Modifiers:

 Lexical expressions of absolute time: tomorrow, last year, etc.

$$(\pi ep_1: [(e_1) ... (e_{1+N})] (ep_1): \sigma_{ep} (ep_1))$$

#### Operators:

 Grammatical specification of absolute time (Tense): past, present

$$(\pi ep_1: [(e_1) ... (e_{1+N})] (ep_1): \sigma_{ep} (ep_1))$$

## States-of Affairs

### States-of-Affairs (SoAs)

- States-of-affairs are entities that can be located in relative time and can be evaluated in terms of their reality status.
  - \*The chair was at 6 o´clock.
  - The meeting was at 6 o´clock
  - \*The idea was at 6 o´clock.
- $\Box$  (e<sub>1</sub>: (f<sup>c</sup><sub>1</sub>: [(f<sub>2</sub>) (x<sub>1</sub>)<sub>A</sub> (x<sub>2</sub>)<sub>U</sub> ...] (f<sup>c</sup><sub>1</sub>)) (e<sub>1</sub>))

### The head of the State-of-Affairs

- Absent:
  - $(e_1)$
  - John saw the accident and Peter saw it too.
- Empty:
  - (e<sub>1</sub>: (f<sub>1</sub>) (e<sub>1</sub>): (f<sub>2</sub>: interesting (f<sub>2</sub>)) (e<sub>1</sub>))
  - I expect this meeting to be an interesting one.
- Lexical:
  - $(e_1: (f_1: assassination (f_1)) (e_i))$
  - the assassination
- Configurational:
  - $(e_1: (f_1: [(f_2) (x_1)_A (x_2)_U] (f_1)) (e_1))$
  - Mary kissed John.

### Modifiers of the State-of-Affairs

 Lexical modification of the properties of the occurrence of a SoA:

Sheila works in London.
 Location

Sheila goes to London frequently.

Frequency

Sheila hadn't heard from him for weeks.
 Duration

Sheila is really a guy.

Reality

Sheila fell ill because of the heat.

Sheila stayed at home so she could watch TV. Purpose

### Operators of the State-of-Affairs (1)

- Grammatical specification of the properties of the occurrence of an SoA, e.g.:
  - Event location
  - Relative tense
  - Event-oriented modality
  - Polarity
  - Event quantification
- $\Box$  ( $\mathbf{\pi}$  e<sub>1</sub>: [...] (e<sub>1</sub>):  $\sigma$ <sub>e</sub> (e<sub>1</sub>))

### Operators of the State-of-Affairs (2)

- Event-oriented modality: describes the existence of possibilities, general obligations, and the like, without the Speaker taking responsibility for these judgements.
  - Epistemic modality (possibility, (ir)realis)
    - John may reject the offer.

$$(poss e_1: [...] (e_1))$$

- Deontic modality:
  - Students have to wear school uniforms.

(**obl** 
$$e_1$$
: [...] ( $e_1$ ))

#### Operators of the State-of-Affairs (3)

#### Relative tense

• Several times it happened that  $[_{\rm ep1}\ [_{\rm e1}\ {\rm mighty}\ {\rm black}\ {\rm clouds}\ had\ {\rm threatened}\ {\rm Marrakesh}\ ],\ [_{\rm e2}\ {\rm thunder}\ had\ {\rm rumbled}\ ],\ [_{\rm e3}\ {\rm it}\ had\ {\rm started}\ {\rm hailing}\ ],\ \dots$ 

```
(past ep_1: [(ant e_1) (ant e_1) (ant e_1) ...] (ep_1))
```

#### Polarity

John did not go to London.
 (neg e₁: [...] (e₁))

### Other languages

#### Hausa:

- Jiya da 3:00 sun shiga.
   yesterday at 3:00 3.PL.ANT enter
   'Yesterday at three they had entered.'
- Gobe da 3:00 sun shiga.
   tomorrow at 3:00 3.PL.ANT enter
   'Tomorrow at three they will have entered.'
- Sun shiga.3.PL.ANT enter
  - 'They had/have/will have entered.'

## Configurational Properties

### Configurational Properties

- Configurational Properties constitute the inventory of predication frames relevant to a language
- These predication frames are stored separately in the fund and are not linked to specific lexemes (even though default relations exist) (see also Hengeveld & García Velasco 2002)
- Configurational Properties have a configurational head: a predication frame
  - Quantitative restrictions: valency
  - Qualitative restrictions: semantic functions

#### Quantitative restrictions (1)

- How many units does a language allow in a predication frame?
- Minimum for English: one unit
  - Predicate: It snows.
  - Argument: There are red swans.
- Maximum for English: predicate + 3 (4) arguments
- Cross-linguistically:
  - maximum of four (e.g. Turkish causative constructions?)
  - some languages allow no more than two arguments (no ditransitive constructions, but serialization, e.g. Mandarin Chinese)
- $\Box$  ( $\pi e_1$ : ( $f_1^c$ : [...] ( $f_1^c$ ):  $\sigma_f$  ( $f_1^c$ )) ( $e_1$ ):  $\sigma_e$  ( $e_1$ ))

### Quantitative restrictions (2)

- Zero-place properties:
  - It rained.

$$(e_1: (f_2: rain (f_1)) (e_1))$$

- One-place properties:
  - The boy (x) is swimming.
  - The meeting (e) was boring.
  - Her hope (p) faded away.

```
(e_1: (f_2: swim (f_2)) (x_1: (f_3: boy (f_3)) (x_1))_A] (f_1)) (e_1)
```

#### Quantitative restrictions (3)

- Two-place properties
  - She (x) kicked him (x).
  - Charles (x) lives in Antwerp (l).
  - The meeting (e) lasted three hours (t).
     (e<sub>1</sub>: (f<sup>c</sup><sub>1</sub>: [(f<sub>2</sub>: kick (f<sub>2</sub>)) (x<sub>1</sub>)<sub>A</sub> (x<sub>2</sub>)<sub>U</sub>] (f<sup>c</sup><sub>1</sub>)) (e<sub>1</sub>))
- Three-place properties
  - Sheila (x) put the book (x) on the shelf (l).
  - The woman (x) forced them (x) to leave (e).
  - John (x) told me (x) that Mary left (p)
     (e<sub>1</sub>: (f<sup>c</sup><sub>1</sub>: [(f<sub>2</sub>: put (f<sub>2</sub>)) (x<sub>1</sub>)<sub>A</sub> (x<sub>2</sub>)<sub>U</sub> (x<sub>2</sub>)<sub>L</sub>] (f<sup>c</sup><sub>1</sub>)) (e<sub>1</sub>))

## Non-verbal predications (1)

- Different predication frames for:
  - Relational properties : predicate includes a relator
    - Mary (x) is in London (l)
    - The letter (x) was from a friend (x)
    - The meeting (e) is at six (t)
    - This book (x) is by Dickens (x)
  - Classification: expression of class membership
    - That man (x) is a painter (x).
  - Identification: equation of two entities
    - The winner (x) is John (x).
  - Existence:
    - There are lions (x).

## Non-verbal predications (2)

#### Relational properties :

The letter was from a friend.

IL:  $T_1 R_1 R_2$ RL:  $(f_2^c: (x_1 \text{ friend } (x_1))_{So} (f_2)) (x_2)_U] (f_1^c)$ 

#### Classification:

That man is a painter.

IL:  $T_1$   $R_1$  RL:  $(f_1: [ (x_1) (x_2)_U] (f_1^c)$ 

## Non-verbal predications (3)

- Identification: equation of two entities
  - The winner is John.

IL:  $R_1 R_2$ RL:  $(f_1^c: [ (x_1) (x_1)] (f_1^c))$ 

- Existence:
  - There are lions.

IL:  $R_1$ 

RL:  $(f_{1}^{c}: (x_{1}) (f_{1}^{c}))$ 

### Semantic functions (1)

- Not universal but language-specific
- Three basic (macro-)functions:
  - Actor:
    - The prototypical Actor is volitionally involved in a SoA
    - Only present in dynamic SoAs
  - Undergoer
    - The prototypical Undergoer is non-volitionally affected by a SoA
    - Can be present in dynamic and non-dynamic SoAs
  - Location

#### Semantic functions (2)

- Agentivity: relative notion (degree of energy input)
- Prototypical Actors:
  - My sister (A) burnt the letter (U).
  - The cat (A) chased the mouse (U).
- Non-prototypical Actors:
  - The boy (A) (accidentally) broke the window (U).
  - The fire (A) destroyed the school (U).

### Semantic functions (3)

#### Dynamic SoAs:

- The girl (A) smiled.
- The girl (U) fell.
- The girl (A) jumped from the fence (L).
- The girl (U) fell from the fence (L).
- The girl (A) threw the ball (U) into the pond (L).
- The wind (A) blew the leaves (U) into the pond (L).

#### Non-dynamic SoAs

- Kure Island (U) lies in the Pacific Ocean (L).
- Kure Island (U) is beautiful.

### Other languages

- Locative as sole participant:
- German: non-dynamic SoAs
  - Mir ist kalt.1.SG.DAT is cold'I am cold.'
- Icelandic: dynamic SoA
  - Honum sárnaði.3.SG.M.DAT became.hurt
    - 'He was hurt.'

## Modifiers of the Conf. Prop. (1)

- Further participants (no arguments)
  - Will you give Mary these flowers for me? (Beneficiary)
  - John went to Paris with Mary (Comitative)
  - John cut the meat with a knife (Instrument)
  - John has lived here for ten years (Duration)
- $\Box$   $(\pi f^{c}_{1}: [(f_{1}) (x_{1}) ...] (f^{c}_{1}): \sigma_{fc} (f^{c}_{1}))$

### Modifiers of the Conf. Prop. (2)

- "Manner" adverbs (see H&M: 208-209):
  - John angrily left the room.

    - # John performed an "angry leaving"
  - John left the room angry. ('Depictive')
    - John was angry when he left the room (secondary predication)
- vs. manner at the layer of the Property:
  - John answered the question stupidly.
  - John left the room slowly.
- vs. manner at the layer of the SoA:
  - John stupidly answered the question.

#### Operators of the Conf. Prop.

- Grammatical specification of the properties of the occurrence of a SoA.
  - Phasal Aspect:
    - John is swimming (progressive)
    - John has swum (perfect)
  - Participant-oriented modality:
    - John can swim / John is able to come.
- Combination of deontic and participant-oriented modality:
  - You have to (obl: e) be able to (abil: f) swim
     (obl e<sub>1</sub>: (abil f<sup>c</sup><sub>1</sub>: [...] (f<sup>c</sup><sub>1</sub>)) (e<sub>1</sub>))

# The Property

### The Property

- Properties are a basic unit of analysis at the Representational Level, providing the descriptive information needed to designate (sets of) entities.
- Default head: lexeme
- The three major classes of lexemes (or parts-of-speech):
  - $(f_1: buy_V (f_1)):$  verbal lexeme (verb)
  - $(f_1: house_N (f_1)): nominal lexeme (noun)$
  - (f<sub>1</sub>: old<sub>A</sub> (f<sub>1</sub>)): adjectival lexeme (adjective)
- Each has a prototypical function with a predication frame:
  - The man bought an old house.

```
(e<sub>1</sub>: (f<sup>c</sup><sub>1</sub>: [(f<sub>2</sub>: buy<sub>V</sub> (f<sub>2</sub>)) (x<sub>1</sub>: (f<sub>3</sub>: man<sub>N</sub> (f<sub>3</sub>)) (x<sub>1</sub>))<sub>A</sub> (x<sub>2</sub>: (f<sub>4</sub>: house<sub>N</sub> (f<sub>4</sub>)) (x<sub>2</sub>): (f<sub>5</sub>: old<sub>A</sub> (f<sub>5</sub>)) (x<sub>2</sub>))<sub>U</sub>] (f<sup>c</sup><sub>1</sub>)) (e<sub>1</sub>))
```

Flexible system: other uses are possible (see ML)

### The head of the Property

- Empty
  - $(f_1)$
  - It's a dark colour. I like it.
- Absent:
  - (x<sub>1</sub>: (f<sub>1</sub>) (x<sub>1</sub>): (f<sub>2</sub>: blue) (x<sub>1</sub>))
  - The green car and the blue one.
- Lexical:
  - $(x_1: (f_1: car (f_1)) (x_1))$
  - the car.
- Compositional:
  - $(f_1: (f_2: name_N (f_2): (f_3: file_N (f_3)) (f_2)) (f_1))$
  - filename

### Modifiers of the Property

- smile evilly
- extremely old
- former president
- The girl smiled evilly

```
(e_1: (f_2: smile_V (f_2): (f_3: evil_A (f_3)) (f_2)) (x_1: (f_4: girl_N (f_4)) (x_1))_A]
(f_1^c) (e_1)
```

□ Form of the modifier (adjective → adverb): ML

## Individuals

#### Individuals

- Individuals are concrete, tangible entities occupying a portion of space.
- They can be modified by a wide range of modifiers specifying size, shape, colour, weight, quantity, location, etc.
- They can be specified for number, proximity etc.
- $\Box$  ( $\pi$  **x**<sub>1</sub>: ( $f_1$ ) ( $x_1$ ):  $\sigma_x$  ( $x_1$ ))

#### The head of the Individual

- Absent:
  - $-(x_1)$
  - John / he
- Empty:
  - (x<sub>1</sub>: (f<sub>1</sub>) (x<sub>1</sub>): (f<sub>2</sub>: blue (f<sub>2</sub>)) (x<sub>1</sub>))
  - The green car and the blue one.
- Lexical:
  - $(x_1: (f_1: car (f_1)) (x_1))$
  - He sold the car.
- Configurational:
  - e.g.  $(x_1: [(f_1: car (f_1): (x_2: (f_2: father (f_2)) (x_2))_{Ass} (f_1))] (x_1))$
  - He sold his father's car.

### Types of Individuals

- Countable:
  - a bike

$$(1^{c}x_{1}: (f_{1}: bike_{N}(f_{1})) (x_{1}))$$

- Mass:
  - (some) wine
     (mx<sub>1</sub>: (f<sub>1</sub>: wine<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>))
- Collective:
  - (some) cattle
     (coll x<sub>1</sub>: (f<sub>1</sub>: cattle<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>))
- Not a subtype of noun, but a subtype of entity

#### Modifiers of the Individual

- Adjectival modifiers:
  - $(1x_1: (f_1: man_N (f_1)) (x_1): (f_2: old_A (f_2)) (x_1))$ 'the old man'
- Stacking of modifiers:
  - (1x<sub>1</sub>: (f<sub>1</sub>: man<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>): (f<sub>2</sub>: old<sub>A</sub> (f<sub>2</sub>)) (x<sub>1</sub>): (f<sub>3</sub>: old<sub>A</sub> (f<sub>3</sub>)) (x<sub>1</sub>): (f<sub>4</sub>: rich (f<sub>4</sub>)) (x<sub>1</sub>): (f<sub>5</sub>: grumpy<sub>A</sub> (f<sub>5</sub>)) (x1))
     'the grumpy rich old man'
- Linear ordering: ML

#### Modifiers of the individual

- PP-modifiers:
  - (1x<sub>1</sub>: (f<sub>1</sub>: man<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>): (f<sup>c</sup><sub>1</sub>: [(f<sub>2</sub>: in<sub>Adp</sub> (f<sub>2</sub>)) (1l<sub>1</sub>: (f<sub>3</sub>: moon (f<sub>3</sub>)) (l<sub>1</sub>))<sub>Ref</sub>] (f<sup>c</sup><sub>1</sub>)) (x<sub>1</sub>))
     'the man in the moon'
- Possessive modifiers:
  - $(1x_1: (f_1: dog_N (f_1)) (x_1): (1x_2: (f_k: teacher (f_k)) (x_2))_{Ass} (x_1))$ 'the teacher's dog'
- Restrictive relative clauses:
  - (1x<sub>1</sub>: (f<sub>1</sub>: man<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>): (pres ep<sub>i</sub>: [....(x<sub>1</sub>)....] (ep<sub>1</sub>)))
     'The man who lives on the moon'
  - (1x<sub>1</sub>: (f<sub>1</sub>: man<sub>N</sub> (f<sub>1</sub>)) (x<sub>1</sub>): (sim e<sub>1</sub>: [.... (x<sub>1</sub>)....] (e<sub>1</sub>)))
     'The man living on the moon'

### Operators of the Individual

 $(1 \text{ prox } x_1: (f_1: man_N (f_1)) (x_1))$ 'this man'  $(1 \text{ dis } x_1: (f_1: man_N (f_1)) (x_1))$ 'that man' (m prox  $x_1$ : ( $f_1$ : man<sub>N</sub> ( $f_1$ )) ( $x_1$ )) 'these man'  $(3 x_1: (f_1: man_N (f_1)) (x_1))$ 'three men'  $(\forall prox x_1: (f_1: man_N (f_1)) (x_1))$ 'all these men'

## Locations and Times

#### Locations and Times

#### Locations:

the area (where?)
 (1 I<sub>1</sub>: (f<sub>1</sub>: area<sub>N</sub> (f<sub>1</sub>)) (I<sub>1</sub>))

#### Times:

a week (how long?)
 (1 t<sub>1</sub>: (f<sub>1</sub>: week<sub>N</sub> (f<sub>1</sub>)) (t<sub>1</sub>))

#### Modifiers of Locations/Times

#### Locations:

Adjectival: a large area

Adverbial: dangerously close

Phrasal: the area to the north of Paris

Clausal: the place where I work

#### Times:

Adjectival: a long day

Adverbial: incredibly soon

Phrasal: the day after the wedding

Clausal: the moment when I met my first love

### Operators of Locations/Times

#### Locations:

• all places  $(\forall l_1: (f_1: place_N (f_1)) (l_1))$ 

• somewhere  $(\exists I_1)$ 

• everywhere (distr  $I_1$ )

• nowhere  $(\varnothing I_1)$ 

• three places  $(3 I_1: (f_1: places_N (f_1)) (I_1))$ 

#### Times:

• always  $(\forall t_1)$ 

• some time  $(\exists t_1)$ 

every time (distr t<sub>1</sub>)

• never  $(\emptyset t_1)$ 

• twice  $(2 t_1)$ 

# Exercises

#### Exercise 1

The following examples (from COCA) all include a form of the verb see. Determine the meaning/function of this element in each example and think about a way of representing it at the Representational or the Interpersonal Level:

- I saw Tom yesterday
- 2. I see you drive by sometimes
- 3. I see you took my advice.
- 4. I saw in the newspaper that they are married.

### Exercise 1 (solution)

The following examples (from COCA) all include a form of the verb see. Determine the meaning/function of this element in each example and think about a way of representing it at the Representational or the Interpersonal Level:

- I saw Tom yesterday (U = Individual)
- 2. I see you drive by sometimes (U = State-of-Affairs)
- 3. I see you took my advice. (U = Propositional Content)
- I saw in the newspaper that they are married. (U = Communicated Content)

#### Exercise 2

For each of the italicized phrases in following examples, decide:

- a. the semantic category
- b. the type of head (absent, empty, lexical or configurational)
- 1. Shocking -- Gloria Allred is her attorney? I can't believe it. (COCA)
- 2. Sadie's heart sank. Why could she never meet anyone of her own class? (BYU-BNC)
- 3. The sheriff is now operating on the assumption that these two cases are actually one case. (COCA)
- 4. Wow! Does this mean I get a wish? I forgot to make one while you were falling. (COCA)
- 5. My dogs were frantic, and so was I. (BYU-BNC)

## Exercise 2 (solutions 1)

1. Shocking -- Gloria Allred is her attorney? I can't believe it. (COCA)

Gloria Allred: a. Individual (x); b. absent (Proper name: specified at IL)

it: a. Propositional Content (p); b. absent (definite pronoun)

2. Sadie's heart sank. Why could she never meet anyone of her own class? (BYU-BNC)

Sadie's heart: a. Individual (x); b. configurational (inalienable possession)

she: Individual (x, co-indexed with Sadie); b. absent (definite pronoun)

## Exercise 2 (solutions 2)

3. The sheriff is now operating on the assumption that these two cases are actually one case. (COCA)

the sheriff: a. Individual (x); b. lexical the assumption that ... one case: a. Propositional Content; configurational (p. 165)

4. Wow! Does this mean I get a wish? I forgot to make one while you were falling. (COCA)

a wish: a. Propositional Content (p); b. lexical

one: Propositional Content (p); b. empty (headless f, co-indexed with wish)

### Exercise 2 (solutions 3)

5. My dogs were frantic, and so was I. (BYU-BNC) so: a. Property (f); b. absent (f, co-indexed with frantic)