

# Lexicalization Patterns

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## Outline

1. Introduction
  - 1.1 Lexicalization Patterns
  - 1.2 Characteristics of Lexicalization
2. The Verb
  - 2.1 Motion + Co-event
  - 2.2 Motion + Path
  - 2.3 Motion + Figure
  - 2.4 Typology of Motion Verbs
  - 2.5 Aspect
  - 2.6 Causation
  - 2.7 Interaction of Aspect and Causation
  - 2.8 Personation
  - 2.9 Valence
4. Salience in the Verb Complex
5. Conclusion

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## Surface/Meaning Interface

- Relation between **meaning** and **surface expression** (semantics and syntax)
- **Meaning:** motion, path, figure, ground, manner, cause
- **Surface expression:** verb, adposition (e.g., prepositional phrase), subordinate clause, satellite
- Many-to-many mapping

## Patterns

- Patterns within or across languages
- **Typology** – small number of patterns
- **Universal** – single pattern
- **Universal Exclusion** – pattern appears in no languages
- Which semantic entities are expressed by a selected surface entity?

## Number of Morphemes

- Zero forms
  - I feel like [having] a milk shake
  - I hope for [there to be] peace
- Surface complexes
  - be of interest to == interest
  - carry out an investigation == investigate
- Single morphemes
  - Root and derivational morphemes

## Characteristics of Lexicalization

*What pressure was exerted?*

How does the 'degree' meaning arise?

- **Lexicalization** – direct association of certain semantic components with a particular morpheme ( $\text{pressure}_2 = \text{degree of pressure}_1$  or  $\text{what}_1 = \text{degree of}$ )
- **Deletion** – *degree of* has been deleted from the middle of the phrase
- **Interpretation** – use of present context and general knowledge

## Usage and Equivalence

- Morpheme's *usage* – a particular selection of its semantic and syntactic properties
  - Allows usage equivalencies between morphemes with different core meanings, or even across languages
- Equivalence between **kill** and **make appear**
  - $L_2 = \text{kill}$ : Agent action on Patient (causative)
  - $L_1 = \text{appear}$ : Patient acting alone (noncausative)
  - G = *make*: Agent-to-Patient relation

usage of  $L_2$  = usage of  $L_1$  in construction with G

## Break

- Break can function equally as  $L_1$  or  $L_2$

Break<sub>2</sub> = I broke the vase (causative)

Break<sub>1</sub> = I made the vase break (noncausative)

usage range of  $L_3$  = usage of  $L_2$  + usage of  $L_1$

## Meaning-in-form relations

- Lexicalization – individual lexeme
- Incorporation – integration of multiple semantic concepts in one verb usage
- Conflation – mixing of two different concepts in one verb usage

## Motion Events

- Motion event consists of:
    - Figure – object moving or being located
    - Ground – reference object
    - Path – path followed or site occupied by figure
    - Motion – presence of motion or locatedness in the event
- Motion: MOVE  
Location: BE<sub>Loc</sub>

## Co-events of Motion

	<i>Manner</i>	<i>Cause</i>
a. <i>Motion</i>	The pencil rolled off the table.	The pencil blew off the table.
b. <i>Location</i>	The pencil lay on the table.	The pencil stuck on the table (after I glued it).

Figure: pencil  
Ground: table  
Paths: on, off  
Manners: rolled, lay  
Cause: blew, stuck

## Talmy vs. Fillmore

- Talmy argues figure and ground have advantages over Fillmore's cases
- Ground captures commonality among Location, Source, Goal, and Path (vs. Instrument)
- MOVE / BE<sub>LOC</sub> opposition distinguishes Source, Goal, and Path from Location
- All notions of Path ('to', 'from', etc.) capture by abstract Path

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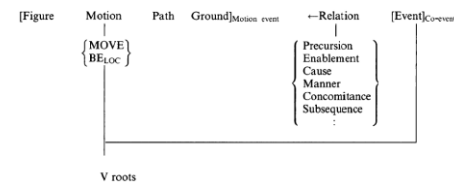
## 2. The Verb

- “Characteristic” expressions of a verb
  - Colloquial in style (rather than literary or stilted)
  - Frequent occurrence in speech
  - Pervasive rather than limited (wide range of semantic notions are expressed in this type)

1. Motion + Co-Event
2. Motion + Path
3. Motion + Figure

## 2.1 Motion + Co-event

- The verb expresses at once both the fact of
  - Motion
  - Co-event: usually either the manner or the cause of the Motion



## Manner Co-event Decomposition

English expressions of Motion with conflated Manner or Cause

### BE<sub>LOC</sub> + Manner

- a. The lamp *stood/lay/leaned* on the table.
- b. The rope *hung* across the canyon from two hooks.

Unconflated paraphrases of English Motion expressions

### BE<sub>LOC</sub> + Manner

- a'. The lamp lay on the table. = [the lamp WAS<sub>LOC</sub> on the table]  
WITH-THE-MANNER-OF [the lamp lay there]
- b'. The rope hung across the canyon from two hooks. =  
[the rope WAS<sub>LOC</sub> (EXTENDED) across the canyon]  
WITH-THE-MANNER-OF [the rope hung from two hooks]

### MOVE + Manner

#### Nonagentive

- c. The rock *slid/rolled/bounced* down the hill.
- d. The gate *swung/creaked* shut on its rusty hinges.
- e. Smoke *swirled/rushed* through the opening.

#### Agentive

- f. I *slid/rolled/bounced* the keg into the storeroom.
- g. I *twisted/popped* the cork out of the bottle.

#### Self-agentive

- h. I *ran/limped/jumped/stumbled/rushed/groped* my way down the stairs.
- i. She *wore* a green dress to the party.

### MOVE + Manner

#### Nonagentive

- c'. The rock rolled down the hill. = [the rock MOVED down the hill] WITH-THE-MANNER-OF [the rock rolled]
- d'. The gate swung shut on its rusty hinges. = [the gate MOVED shut (= the gate shut)] WITH-THE-MANNER-OF [the gate swung on its rusty hinges]

#### Agentive

- f'. I bounced the keg into the storeroom. = I <sub>A</sub>MOVED the keg into the storeroom] WITH-THE-MANNER-OF [I bounced the keg]

#### Self-agentive

- h'. I ran down the stairs. = [I WENT down the stairs] WITH-THE-MANNER-OF [I ran]

## Cause Co-event Decomposition

### MOVE + Cause

#### Nonagentive

- j. The napkin *blew* off the table.
- k. The bone *pulled* loose from its socket.
- l. The water *boiled* down to the midline of the pot.

#### Agentive

- m. I *pushed/threw/kicked* the keg into the storeroom.
- n. I *blew/flicked* the ant off my plate.
- o. I *chopped/sawed* the tree down to the ground at the base.
- p. I *knocked/pounded/hammered* the nail into the board with a mallet.

### MOVE + Cause

#### Nonagentive

- j'. The napkin blew off the table. = [the napkin MOVED off the table] WITH-THE-CAUSE-OF [(something) blew on the napkin]

- k'. The bone pulled loose from its socket. = [the bone MOVED loose from its socket] WITH-THE-CAUSE-OF [(something) pulled on the bone]

#### Agentive

- m'. I kicked the keg into the storeroom. = [I <sub>A</sub>MOVED the keg into the storeroom] WITH-THE-CAUSE-OF [I kicked the keg]
- o'. I chopped the tree down to the ground at the base. = [I <sub>A</sub>MOVED the tree down to the ground] WITH-THE-CAUSE-OF [I chopped on the tree at the base]

## Float

The craft **float<sub>ed1</sub>** on a cushion of air. (locative)

The craft **float<sub>ed2</sub>** into the hangar on a cushion of air. (directional + locative)

- Two different lexicalizations?

- float<sub>1</sub> = buoyancy
- float<sub>2</sub> = movement + buoyancy

- a. The craft float<sub>ed1</sub>/was afloat on a cushion of air.
- b. The craft float<sub>ed2</sub>/\*was afloat into the hangar on a cushion of air.

MOVE WITH-THE-MANNER-OF [float<sub>ing1</sub>] → float<sub>2</sub>

or MOVE [float<sub>ing1</sub> (the while)] → float<sub>2</sub>

The craft MOVED [float<sub>ing1</sub> (the while)] into the hangar on a cushion of air

↓  
float<sub>ed2</sub>

## Kick

I **kick<sub>ed1</sub>** the wall with my left foot.

I **kick<sub>ed2</sub>** the ball across the field.

Kick<sub>1</sub> = agent impacting foot into some object

Kick<sub>2</sub> = movement + agent impacting foot into some object

- a. I <sub>A</sub>MOVED the ball across the field, by kicking<sub>1</sub> it with my left foot
  - b. I <sub>A</sub>MOVED [by kicking<sub>1</sub>] the ball across the field with my left foot
- ↓  
kicked<sub>2</sub>

• Mandarin also conflates the co-event in its verb, and has the same double usage for a single verb form.

- a. Wǒ yòng zuǒ jiǎo tī le yī xià qiáng  
I use(-ing) left foot kick PERF one stroke wall  
'I kicked the wall with my left foot.'
- b. Wǒ yòng zuǒ jiǎo bǎ qiú tī guò le cǎo-chǎng  
I use(-ing) left foot D.O. ball kick across PERF field  
'I kicked the ball across the field with my left foot.'

## Carry / Hold

### *Without motion*

- a. I held the box as I lay on the bed.
- b. \*I carried the box as I lay on the bed.

### *With motion*

- \*I held the box to my neighbor's house.
- I carried the box to my neighbor's house.

*I stood at the front door carrying the box.*

### • Children's errors

- a. Don't hug me off my chair (= by hugging move me off).
- b. When you get to her [a doll], you catch her off (on a merry-go-round with a doll, wants a friend standing nearby to remove the doll on the next spinaround).
- c. I'll jump that down (about to jump onto a mat floating atop the tub water and force it down to the bottom).

## Lexical Conflation vs. Constructions

- Aske (1989) and Goldberg (1995) treat the additional complexities of the surrounding construction as the source of additional meanings.
- Break: intransitive vs. transitive forms
  - **Lexical conflation** says distinct lexical items
  - **Constructionist** says transitive causative usage consists of intransitive *break* in interaction with the structure of the surrounding sentence

## Extensions of the Co-event Conflation Pattern (Mid-level verbs)

### *Mid-level verbs that take Co-event conflation*

- a. COVER: [F] BE<sub>LOC</sub> all-over [G]  
[paint COVERED the rug] WITH-THE-MANNER-OF [the paint was in streaks/dots]  
Paint streaked/dotted the rug.
- b. GIVE: [A<sub>1</sub>] A<sub>1</sub>MOVE [F] into the GRASP of [A<sub>2</sub>]  
[I GAVE him another beer] WITH-THE-MANNER-OF [I slid the beer]  
I slid him another beer.
- c. PUT: [A] controlledly A<sub>1</sub>MOVE [F] by limb motion but without body translocation  
[I PUT the hay up onto/down off of the truck] WITH-THE-CAUSE-OF [I forked the hay]  
I forked the hay up onto/down off of the truck.  
(\*I forked the hay to my neighbor's house down the block shows that *fork* is based on PUT, not on A<sub>1</sub>MOVE.)

## Extensions of the Co-event Conflation Pattern (Matrix Verbs)

- a. GO: [A] AGENT himself [i.e., his whole body, = F] to MOVE  
[the child WENT down the hallway] WITH-THE-MANNER-OF [the child hopped]  
The child hopped down the hallway.  
Similarly: I ran into the house.
- b. GET: [A<sub>1</sub>] INDUCE [A<sub>2</sub>] to GO  
[I GOT him out of his hiding place] WITH-THE-CAUSE-OF [I lured/scared him]  
I lured/scared him out of his hiding place.  
Similarly: I talked him down off the ledge. / I prodded the cattle into the pen. / They smoked the bear out of its den.
- c. URGE: [A<sub>1</sub>] AIM to GET [A<sub>2</sub>] = [A<sub>1</sub>] AIM to INDUCE [A<sub>2</sub>] to GO  
[I URGED her away from the building] WITH-THE-CAUSE-OF [I waved at her]  
I waved her away from the building.  
Similarly: I beckoned him toward me. / I called him over to us.

## Extensions of the Co-event Conflation Pattern (Metaphorically extended MOVE)

*Motion-like change of state constructions*

*Negative*

- a. "MOVE": [F] MOVE metaphorically (i.e., change state)  
[he "MOVED" to death] WITH-THE-CAUSE-OF [he choked on a bone]  
(He died from choking on a bone.—or)  
He choked to death on a bone.

- b. BECOME: "MOVE" in the environment: \_\_\_Adjective  
[the shirt BECAME dry] WITH-THE-CAUSE-OF [the shirt flapped in the wind]  
(The shirt dried from flapping in the wind.—or)  
The shirt flapped dry in the wind.  
Similarly: The tinman rusted stiff./The coat has worn thin in spots./The twig froze stuck to the window.

- c. FORM: [F] "MOVE" into EXISTENCE (cf. the phrase *come into existence*)  
[a hole FORMED in the table] WITH-THE-CAUSE-OF [a cigarette burned the table]  
A hole burned in the table from the cigarette.

- d. "AGENT": [A] AGENT [F] to "MOVE"  
[I "MOVED" him to death] WITH-THE-CAUSE-OF [I choked him]  
(I killed him by choking him.—or)  
I choked him to death.  
Similarly: I rocked/sang the baby to sleep.

- e.  $\text{BECOME} = \text{MAKE}_1$ : "MOVE" in the environment: \_\_\_Adjective

[I MADE<sub>1</sub> the fence blue] WITH-THE-CAUSE-OF [I painted the fence]

I painted the fence blue.

- f.  $\text{FORM} = \text{MAKE}_2$ : [A] AGENT [F] to "MOVE" into EXISTENCE (cf. the phrase *bring into existence*)  
[I MADE<sub>2</sub> the cake out of fresh ingredients] WITH-THE-CAUSE-OF [I baked the ingredients]  
I baked a cake out of fresh ingredients.  
Similarly: I knitted a sweater out of spun wool./I hacked a path through the jungle./The mouse chewed a hole through the wall.

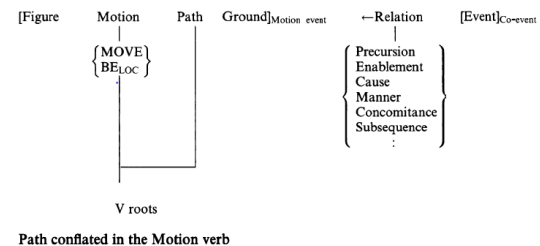
## More Relations

- **Precursion** – the co-event precedes the main Motion event, but does not cause or assist its occurrence (*Glass splintered onto the carpet*)
- **Enablement** – the co-event directly precedes the main Motion event and enables the occurrence of an event that causes the motion but does not itself cause this Motion (*I scooped jellybeans up into her sack*)
- **Reverse enablement** – the co-event is an event that has previously taken place and that now gets undone (German: *I have the dog free-chained*)
- **Onset Causation** – the co-event precedes the main Motion event (*I batted the puck across the ice*)
- **Extended Causation** – the co-event co-occurs with the main Motion event (*The water boiled down to the midline of the pot*)
- **Manner** – the co-event co-occurs with the Motion event and is conceptualized as an additional activity that the Figure of the Motion event exhibits (*I slid the mug along the counter*)
- **Concomitance** – similar to Manner, but the activity does not in itself pertain to the concurrent Motion (*I whistled past the graveyard*)
- **Concurrent Result** – the co-event results from the main Motion event, and would not otherwise occur (*The rocket splashed into the water*)
- **Subsequence** – the co-event takes place directly after the main Motion event, and is enabled by, caused by, or is the purpose of that Motion event (*They locked the prisoner into his cell*)

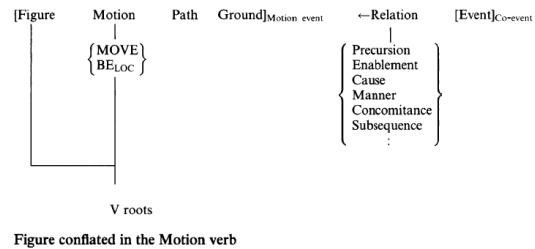
## Multiple Conflation

- a. [could you GIVE me the flour]  
WITH-THE-ENABLEMENT-OF [you  $\text{MOVE}$  the flour down off the shelf], WITH-THE-ENABLEMENT-OF [you reach<sub>1</sub> to it with your free hand?]  
⇒ [could you GIVE me the flour,]  
WITH-THE-ENABLEMENT-OF [you reach<sub>2</sub> the flour down off that shelf with your free hand?]  
⇒ Could you reach<sub>3</sub> me the flour down off that shelf with your free hand?  
Similarly: [I  $\text{MOVED}$  a path through the jungle]  
WITH-THE-ENABLEMENT-OF [I  $\text{FORMED}$  a path ( $\Rightarrow$  out)]  
WITH-THE-CAUSE-OF [I  $\text{MOVED}$  STUFF away]  
WITH-THE-CAUSE-OF [I hacked at the STUFF with my machete]  
⇒ I hacked out a path through the jungle with my machete.
- b. [the prisoner SENT a message to his confederate]  
WITH-THE-MANNER-OF [the prisoner  $\text{MOVED}$  the message along the water pipes]  
WITH-THE-ENABLEMENT-OF [the prisoner  $\text{FORMED}$  the message ( $\Rightarrow$  out)]  
WITH-THE-CAUSE-OF [the prisoner tapped on the water pipes]  
⇒ The prisoner tapped out a message along the water pipes to his confederate.

## 2.2 Motion + Path



## 2.3 Motion + Figure



## Language Groupings

**Table 1.2**  
Three main typological categories for Motion verbs

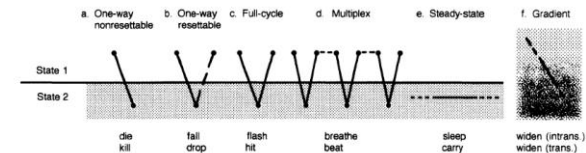
Language/language family	The particular components of a Motion event characteristically represented in the verb root
Romance Semitic Polynesian Nez Perce Caddo Japanese Korean	Motion + Path
Indo-European (not Romance) Chinese Finn-Ugric Ojibwa Warlpiri	Motion + Co-event
Atsugewi (and apparently most northern Hokan) Navaho	Motion + Figure

## 2.4 Typology of Motion Verbs

- **Motion + Co-Event**, Path, or Figure
- **Motion + Ground** – near Universal Exclusion (exceptions: *emplane*, *deplane*)
- **Motion + Two Semantic Components** – combinatorial explosion (*to box*, *to shelve*)
- **Motion + No Further Semantic Component** – inefficient (*estar*)
- **Motion + Minimally Differentiated Semantic Component** – (*straight line*, *curve*, and *circle path contours in ASL*)
- **Split System of Conflation** – different conflations for different types of Motion events ( $BE_{Loc}$  vs.  $MOVE$ )
- **Parallel System of Conflation** – different conflation types for the *same* type of Motion event
- **Intermixed System of Conflation** – no consistent pattern of conflation for a given type of Motion event

## 2.5 Aspect

- The pattern of distribution of action through time



- intrinsically part of verb root meaning
- determines how it interacts with grammatical elements that also have an aspectual meaning
- different languages have different patterns of aspect incorporation in their verbs
- verb roots' aspect incorporation can correlate with surrounding factors



## 2.6 Causation

*Different types of causative meaning incorporated in the verb root*

- |                                                            |                                                 |
|------------------------------------------------------------|-------------------------------------------------|
| a. The vase broke.                                         | Autonomous event (not causative)                |
| b. The vase broke from a ball's rolling into it.           | Resulting-event causation                       |
| c. A ball's rolling into it broke the vase.                | Causing-event causation                         |
| d. A ball broke the vase (in rolling into it).             | Instrument causation                            |
| e. I broke the vase in rolling a ball into it.             | Author causation (i.e., with result unintended) |
| f. I broke the vase by rolling a ball into it.             | Agent causation (i.e., with result intended)    |
| g. I broke my arm when I fell (= My arm broke [on me]...). | Undergoer situation (not causative)             |
| h. I walked to the store.                                  | Self-agentive causation                         |
| i. I sent him to the store.                                | Inductive causation (caused agency)             |

## 2.7 Interaction of Aspect and Causation

- **Stative** – being in a state
- **Inchoative** – entering into a state
- **Agentive** – putting into a state

## 2.8 Personation

- The role structure ascribed to an action
- **Monadic** – action manifested locally, in the body and movements of a single actor (*I will shave*)
- **Dyadic** – action manifested distributively, with an actor's body acting on that of a further participant (*I will shave John*)

## Personation

- Personation envelope / Transitivity envelope



Aa



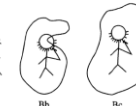
Ab

**Aa.** The girls is beating the drum. (dyadic, transitive)

**Ab.** The girl is drumming. (monadic, intransitive)



Ba



Bb



Bc

**Ba.** I shaved him. (dyadic, transitive)

**Bb.** I shaved myself. (reflexively dyadic, reflexively transitive)

**Bc.** I shaved. (monadic, intransitive)

## 2.9 Valence

- Traditionally, the number of distinct element types occurring in association with a verb
- Here, used just for the particular case assignment(s) that a verb exhibits
- Syntactic alternations of semantic roles
- A verb's constraints on its freedom to assign **focus** in a multi-roled event.

## Valence

Valence properties for emanate, emit, and radiate

Figure as subject

Light emanates from the sun.

\*Light emits from the sun.

Light radiates from the sun.

Ground as subject

\*The sun emanates light.

The sun emits light.

The sun radiates light.

*Emanate* requires the Figure as the subject.

*Emit* requires the Ground as the subject.

*Radiate* can incorporate either focus.

a. Valence patterns for a non-'from'-type Path (*F* = Figure, *G* = Ground, *A* = Agent)

	Nonagentive	Agentive
Basic	Perfume (F) suffused	I (A) suffused perfume
precedence	through the room (G).	(F) through the room (G).
Inverted	The room (G) suffused	I (A) suffused the room
precedence	with perfume (F).	(G) with perfume (F).

b. Valence patterns for a 'from'-type Path

	Nonagentive	Agentive
Basic	The gasoline (F) drained	I (A) drained the gasoline
precedence	from the fuel tank (G).	(F) from the fuel tank (G).
Inverted	The fuel tank (G)	I (A) drained the fuel tank
precedence	drained of gasoline (F).	(G) of gasoline (F).

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## 4. Saliency in the Verb Complex

- Saliency** – the degree to which a component of meaning, due to its type of linguistic representation, emerges into the foreground of attention, or on the contrary, forms part of the semantic background where it attracts little direct attention.
- Principle of backgrounding according to constituent type** - Other things being equal, a semantic component is backgrounded by expression in the main verb root or in any closed-class element, including a satellite. Elsewhere, though, it is foregrounded.
  - I went by plane to Hawaii last month.
  - I flew to Hawaii last month.
  - I went to Hawaii last month.
  - Use of aircraft foregrounded
  - Use of aircraft backgrounded
  - Use of aircraft absent

## Salience in the Verb Complex

- **Ready expression under backgrounding** – speakers tend express a concept more often when it can be referred to in a backgrounded way than where it can only be referred to in a foregrounded way.
- **Low cognitive cost of extra information under backgrounded** – extra information in background is included “for free”
- **Ready inclusion of extra information under backgrounding** – a language can casually and comfortably pack more information into a sentence where it can express that information in a backgrounded fashion than can another language that can't

*Spanish sentences closest to information-packed English sentence of (137)*

- a. El hombre corrió a -l sótano  
the man ran to-the cellar  
“The man ran to the cellar.”
- b. El hombre volvió a -l sótano corriendo  
the man went-back-to-the cellar running  
“The man returned to the cellar at a run.”
- c. El hombre bajó a -l sótano corriendo  
the man went-down-to-the cellar running  
“The man descended to the cellar at a run.”
- d. El hombre entró a -l sótano corriendo  
the man went-in-to-the cellar running  
“The man entered the cellar at a run.”

*The man ran back down into the cellar.*

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## 5. Conclusion

- Semantic elements and surface elements relate to each other in specific patterns, both typological and universal.
- There exist certain semantic categories: Motion Event, Figure, Ground, Path, Co-event, Precursion, Enablement, Cause, Manner, Personation, etc. along with syntactic verb complex
- Analysis of semantic decomposition at morpheme level, and across languages
- Whole system properties of semantic-surface relations (multiple semantic components per surface form)
- Meaning-form patterns can exhibit diachronic shifts/nonshifts in the history of a language
- Suggestion of cognitive structures and processes that underlie the newly posited semantic and syntactic categories