Lecture 2

Categories and Constructions

A. Grammatical Categories B. Conceptual Characterizations C. Nouns
D. Relational Expressions E. Grammatical Constructions

A. Grammatical Categories

(1)(a) A **category** (or **class**) is a set of elements viewed as being alike in certain respects. Any aspect of the world (or our experience) is subject to categorization.
(b) The basis for categorization can either be **intrinsic** (pertaining to the *nature* of category members) or **extrinsic** (pertaining to their *context*, *function*, or *behavior*).
(c) These are closely related, with no clear division. Intrinsic factors create the potential for extrinsic ones and may in turn be influenced by them.
(d) An element belongs to multiple categories based on different factors. Some of these are arranged hierarchically (classes > subclassess > sub-subclasses > ...).

(2) The traditional **parts of speech** offered a *semantic basis* for *grammatical categories*:
(a) The parts of speech are universal, distinct, and few in number, the usual list including noun, pronoun, verb, adjective, adverb, preposition, conjunction, and interjection.
(b) They have semantic definitions (e.g. a noun is the name of a person, place, or thing).
(c) They are exhaustive, every lexical item belonging to just one category.
(d) They are referred to by the rules of grammar and thus determine how a lexeme functions.

(3)(a) A central claim of Cognitive Grammar: basic grammatical categories, such as noun and verb, are universal and have semantic characterizations that apply to all their members.
(b) Linguistic doctrine: "No constant semantic effect is associated with the functioning of a morpheme as a noun, as a verb, or as any other part of speech." (Langacker 1968: 83)
(c) Standard argument: "Let's ask whether each part of speech really denotes a consistent kind of meaning ... Now it is true that any word that names an object will be a noun. But on the other hand, not every noun names an object. 'Earthquake' names, if anything, an action, as does 'concert'; 'redness' and 'size' name properties; 'place' and 'location' pretty obviously name locations. In fact, for just about any kind of entity we can think of, there exist nouns that name that kind of entity. So the grammatical notion of noun can't be given a definition in terms of what kind of entity it names ... A particular kind of entity need not correspond to a single part of speech either ... We conclude that parts of speech ... are not definable in terms of meaning." (Jackendoff 1994: 68-69)

(4) Generally accepted view (Croft 2001: 104):
(a) Lexical categories are defined *extrinsically*, on the basis of their *grammatical behavior*.
(b) A grammatical **construction** (or pattern) defines a grammatical class consisting of the lexemes that occur in it (e.g. the class of English verbs that occur in the passive).
(c) Constructions differ across languages, so there are *no universal grammatical categories*.
(d) Cross-linguistic comparison shows that language-specific classes center on certain regions in a universal "conceptual space" (e.g. 'object'). These are the category prototypes.
(e) These prototypes are associated with particular **discourse functions** (e.g. 'reference'). Universal classes defined in this way (e.g. noun and verb) are not *grammatical* categories.

(5) Non-validity of the standard argument:
(a) The inadequacy of particular definitions does not establish that none can be adequate.
(b) Only a limited range of candidates are considered (**conceptual archetypes**).
(c) It presupposes an **objectivist** semantics, making no reference to conceptualization or to **construal**, our capacity to conceive and portray the same situation in alternate ways.

(6)(a) **Conceptual archetypes:** general notions reflecting fundamental aspects of human experience, such as 'object', 'action', 'event', 'motion', 'property', and 'location'.
(b) Archetypes function as the **prototypes** of basic categories: 'object' for nouns (e.g. *cup*), 'event' for verbs (*break*), 'property' for adjectives (*blue*).
(c) Characterizations valid for all category members must be highly **schematic**, abstracting away from any specific conceptual content. They consist in **basic cognitive abilities**.

(7)(a) A **usage-based** framework handles categories of any kind and any degree of generality.
(b) At one extreme are **distributional classes**, defined by occurrence in a single construction. Their membership is often arbitrary (e.g. verbs forming their past tense in a certain way).
(c) Intermediate cases, participating in a number of constructions, are categories centered on a semantic prototype (e.g. gender classes, or nouns that take a certain classifier).
(d) At the other extreme are universal categories (like noun and verb) all of whose members instantiate a schematic meaning. These are independent of particular constructions.

(8)(a) Grammar consists in the structuring and symbolization of conceptual content. Classes like noun and verb, semantically defined but basic to grammar, are thus to be expected.
(b) Since constructions are meaningful, imposing semantic constraints on the elements appearing in them, there may well be no construction compatible with every member of a category figuring in its characterization.
(c) English *the* does not occur with proper names or pronouns (**the Barack Obama*, **the you*), as their meaning (presupposing identifiability) makes the article superfluous.

(9)(a) The parts-of-speech model [in (2)] adopts the **classical model of categorization**, where a category is defined by a single definition based on **objective** properties.
(b) Instead, CG assumes a **subjectivist** (or **conceptualist**) semantics and posits **complex categories** centered on **prototypes**.
(c) Category elements include both **extensions** from the prototype and more **schematic** structures representing the common features of more specific elements.
(d) Not every category has a schematic characterization valid for all members.

(10) The schematic definitions reflect a general proposal as to why certain grammatical notions (like noun, verb, subject, object, and possessive) are fundamental and possibly universal:
(a) Each such notion can be characterized semantically in terms of both a **prototype**, valid for central instances, and a **schema** instantiated by all instances.
(b) The prototype is an experientially grounded **conceptual archetype**, e.g. physical object. The schema resides in **basic cognitive abilities**, such as grouping.
(c) The basic abilities are initially manifested in the corresponding archetypes; presumably innate, they make it possible for structured experience to occur in the first place.
(d) At a later developmental stage, these same abilities are extended to other domains of experience, giving rise to non-prototypical instances.

B. Conceptual Characterizations

(11)(a) A **conception** (any kind of experience) consists in *processing activity*. An **entity** is anything we are capable of experiencing or apprehending.
(b) We can only be aware of so much at any one moment: a limited **scope of awareness**.
(c) The conception of multiple entities in the same scope of awareness is a single, complex experience (as opposed to separate, unrelated experiences).
(d) Such entities are generally *conceived in relation to one another* through **connecting operations**. These constitute the apprehension of a **relationship** (itself an entity).

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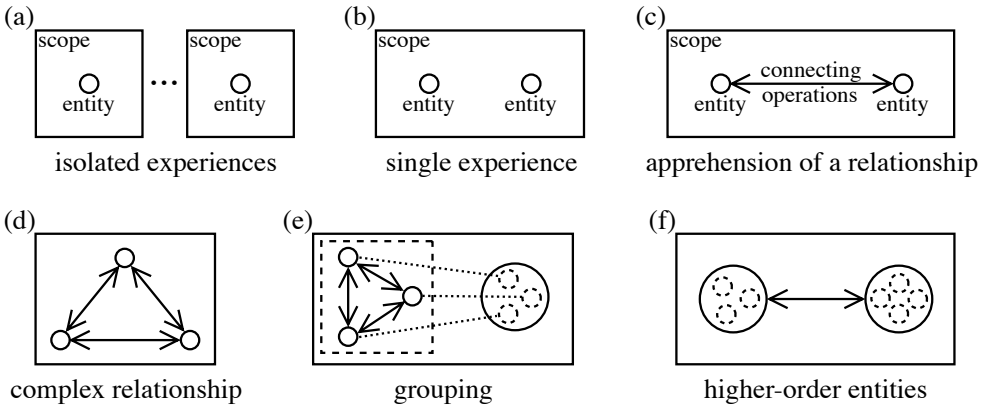

(13)(a) A complex conception usually represents multiple **levels of organization**, whereby the structure at one level is the basis for a structure that emerges at another, "higher" level.
(b) In **grouping**, a set of connected entities are conceived as a *single entity* for higher-level purposes. The resulting group can be connected to others through further operations.
(c) This many-to-one reduction facilitates processing: [7429153861] vs. [742]-[915]-[3861].

(14)(a) **Change** occurs through time. It involves a continuous series of situations, each of which "morphs into" the next (>), providing the basis for its apprehension.
(b) **Conceived time** (t) is time in its role as an *object of conception* (the time through which a conceived event occurs).
(c) **Processing time** (T) is time in its role as the *medium of conception* (the time required to conceptualize an event).
(d) **Sequential scanning:** following an event through time; the situation at a given moment in conceived time is apprehended at the corresponding moment of processing time.

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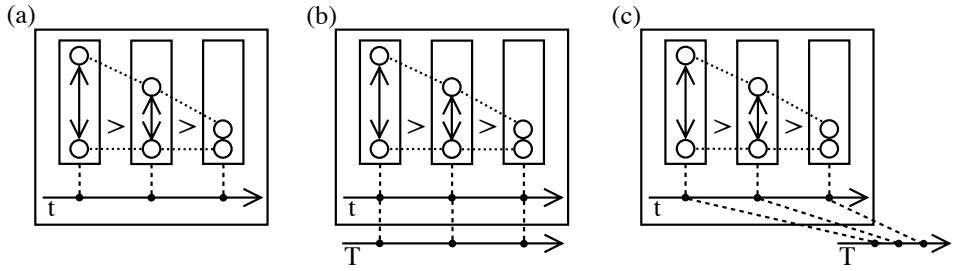

(16)(a) We can **focus attention** on any facet of a conception, e.g. a single entity, a *component* relationship, a *complex* relationship, or the higher-level entity obtained by grouping.
(b) Something conceived as a single entity—either intrinsically (like a point of light) or as the result of grouping (like a team)—is referred to as a **thing**.
(c) A relationship is **conceptually dependent** on the entities it connects, requiring them for its manifestation. The connected entities are part of the relationship.
(d) When a relationship is made the focus of attention, the connected entities receive some prominence as well. There is usually a **primary focus** and often a **secondary focus**.

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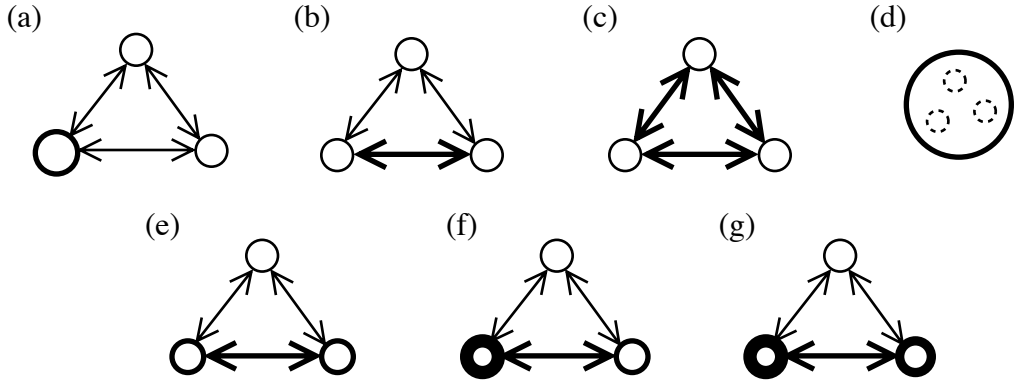

(18)(a) Only these fundamental cognitive abilities figure in the CG definition of basic categories.
(b) An expression's category depends on its **profile**, i.e. its *semantic focus of attention*. It is the expression's *conceptual referent*—the entity it designates within the content invoked.
(c) An expression profiles either a *thing* [as defined in (16)(b)] or a *relationship*.

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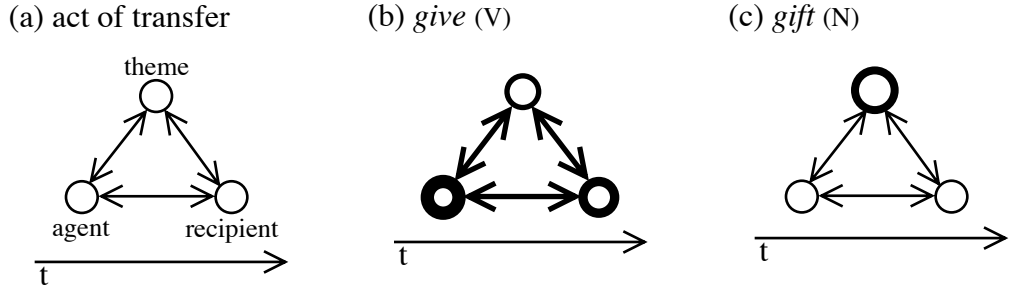

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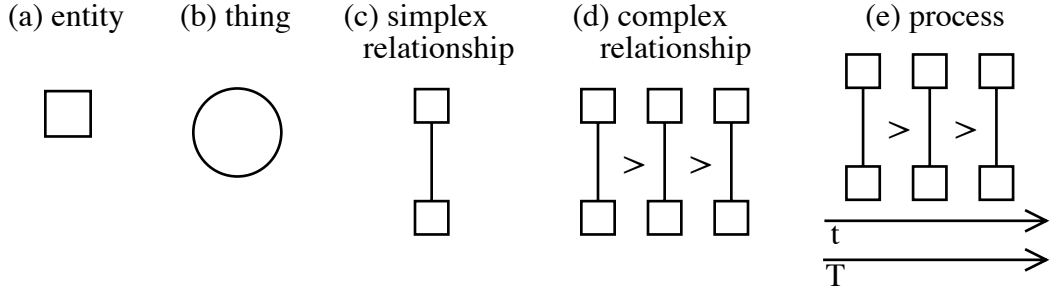
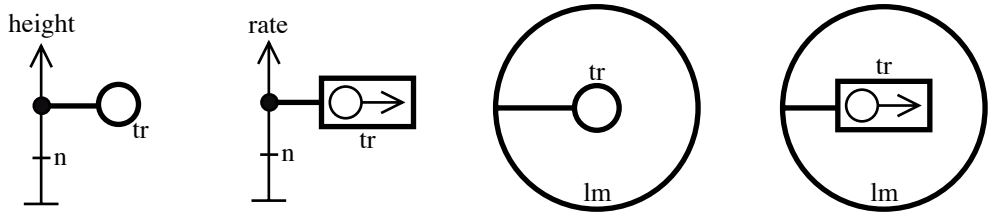


(21)(a) A noun profiles a **thing**. A verb profiles a **process**. Adjectives, adverbs, and prepositions profile relationships that are **non-processual** (i.e. they fail to qualify as processes).
(b) The *primary focal participant* in a profiled relationship is called the **trajector** (tr). A *secondary focal participant* is called a **landmark** (lm).
(c) Adjectives and adverbs profile non-processual relationships which have a trajector but not a focused landmark. They are distinguished by whether their trajector is a thing (***tall*** *boy*) or another relationship (*work* ***quickly***; ***extremely*** *difficult*; ***almost*** *excessively beautiful*).
(d) A preposition (or prepositional phrase) does have a focused landmark. Its trajector can either be a thing (e.g. *the alligator* ***in*** *the lake*) or a relation (*He swam* ***in*** *the lake*).

(22)

(a) *tall* (ADJ) (b) *quickly* (ADV) (c) *in* (P) (d) *in* (P)

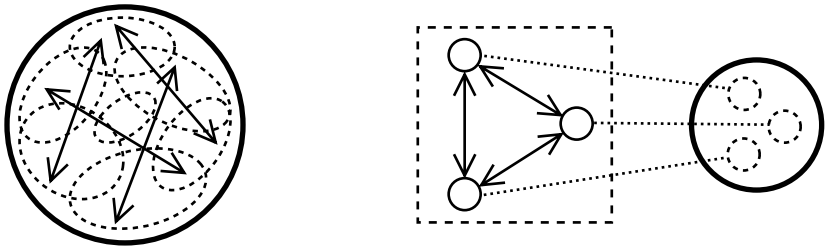


C. Nouns

(23)(a) A noun profiles a **thing**, defined abstractly by its unitary nature ("oneness").
(b) Since the world as we experience it is mentally constructed, even entities whose oneness seems inherent result from grouping activity at some level.
(c) An object (e.g. a *rock*) consists of physical substance distributed through a continuous region in space. Its conception requires that this continuity be apprehended.
(d) The mental activity serving to register continuity amounts to *connecting operations* whereby arbitrary "patches" of substance are grouped to form a single entity.
(e) Object nouns are prototypical because the grouping is so basic and automatic that we are usually unaware of constitutive entities—oneness predominates at the conscious level.

(24)

(a) Object Noun (b) Group Noun



(25)(a) A large number of nouns clearly do refer to groups: *team*, *stack*, *set*, *class*, *choir*, *orchestra*, *alphabet*, *orchard*, *forest*, *convoy*, *fleet*, *archipelago*, *herd*, *flock*, *mob*, *crowd*, *audience*, *cluster*, *bunch*, *array*, *library*, *anthology*, *collection*, *trio*, *quartet*, *chord*, *list*, *roster*, *lexicon*, *vocabulary*, *constellation*, *galaxy*, *family*, *tribe, committee*, *assembly* ...

(b) The non-typicality of group nouns makes the role of grouping more evident.

(c) In accordance with (10), the noun schema (based on grouping) is initially manifested in the archetype (object) functioning as category prototype, making its conception possible, and is later extended to less typical instances.

(d) Nouns are so varied in nature because grouping is a fundamental cognitive ability that applies to any domain of experience.

(26)(a) Prototypical **mass nouns** are terms for physical substances: *water*, *blood*, *wine*, *meat*, *flour*, *butter*, *wood*, *steel*, *glass*, *air*, *sand*, *clay*, *leather*, *cloth*, *plastic*, *paper*, *gasoline* ...

(b) A substance occupies space but has no inherent size or shape. It is conceived as being uniform throughout, any portion being the same as any other.

(c) Taking any portion of a mass, or adding more to it, yields another instance of the same substance type: ***the wine*** *in that bottle*; ***the wine*** *in this glass*; ***the wine*** *in those bottles*.

(d) **Count nouns** can occur with the indefinite article *a* or the number *one*: *a bottle*; *one bottle*. Mass nouns do not: **a leather*; **one gasoline*.

(e) **Countability** is not the same as the **oneness** characteristic of nouns in general.

(27)(a) Countability depends on **bounding**: an inherent limit on the extent of an instance, so that we can tell where one ends and another begins. [*another bottle*; *two bottles*; **more bottle*]

(b) A mass can be expanded indefinitely, never reaching completion so that further expansion constitutes another instance. [*more gasoline*; **another gasoline*; **two gasolines*]

(c) Despite the absence of inherent bounding, a mass represents a grouping (hence a single entity) by virtue of its component entities being connected and functioning as a whole.

(d) For a given patch of substance, the connecting operations consist in the registration of **spatial continuity** as well as an assessment of **qualitative uniformity**.

(e) A certain **quantity** is needed for a substance to manifest its properties or serve a function. The amount doing this does it as a whole, functioning as a single entity for this purpose.

(f) A substance being characterized by quality, spatial distribution is not essential. Spatially discontinuous patches of substance can still be grouped by qualitative uniformity.

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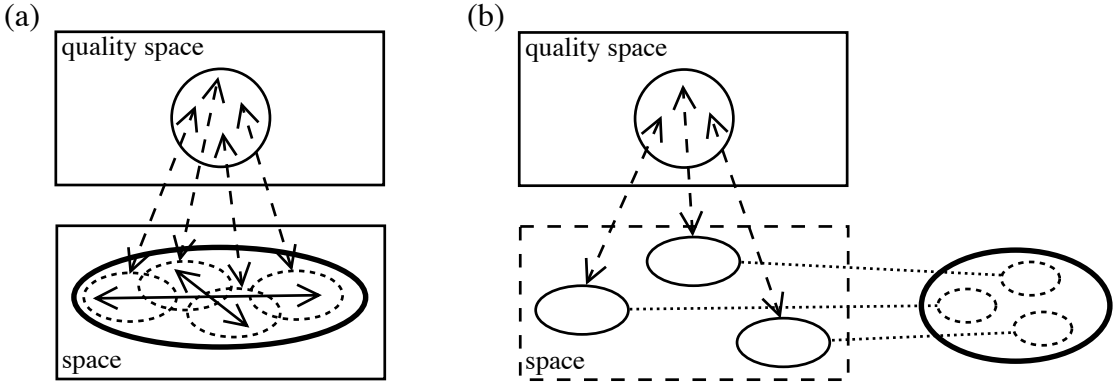
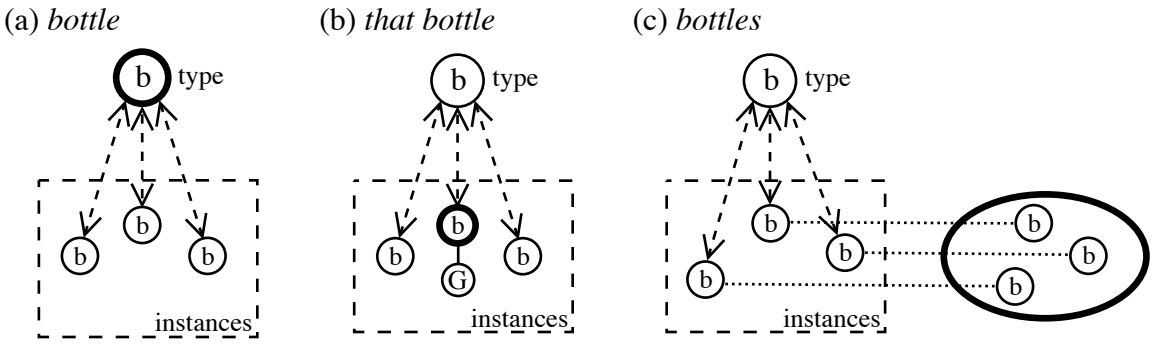


(29)(a) **Plural nouns** (*bottles*, *dogs*, *ideas* ...) derive from count nouns: *bottles* = *bottle* + *-s* PL.
(b) Plurals function as mass nouns (e.g. *a lot of {wine / bottles}*; *most {wine / bottles}*) but are special in some respects (e.g. *that wine* vs. *those bottles*; *much wine* vs. *many bottles*).
(c) A count noun names a **type** with multiple **instances**. A nominal (e.g. *that bottle*) refers to an instance and indicates how the profiled instance relates to the **ground** (G).
(d) A plural mass is obtained by grouping count-noun instances connected based on their common type. It is a mass because there is no inherent limit on the number of instances.
(e) A plural differs from a substance noun because its components are discrete and salient. It differs from a group noun (e.g. *team*) because its referent is unbounded.

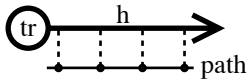
(30)



(31)(a) An expression's category is not determined by its overall conceptual content, or even the most important content, but by its **profile** (i.e. its *conceptual referent*).
(b) A **relational noun** (e.g. *uncle*, *elbow*, *gift*, *hiker*) is a noun because it profiles a thing, although its essential content is a relationship serving to characterize the referent.
(c) **Nominalization**—the derivation of nouns from other categories—need not introduce new content; it may just reside in a shift of profile within the content supplied by the stem.
(d) An **event noun** (e.g. *explosion*) profiles one instance of the verbal process (*explode*). The entities grouped to form this abstract thing are the component situations of the process.

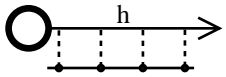
(32)

(a) *hike* (V)



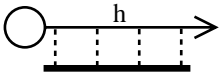
*She **hike**d through the canyon.*

(b) *hiker* (AGENT N)



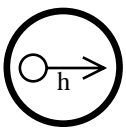
*The **hiker** stopped to rest.*

(c) *hike* (PATH N)



*This **hike** is all downhill.*

(d) *hike* (EVENT N)



*The **hike** took just an hour.*

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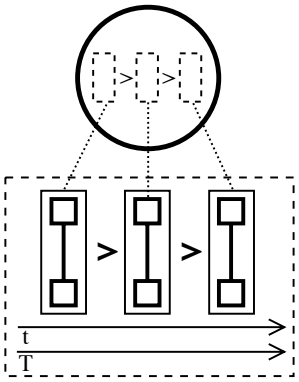

(34)(a) Entities like **numbers** and **qualities** are abstract in the sense that they do not themselves exist in space, but are invoked by adjectives to characterize those which do.

(b) These entities can also be focused as abstract objects of description, giving rise to nouns.

(c) ADJ: ***three*** *bottles* N: ***Three*** *is odd*. ***Three*** *is less than five*. ***Three*** *plus four is seven*.

(d) ADJ: ***sad*** *girl* PROPER N: ***Sadness*** *is unpleasant*. COUNT N: *Grief is a* ***sadness*** *caused by tragedy*. MASS N: *There's a lot of* ***sadness*** *in this family*.

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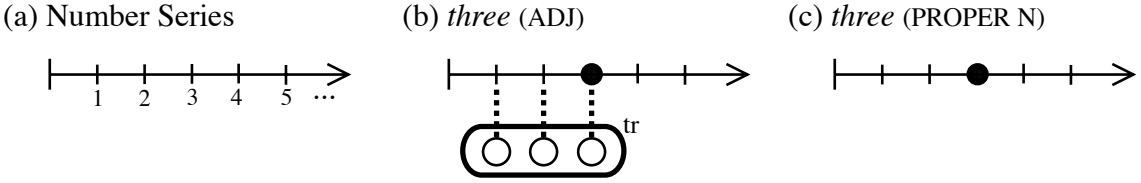

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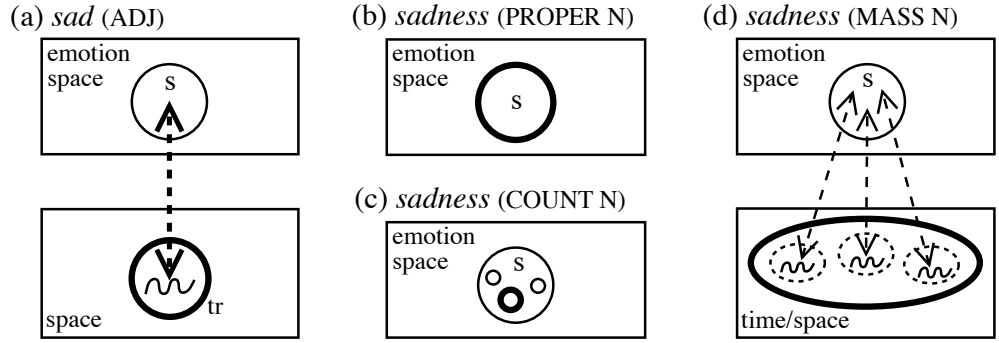

D. Relational Expressions

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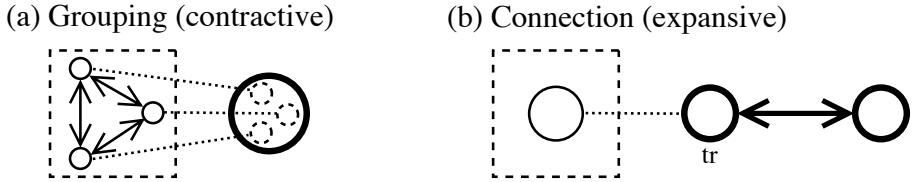
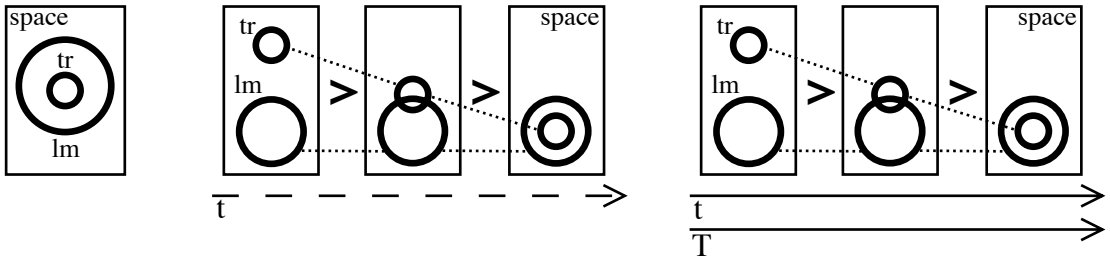


(38)(a) Factors contributing to the complexity of relational expressions: the number of *participants*; the number of *component situations*; the role of *time*.
(b) Typical adjectives are minimal in all three respects: only one focused participant; only one component situation; time not salient (full manifestation at a single moment).
(c) Prepositions are more complex by having a focused landmark in addition to the trajector. They can also be complex by consisting in multiple component situations.
(d) The preposition itself leaves time in the background. In *the road into the mountains*, time figures only secondarily through the implicit notion of travelling along the road.
(e) With verbs a complex relationship is specifically conceived as evolving through time and is scanned sequentially along this axis.

(39)

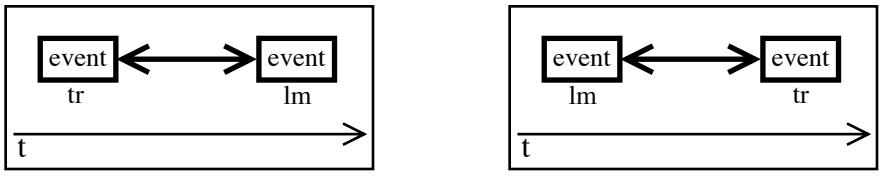
(a) *in* (SIMPLEX P) (b) *into* (COMPLEX P) (c) *enter* (V)



(40) Roles of time in relational expressions:
(a) Time (t) can function as the domain in which a simplex relationship is manifested.
(b) At a higher level, time (t) is the dimension through which a complex relationship evolves.
(c) A relationship is conceptualized through processing time (T). In verbs, the sequentiality of an event's conception mirrors that of its temporal evolution (sequential scanning).

(41)

(a) *before* (P) (b) *after* (P)



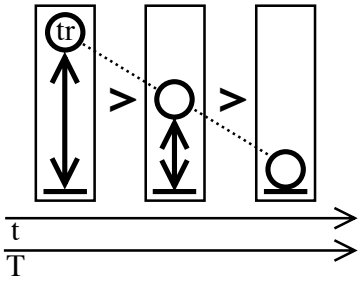
(42)(a) The high-level category of **expressions that profile relationships** includes both verbs, which profile *processes*, and expressions that profile *non-processual relations*.
(b) In the traditional terminology, one- vs. two-participant verbs are described as **intransitive** (*She hiked*) vs. **transitive** (*She cooked the squash*). For non-processual relationships, the same distinction is described with separate category labels: **adjective** vs. **preposition**.
(c) The higher-level category lets us make the generalization that *expressions which profile relationships* have either one or two focal participants.
(d) Within this category, verbs are distinguished by the *centrality of time* (evolution through time, sequential scanning). Hence their marking for tense and aspect (e.g. perfective *le*).

(43)(a) Only expressions that profile *non-processual relationships* can modify nouns.
(b) OK: *a **tall** building* (ADJ) *the tiger **in** that cage* (SIMPLEX P) *the road **into** the mountains* (COMPLEX P) Not OK: **the **cat** food* (N) **the **melt** ice* (V)
(c) A full clause profiles a *process*, often supplied by the lexical verb: *She **cook**ed the squash*.
(d) A non-processual element cannot stand alone as a clausal head: **The building **tall***.
The tiger **in that cage*. **The road **into** the mountains*.
(e) For clausal use, a schematic verb is required: *The building **is** tall*.
*The tiger **was** in that cage*. *The road **goes** into the mountains*.

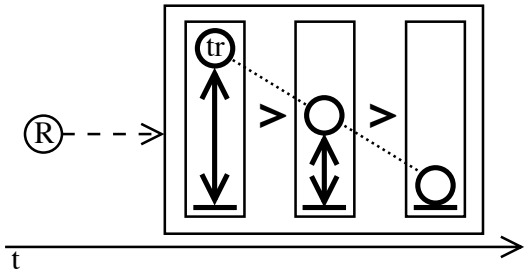
(44)(a) Infinitives and participles derive from verbs but are not themselves processual. They view an event holistically (rather than sequentially) and impose a certain **perspective** on it.
(b) INFINITIVE: *the first guest **to arrive*** *The guests are **to arrive** before noon*.
(c) PRESENT PARTICIPLE: *a **complaining** customer* *A customer was **complaining***.
(d) PAST PARTICIPLE: *the **broken** plate* *The plate is **broken***.

(45)

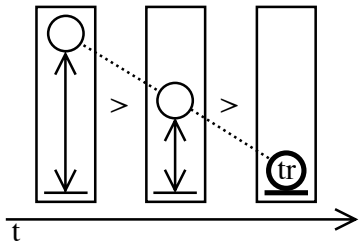
(a) *fall* (V)



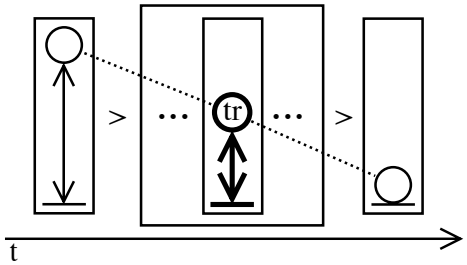
(b) *to fall* (INFINITIVE)



(c) *fallen* (PAST PARTICIPLE)



(d) *falling* (PRESENT PARTICIPLE)



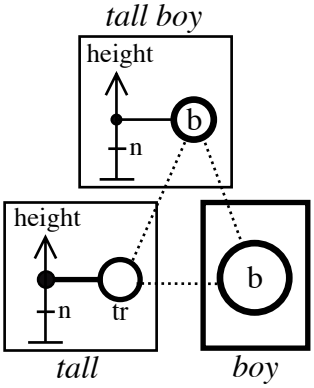
E. Grammatical Constructions

(46)(a) A **construction** is any pattern for combining simpler structures into more complex ones.
(b) CG posits only three basic kinds of structures: **semantic**, **phonological**, and **symbolic**. A symbolic structure pairs a semantic and a phonological structure (its two **poles**).
(c) Lexicon, morphology, and syntax form a continuum of symbolic structures. So like lexicon, grammar is inherently meaningful.
(d) A **grammatical construction** comprises an **assembly** of symbolic structures.

(47)(a) In a typical construction, two **component structures** are **integrated**—at both the semantic and the phonological pole—to form a **composite structure**.
(b) Integration is effected by **correspondences** between component elements, which project to the same element at the composite structure level.
(c) The phonological integration **symbolizes** the semantic integration.
(d) A component structure which imposes its profile on the composite structure is called the **profile determinant** (indicated by a heavy-line box).
(e) The profile determinant is the **head**, defined as the element that determines the composite expression's grammatical category (which depends on profiling).

(48)

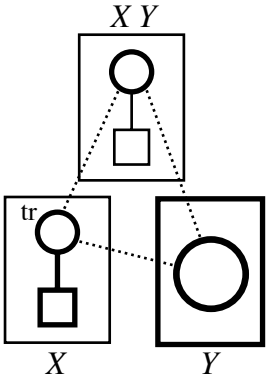
(a) Complex Expression



Composite Structure

Component Structures

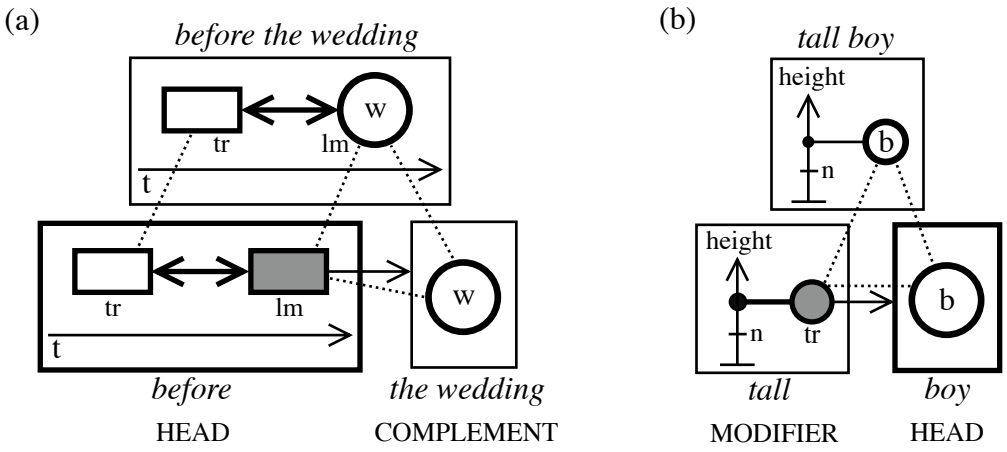
(b) Constructional Schema



(49)(a) The composite structure is not just the sum or union of its components, but a distinct structure with emergent properties.
(b) Regularities in the formation of complex expressions consist in **constructional schemas**: assemblies of symbolic structures that are partially or wholly schematic.
(c) An expression is **fully compositional** when it conforms to a constructional schema which specifies all of the composite structure's emergent properties.
(d) Since actual language use draws upon other resources (e.g. general and contextual knowledge), it normally exhibits only **partial compositionality**.

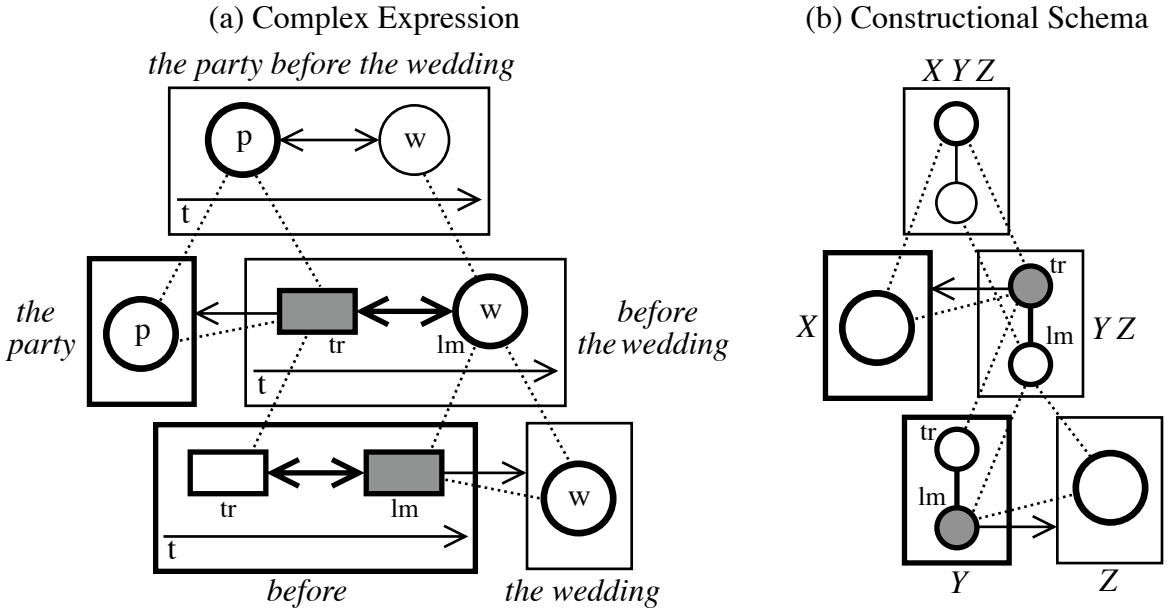
(50)(a) Typically, one component structure *elaborates* (specifies in finer detail) a salient substructure of the other. This substructure (shaded) is called an **elaboration site** (**e-site**).
(b) The traditional grammatical notions **complement** and **modifier** are semantically defined in terms of *profile determinance* (head) and *direction of elaboration*.
(c) A **complement** is a component structure which *elaborates* an e-site within the head.
(d) A **modifier** contains an e-site *elaborated by* the head.

(51)



(52)(a) The composite structure at one level of organization can function in turn as a component structure at a higher level of organization. The result is grammatical **constituency**.
(b) Constituency is a feature of both specific expressions and constructional schemas.
(c) However, it is neither fundamental nor essential. Hierarchical organization is just one aspect of the **assemblies** of symbolic structures constituting grammar.

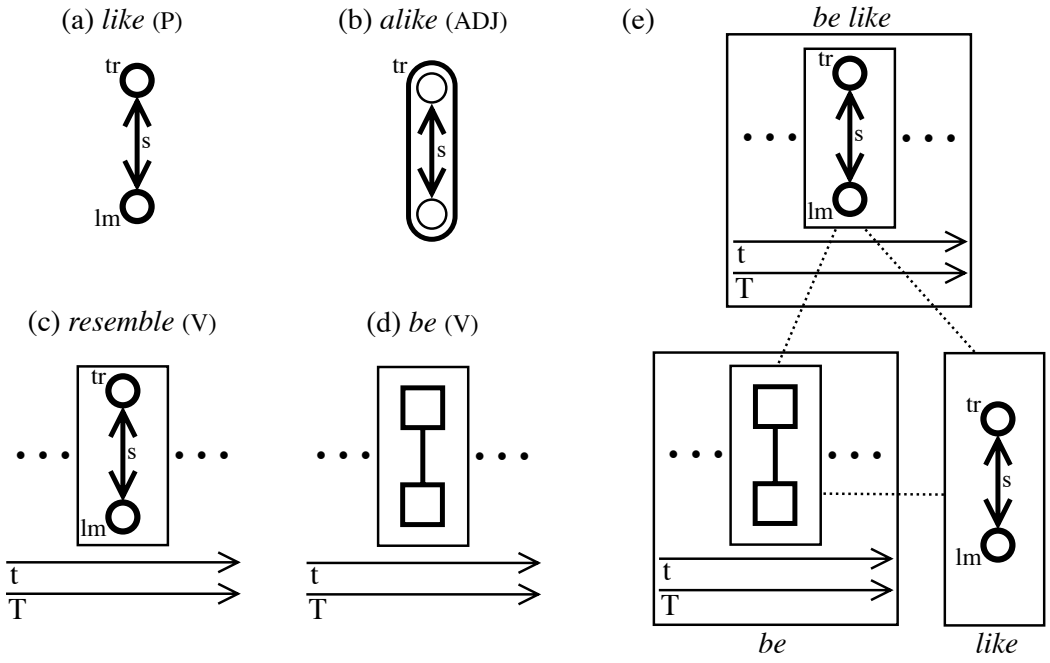
(53)



(54)(a) *Jill is **like** her mother.* *Jill and her mother are **alike**.* *Jill **resemble**s her mother.*
(b) **Perfective** and **imperfective** verbs are exactly analogous to **count** and **mass** nouns.
(c) A perfective verb (e.g. *break*, *hike*, *cook*, *learn*) profiles a process, usually involving change, whose evolution through time is conceived as being **bounded**.
(d) With an imperfective verb (e.g. *know*, *have*, *exist*, *contain*, *resemble*) the process is **internally uniform** (continuity instead of change) so it lacks inherent bounding.

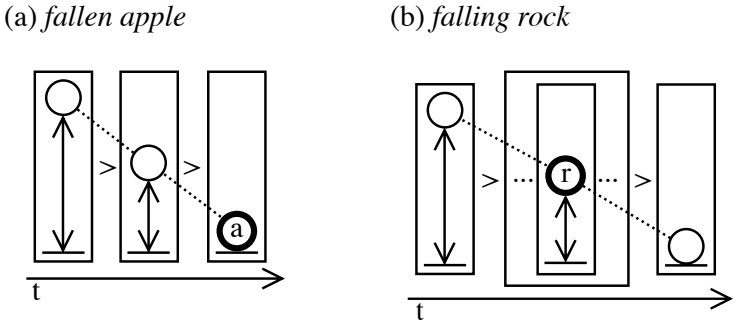
(55)(a) The verb *be* profiles an imperfective process that is fully **schematic**.
(b) *Be* combines with an adjective or prepositional phrase to form a complex verb.
(c) This construction reflects the conceptual characterization proposed for verbs: *be* extends and tracks through time the relationship profiled by the element it combines with.

(56)



(57)(a) With a **holistic** view of conceptual content—characteristic of nouns, adjectives, and prepositions—the full conception is active at a single moment in processing time.
(b) Nouns cannot be modified by verbs because their holistic nature does not allow a verb's sequentiality to be manifested.
(c) Infinitives and participles modify nouns because they construe an event holistically. Since they are non-processual and their trajector is a thing, they qualify as adjectives.

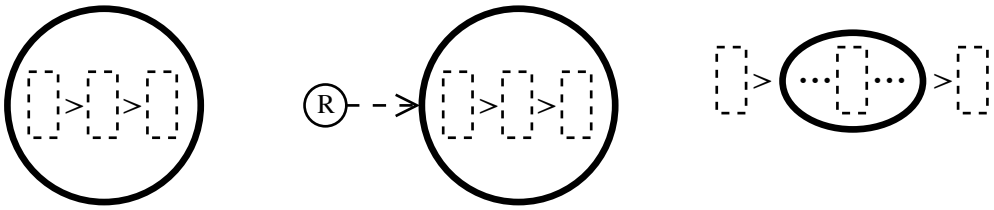
(58)



(59)(a) Being relational but non-processual, an infinitive or participle is half way between a verb and a noun. Use as a noun requires only the further step of shifting the profile to a thing.
(b) *She took a **fall**. **To fall** would be disastrous. **Falling** is a horrible experience.*

(60)

(a) *a* [V]$_N$ (b) [*to* V]$_N$ (c) [V*ing*]$_N$



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