Adposition and Case Supersenses v2.5: Guidelines for English

April 1, 2020

Abstract

This document offers a detailed linguistic description of SNACS (Semantic Network of Adposition and Case Supersenses; Schneider et al., 2018), an inventory of 50 semantic labels ("supersenses") that characterize the use of adpositions and case markers at a somewhat coarse level of granularity, as demonstrated in the STREUSLE corpus (https://github.com/nert-gu/streusle/; version 4.3 tracks guidelines version 2.5). Though the SNACS inventory aspires to be universal, this document is specific to English; documentation for other languages will be published separately.

Version 2 is a revision of the supersense inventory proposed for English by Schneider et al. (2015, 2016) (henceforth “v1”), which in turn was based on previous schemes. The present inventory was developed after extensive review of the v1 corpus annotations for English, plus previously unanalyzed genitive case possessives (Blodgett and Schneider, 2018), as well as consideration of adposition and case phenomena in Hebrew, Hindi, Korean, and German. Hwang et al. (2017) present the theoretical underpinnings of the v2 scheme. Schneider et al. (2018) summarize the scheme, its application to English corpus data, and an automatic disambiguation task.
# Contents

1 Overview ......................................................... 4  
1.1 What counts as an adposition? .............................. 4  
1.2 Inventory ..................................................... 5  
1.3 Limitations ................................................... 6  
1.4 Construal ..................................................... 6  

2 Circumstance ..................................................... 7  
2.1 Temporal ....................................................... 9  
2.1.1 Time ........................................................ 10  
2.1.2 Frequency ................................................. 12  
2.1.3 Duration ................................................... 13  
2.1.4 Interval .................................................... 14  
2.2 Locus ........................................................... 17  
2.2.1 Source ..................................................... 19  
2.2.2 Goal ......................................................... 21  
2.3 Path ............................................................ 22  
2.3.1 Direction ................................................... 24  
2.3.2 Extent ...................................................... 25  
2.4 Means .......................................................... 26  
2.5 Manner ........................................................ 26  
2.6 Explanation ................................................... 28  
2.6.1 Purpose .................................................... 28  

3 Participant ......................................................... 32  
3.1 Causor .......................................................... 32  
3.1.1 Agent ....................................................... 33  
3.2 Theme ........................................................ 34  
3.2.1 Topic ....................................................... 37  
3.3 Ancillary ....................................................... 40  
3.4 Stimulus ....................................................... 43  
3.5 Experiencer .................................................... 44  
3.6 Originator ...................................................... 45  
3.7 Recipient ...................................................... 46  
3.8 Cost ............................................................. 47  
3.9 Beneficiary .................................................... 48  
3.10 Instrument ..................................................... 50
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>Configuration</strong></td>
<td>52</td>
</tr>
<tr>
<td>4.1</td>
<td>Identity</td>
<td>52</td>
</tr>
<tr>
<td>4.2</td>
<td>Species</td>
<td>53</td>
</tr>
<tr>
<td>4.3</td>
<td>Gestalt</td>
<td>54</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Possessor</td>
<td>55</td>
</tr>
<tr>
<td>4.3.2</td>
<td>Whole</td>
<td>57</td>
</tr>
<tr>
<td>4.3.3</td>
<td>Org</td>
<td>59</td>
</tr>
<tr>
<td>4.3.4</td>
<td>QuantityItem</td>
<td>60</td>
</tr>
<tr>
<td>4.4</td>
<td>Characteristic</td>
<td>62</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Possession</td>
<td>67</td>
</tr>
<tr>
<td>4.4.2</td>
<td>PartPortion</td>
<td>68</td>
</tr>
<tr>
<td>4.4.3</td>
<td>OrgMember</td>
<td>70</td>
</tr>
<tr>
<td>4.4.4</td>
<td>QuantityValue</td>
<td>71</td>
</tr>
<tr>
<td>4.5</td>
<td>Ensemble</td>
<td>73</td>
</tr>
<tr>
<td>4.6</td>
<td>ComparisonRef</td>
<td>73</td>
</tr>
<tr>
<td>4.7</td>
<td>RateUnit</td>
<td>78</td>
</tr>
<tr>
<td>4.8</td>
<td>SocialRel</td>
<td>79</td>
</tr>
<tr>
<td>5</td>
<td>Constraints on Role and Function Combinations</td>
<td>80</td>
</tr>
<tr>
<td>5.1</td>
<td>Supersenses that are purely abstract</td>
<td>80</td>
</tr>
<tr>
<td>5.2</td>
<td>Supersenses that cannot serve as functions</td>
<td>80</td>
</tr>
<tr>
<td>5.3</td>
<td>Supersenses that cannot serve as roles</td>
<td>81</td>
</tr>
<tr>
<td>5.4</td>
<td>No temporal-locational construals</td>
<td>81</td>
</tr>
<tr>
<td>5.5</td>
<td>Construals where the function supersense is an ancestor or descendant of the role supersense</td>
<td>81</td>
</tr>
<tr>
<td>6</td>
<td>Special Constructions</td>
<td>82</td>
</tr>
<tr>
<td>6.1</td>
<td>Genitives/Possessives</td>
<td>82</td>
</tr>
<tr>
<td>6.2</td>
<td>Passives</td>
<td>84</td>
</tr>
<tr>
<td>6.3</td>
<td>Comparatives and Superlatives</td>
<td>84</td>
</tr>
<tr>
<td>6.3.1</td>
<td>As-as comparative construction</td>
<td>85</td>
</tr>
<tr>
<td>6.3.2</td>
<td>Superlatives</td>
<td>85</td>
</tr>
<tr>
<td>6.4</td>
<td>Infinitive Clauses</td>
<td>85</td>
</tr>
<tr>
<td>6.4.1</td>
<td>Infinitival varieties of Purpose</td>
<td>85</td>
</tr>
<tr>
<td>6.4.2</td>
<td>Infinitivals with for-subject</td>
<td>86</td>
</tr>
<tr>
<td>6.4.3</td>
<td>For_to infinitives</td>
<td>86</td>
</tr>
<tr>
<td>6.4.4</td>
<td>Other infinitivals</td>
<td>86</td>
</tr>
<tr>
<td>6.5</td>
<td>PP Idioms</td>
<td>87</td>
</tr>
<tr>
<td>6.5.1</td>
<td>PP Idioms vs. Multiword Prepositions</td>
<td>87</td>
</tr>
<tr>
<td>6.5.2</td>
<td>Reflexive PP Idioms</td>
<td>87</td>
</tr>
</tbody>
</table>
1 Overview

This document details version 2 of a scheme for annotating English prepositions and related grammatical markers with semantic class categories called super-senses. The motivation and general principles for this scheme are laid out in publications cited in the abstract. This document focuses on the technical details, giving definitions, descriptions, and examples for each supersense and a variety of prepositions and constructions that occasion its use.

1.1 What counts as an adposition?

“Adposition” is the cover term for prepositions and postpositions. Briefly, we consider an affix, word, or multiword expression to be adpositional if it:

- mediates a semantically asymmetric figure–ground relation between two concepts, and
- is a grammatical item that can mark an NP. We annotate tokens of these items even where they mark clauses (as a subordinator) or are intransitive.\(^1\) We also include always-intransitive grammatical items whose core meaning is spatial and highly schematic, like together, apart, and away.

Inspired by Huddleston and Pullum (2002), the above criteria are broad enough to include a use of a word like before whether it takes an NP complement, takes a clausal complement (traditionally considered a subordinating conjunction), or is intransitive (traditionally considered an adverb):

(1) a. It rained before the party. [NP complement]

\(^1\) Usually a coordinating conjunction, but only receives a supersense when it is prepositional, as described under PartPortion.
b. It rained **before** the party started. [clausal complement]
c. It rained **before**. [intransitive]

Even though they are not technically adpositions, we also apply adposition supersenses to possessive case marking (the clitic 's and possessive pronouns), and some uses of the infinitive marker to, as detailed in §6.

### 1.2 Inventory

The v2.5 hierarchy is a tree with 50 supersense labels. They are organized into three major subhierarchies: **Circumstance** (18 labels), **Participant** (13 labels), and **Configuration** (19 labels).

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Participant</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
<td>Causer</td>
<td>Identity</td>
</tr>
<tr>
<td>Time</td>
<td>Agent</td>
<td>Species</td>
</tr>
<tr>
<td>StartTime</td>
<td>Theme</td>
<td>Gestalt</td>
</tr>
<tr>
<td>EndTime</td>
<td>Topic</td>
<td>Possessor</td>
</tr>
<tr>
<td>Frequency</td>
<td>Ancillary</td>
<td>Whole</td>
</tr>
<tr>
<td>Duration</td>
<td>Stimulus</td>
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<tr>
<td>Interval</td>
<td>Experiencer</td>
<td>QuantityItem</td>
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<tr>
<td>Locus</td>
<td>Originator</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Source</td>
<td>Recipient</td>
<td>Possession</td>
</tr>
<tr>
<td>Goal</td>
<td>Cost</td>
<td>PartPortion</td>
</tr>
<tr>
<td>Path</td>
<td>Beneficiary</td>
<td>Stuff</td>
</tr>
<tr>
<td>Direction</td>
<td>Instrument</td>
<td>OrgMember</td>
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<tr>
<td>Extent</td>
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<td>QuantityValue</td>
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<tr>
<td>Means</td>
<td></td>
<td>Approximator</td>
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<tr>
<td>Manner</td>
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<td>RateUnit</td>
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<tr>
<td></td>
<td></td>
<td>SocialRel</td>
</tr>
</tbody>
</table>

- Items in the **Circumstance** subhierarchy are prototypically expressed as adjuncts of time, place, manner, purpose, etc. elaborating an event or entity.
- Items in the **Participant** subhierarchy are prototypically entities functioning as arguments to an event.
• Items in the **CONFIGURATION** subhierarchy are prototypically entities or properties in a static relationship to some entity.

**History.** v2.0–2.4 had 50 labels. In v2.5, the inventory was modified slightly: **CO-AGENT**, **CO-THEME**, and **INSTEADOF** were removed (a mostly deterministic change as each was merged with another label), **ORGROLE** was split into **ORG** and **ORGMEMBER**, **QUANTITY** was split into **QUANTITYITEM** and **QUANTITYVALUE**, and **ACCOMPNIER** was split into **ANCILLARY** and **ENSEMBLE**.

### 1.3 Limitations

This inventory is only designed to capture semantic relations with a figure–ground asymmetry. This excludes:

- The semantics of coordination, where the two sides of the relation are on equal footing (see §7.2).
- Aspects of meaning that pertain to information structure, discourse, or pragmatics (see §7.1).

Moreover, this inventory only captures semantic distinctions that tend to correlate with major differences in syntactic distribution. Thus, while there are supersense labels for locative (**LOCUS**), ablative (**SOURCE**), allative (**GOAL**), and **PATH** semantics—and analogous temporal categories—finer-grained details of spatiotemporal meaning are for the most part lexical (viz.: the difference between *in the box* and *on the box*, or temporal **at**, **before**, **during**, and **after**) and are not represented here.²

### 1.4 Construal

In some cases, following Hwang et al. (2017), an adposition usage will be analyzed with two of the supersenses from the inventory. This is done when the choice of adposition is analyzed as inviting a construal that might not otherwise be the default for the semantic relation it marks (perhaps due to semantic extension beyond the adposition’s more prototypical meanings).

This is illustrated in table 1. The two semantic dimensions of an adposition usage are:

**Scene Role:** What is the basic semantic relation between the preposition-linked elements (e.g., governor and object)? With a PP argument to a semantic

---
²This is not to claim that all members of a category can be grammatical in all the same contexts: *on Saturday* and *at 5:00* are both labeled **TIME**, though the prepositions are by no means interchangeable in American English. We are simply asserting that the different constructions specific to days of the week versus times of the day are minor aspects of the grammar of English.
The ball was hit **by** the batter

Put the book **on** the shelf

Put the book **onto** the shelf

I talked to **her**

I heard it **in** my bedroom

I heard it **from** my bedroom

John’s death

the windshield **of** the car

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Scene Role</th>
<th>Coding</th>
<th>Function</th>
<th>Congruent?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ball was hit <strong>by</strong> the batter</td>
<td>AGENT</td>
<td>by</td>
<td>AGENT</td>
<td>✓</td>
</tr>
<tr>
<td>Put the book <strong>on</strong> the shelf</td>
<td>GOAL</td>
<td>on</td>
<td>LOCUS</td>
<td>x</td>
</tr>
<tr>
<td>Put the book <strong>onto</strong> the shelf</td>
<td>GOAL</td>
<td>onto</td>
<td>GOAL</td>
<td>✓</td>
</tr>
<tr>
<td>I talked to <strong>her</strong></td>
<td>RECIPIENT</td>
<td>to</td>
<td>GOAL</td>
<td>x</td>
</tr>
<tr>
<td>I heard it <strong>in</strong> my bedroom</td>
<td>LOCUS</td>
<td>in</td>
<td>LOCUS</td>
<td>✓</td>
</tr>
<tr>
<td>I heard it <strong>from</strong> my bedroom</td>
<td>LOCUS</td>
<td>from</td>
<td>SOURCE</td>
<td>x</td>
</tr>
<tr>
<td>John’s death</td>
<td>THEME</td>
<td>’s</td>
<td>GESTALT</td>
<td>x</td>
</tr>
<tr>
<td>the windshield <strong>of</strong> the car</td>
<td>WHOLE</td>
<td>of</td>
<td>WHOLE</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1: Examples from Shalev et al. (2019) illustrating construal analysis in terms of scene role, morphosyntactic coding, and function. The scene role and function annotations are labels from §1.2 and are often but not always congruent for a particular token. The function annotation reflects the semantics of the morphosyntactic coding (i.e. the choice of adposition).

A predicate such as a content verb, this will often correspond to a semantic role like AGENT, THEME, or RECIPIENT.

**Function:** What semantic relation literally or metaphorically present in the scene is highlighted by the choice of adposition? Often this is a spatial meaning like LOCUS, SOURCE, or GOAL, even if the situation is not literally spatial.

In this document, construal is notated by Scene Role→Function when the supersenses differ.³ Token annotations given as SuperSense are shorthand for a congruent construal whose full form would be SuperSense→SuperSense.

Constraints on the supersenses that can serve as roles or as functions for English adpositions are discussed in §5.

2 CIRCUMSTANCE

Macrolabel for labels pertaining to space and time, and other relations that are usually semantically non-core properties of events.

CIRCUMSTANCE is used directly for:

- Contextualization

  (2) **In** arguing for tax reform, the president claimed that loopholes allow big corporations to profit from moving their headquarters overseas.

---

³This can be read as “Scene Role realized as Function” (or, “an underlying Scene Role relation that is realized via an adposition coding for Function”).
(3) You crossed the line in sharing confidential information. 
   [but see (233c) under Topic, which is syntactically parallel]

(4) I found out in our conversation that she speaks 5 languages.

(5) Circumstance~Locus:
   a. I haven't seen them in that setting.
   b. In that case, I wouldn't worry about it.

(6) We have to keep going through all these challenges. [metaphoric motion] (Circumstance~Path)

(7) Bipartisan compromise is unlikely with the election just around the corner.

(8) As we watched, she transformed into a cat. ['while', 'unfolding at the same time as'; not simply providing a 'when'—contrast (25) under Time]

For these cases, the preposition helps situate the background context in which the main event takes place. The background context is often realized as a subordinate clause preceding the main clause. It may also be realized as an adjective complement:

(9) a. My tutor was helpful in giving concrete examples and exercises.
   b. You were correct in answering the question.
      your answer

Relatedly, we use Circumstance to analyze involved in:

(10) a. I was involved in a car accident. (Circumstance)
   b. Many steps are involved in the process of buying a home.
      (Whole~Circumstance)

• Setting events

(11) We are having fun at the party. (Circumstance~Locus)
    on vacation

The object of the preposition is a noun denoting a containing event; it thus may help establish the place, time, and/or reason for the governing scene, but is not specifically providing any one of these, despite the locative preposition. These can be questioned (at least in some contexts) with Where? or When? (11) entails (12):

(12) We are at the party. (Circumstance~Locus)
    on vacation
which may be responsive to the questions *Where are you?* and *What are you doing?*. Journey-type PPs are treated similarly:

(13) They are **on** a journey **(CIRCUMSTANCE~LOCUS)**

- **on** the _way

- **on** their $ _way

- **Occasions**

(14) I bought her a bike **for** Christmas.

(15) I had peanut butter **for** lunch.

These simultaneously express a **Time** and some element of causality similar to **Purpose**. But the PP is not exactly answering a *Why?* or *When?* question. Instead, the sentence most naturally answers a question like *On what occasion was X done?* or *Under what circumstances did X happen?*.

- **Conditions**

(17) You can leave **as long as** your work is done.

- provided

(18) Whether you can leave depends on whether your work is done.

- **Conditions**

2.1 **Temporal**

<table>
<thead>
<tr>
<th>Supercategory for temporal descriptions: <strong>when, for how long, how often, how many times</strong>, etc. something happened or will happen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies directly only to event descriptors with an aspectual quality that do not fit any of the subcategories:</td>
</tr>
</tbody>
</table>

(19) The party is **over**. (= complete) **(TEMPORAL)**

(20) The plans are **in progress**. **(TEMPORAL~LOCUS)**

- **on hold**

---

4When the object of the preposition is not a (dynamic) event, as with *We are at odds/on medication*, **Characteristic~LOCUS** usually applies: see discussion of state PPs at **Characteristic**.
2.1.1 **Time**

*When* something happened or will happen, in relation to an explicit or implicit reference time or event.

(22) We ate in the afternoon .
    during the afternoon
    at 2:00
    on Friday

(23) Let's talk at lunch. [compare (16)]
    during

For a containing time period or event, *during* can be used and is unambiguously *Time*—unlike *in, at, and on*, which can also be locative.  

(24) a. They will greet us on our arrival.
    upon

b. I succeeded on the fourth attempt. [contrast *on occasion*, (48)]
    several occasions

(25) **As** meaning 'when' (contrast (8) under *Circumstance*):
    a. The lights went out as I opened the door.
    b. A bee stung me as I was eating lunch.

(26) I will finish after tomorrow.
    lunch
    you (do)

(27) I will finish by tomorrow.
    lunch

(28) I will contact you as soon as it's ready.
    once

---

5See §5.4 regarding the use of locational metaphors for temporal relations.
The preposition *since* is ambiguous:

(29) [‘after’] I bought a new car—that was *since* the breakup. (TIME)
(30) [‘ever since’] I have loved you *since* the party where we met. (STARTIME)
(31) [‘because’] I’ll try not to whistle *since* I know that gets on your nerves. (EXPLANATION)

Simple *TIME* is also used if the reference time is implicit and determined from the discourse:

(32) We broke up last year, and I haven’t seen her *since*. [since we broke up]

However, *TIME~INTERVAL* is used for adpositions whose complement (object) is the amount of time between two reference points:

(33) We left the party *after* an hour. [an hour after it started] (TIME~INTERVAL)
(34) We left the party an hour *ago*. [an hour before now] (TIME~INTERVAL)

The preposition *over* is also ambiguous:

(35) The deal was negotiated *over* (the course of) a year. (DURATION)
(36) He arrived in town *over* the weekend. (TIME~DURATION)

See discussion under DURATION.

If the scene role is *TIME*, the PP can usually be questioned with *When*?

*TIME* is also used for special constructions for expressing clock times, e.g. identifying a time via an offset:

(37) a. The alarm rang at a quarter *after* 8. (TIME)
     half past
b. The alarm rang at a quarter *to* 8. (TIME~GOAL)
c. The alarm rang at a quarter *of* 8.6 (TIME~SOURCE)

(38) The alarm rang 15 minutes *before* 8. (TIME) [“15 minutes” modifies the PP]

---

*History.* In v1, point-like temporal prepositions (*at, on, in, as*) were distinguished from displaced temporal prepositions (*before, after, etc.*) which present the two times in the relation as unequal. RELATIVE TIME inherited from TIME and was reserved for the displaced temporal prepositions, as well as subclasses STARTIME, ENDTIME, DEICTICTIME, and CLOCKTIMECxn.

For v2, RELATIVE TIME was merged into TIME: the distinction was found to be entirely lexical and lacked parallelism with the spatial hierarchy. CLOCKTIMECxn

---

6In some dialects, this is an alternate way to express the same meaning as (37b). It seems that *to* and *of* construe the same time interval from opposite directions.
was also merged with **Time**, the usages covered by the former (expressions of clock time like *ten to seven*) being exceedingly rare and not very different semantically from prepositions like **before**. **DeicticTime** became **Interval**.

**StartTime**

**When the event denoted by the governor begins.**

Prototypical prepositions are **from** and **since** (but see note under **Time** about the ambiguity of **since**):

(39)  
- a. The show will run **from** 10 a.m. to 2 p.m.  
- b. a document dating **from** the thirteenth century

Note that simple **Time** is used with verbs like **start** and **begin**: the event directly described by the PP is the starting, not the thing that started.

(40) The show will start **at** 10 a.m. (**Time**)

**EndTime**

**When the event denoted by the governor finishes.**

Prototypical prepositions are **to**, **until**, **till**, **up_to**, and **through**:

(41) The show will run from 10 a.m. **to** 2 p.m.

(42) Add the cider and boil **until** the liquid has reduced by half.

(43) If we have survived **up_to** now what is stopping us from surviving in the future?

(44) They will be in London from March 24 **through** May 7.

Note that simple **Time** is used with verbs like **end** and **finish**: the event directly described by the PP is the ending, not the thing that ended.

(45) The show will end **at** 2 p.m. (**Time**)

2.1.2 **Frequency**

**At what rate** something happens or continues, or the instance of repetition that the event represents.

(46) Guests were arriving **at** a steady clip.

(47) The risk becomes worse **by** the day.
(48) I see them on occasion. [contrast on ... occasion, (24b)]

from_time_to_time

(49) I see them on a daily basis. (FREQUENCY~MANNER) [cf. (174a)]

(50) I keep getting the same message over and over again.

FREQUENCY is also used when an iteration is specified with an obligatory ordinal number modifier. If the ordinal number is optional, the preposition presumably receives another label:

(51) a. The camcorder failed for the third time. (FREQUENCY)

b. I skipped lunch for three days in CHARACTERISTIC~LOCUS a row. (FREQUENCY) [see (402c)]

c. We arrived for our (third) visit. (PURPOSE)

Contrast: RATEUNIT

2.1.3 DURATION

Indication of how long an event or state lasts (with reference to an amount of time or time period/larger event that it spans).

(52) I walked for 20 minutes.

#in

(53) I walked to GOAL the store in/within 20 minutes. [see (65a)]

#for

(54) I walked a mile in/within 20 minutes.

#for

(55) I mowed the lawn for an hour.

in/within

Note that the presence of a goal (53) or extent of an event (a mile in (54)) can affect the choice DURATION preposition, blocking for. (55) shows a direct object which can be interpreted either as something against which partial progress is made—licensing for and the inference that some of the lawn was not reached—or as defining the complete scope of progress, licensing in/within and the inference that the lawn was covered in its entirety.

The object of a DURATION preposition can also be a reference event or time period used as a yardstick for the extent of the main event:

(56) I walked for the entire race. [the entire time of the race]
(57) I walked throughout the night.

through
well into

(58) The deal was negotiated over (the course of) a year.

But over can also mark a time period that contains the main event and is larger than it. While the path preposition over highlights that the object of the preposition extends over a period of time, it does not require that the main event extend over a period of time:

(59) He arrived in town over the weekend. (TIME~DURATION)

Note that during can be substituted for over in (59) but not (58).

Some for-DURATIONS measure the length of the specified event’s result:

(60) a. John went to the store for an hour. [he spent an hour at the store, not an hour going there]7

b. John left the party for an hour. [he spent an hour away from the party before returning]

A Duration may be a stretch of time in which a simple event is repeated iteratively or habitually:

(61) a. I lifted weights for an hour. [many individual lifting acts collectively lasting an hour]

b. I walked to the store for a year. [over the course of a year, habitually went to the store by walking]

See further discussion at INTERVAL.

2.1.4 INTERVAL

A marker that points retrospectively or prospectively in time, and if transitive, marks the time elapsed between two points in time.

The clearest example is ago, which only serves to locate the Time of some past event in terms of its distance from the present:

(62) I arrived a year ago. (TIME~INTERVAL)
[points backwards from the present: before now]

7This stands in contrast with John walked to the store for an hour, where the most natural reading is that it took an hour to get to the store (Chang et al., 1998, p. 230).
The most common use of INTERVAL is in the construal TIME→INTERVAL: the time of an event is described via a temporal offset from some other time.

Another retrospective marker, back, can be transitive (63), or can be an intransitive modifier of a TIME PP (64). Plain INTERVAL is used in the latter case:

(63)  I arrived a year back.⁸ (TIME→INTERVAL)
(64)  I arrived back in TIME June. (INTERVAL)

(This category is unusual in primarily marking a construal for a different scene role. But this seems justified given the restrictive set of English temporal prepositions that can appear with a temporal offset, and the distinct ambiguity of in. INTERVAL is designed as the temporal counterpart of DIRECTION, which can construe static distance measures; in fact, TIME DIRECTION was considered as a possible name, but INTERVAL seemed more straightforward for the most frequent class of usages.)

Other adpositions can also take an amount of intervening time as their complement (object):

(65)  I will eat in 10 minutes.
   a. ['for no more than 10 minutes' reading]: DURATION⁹
   b. ['10 minutes from now' reading]: TIME→INTERVAL¹⁰
(66)  The game started at 7:00, but I arrived after 20 minutes. (TIME→INTERVAL) within

Some adpositions license a temporal difference measure in modifier position, which does not qualify:

(67)  To beat the crowds, I will arrive a while before (it starts). (TIME) beforehand
(68)  The game started at 7:00, but I arrived 20 minutes after (it started). (TIME) afterward

The preposition after can be used either way—contrast (68) with (66).

Note that having INTERVAL as a separate category allows us to distinguish the sense of in in (65b) from both the DURATION sense (65a) and the TIME sense (in the morning).

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⁸While a while back and a few generations back are generally accepted, the use of back rather than ago for nearer and more precise temporal references, e.g. 10 minutes back, appears to be especially associated with Indian English (Yadurajan, 2001, p. 7).

⁹This usage of in has been classified under the terms frame adverbial (Pustejovsky, 1991) and span adverbial (Chang et al., 1998).

¹⁰This usage of in, as well as ago (62) and back (63, 64), are deictic, i.e., they are inherently relative to the speech time or deictic center. (See also Klein (1994, pp. 154–157).) This was taken to be a criterion for the v1 category DEICTIC TIME, but that was never well-defined in v1 and was broadened for this version.
**Versus Duration.** The prepositions *in* and *within* are ambiguous between *Interval* and *Duration*. The distinction can be subtle and context-dependent. The key test is whether the phrase answers a *When?* question. If so, its scene role is *Time*; otherwise, it is a *Duration*.

(69) **Time~Interval:**
   a. I reached the summit *in* 3 days. [= 3 days later, I reached the summit.]
   b. I was at the summit *within* 3 days. [= 3 days later, I was at the summit.]
   c. I finished climbing *in* 3 days. [= 3 days later, I finished climbing.]
   d. They had the engine fixed *in* 3 days. [= 3 days later, they had the engine fixed.]

(70) **Duration:**
   a. I reached the summit *in* 3 days. [it took not more than 3 days]
   b. I had climbed 1000 feet *in* [a total of] 3 days.
   c. I fixed the engine *in* 3 days. [it took not more than 3 days]

With a negated event, we use **Duration:**

(71) I haven't eaten *in* hours. [hours have passed since the last time I ate]
    for
    (#When haven't you eaten?)

*History.* Version 1 featured a label called *DeicticTime*, under *RelativeTime*, which was meant to cover *ago* and temporal usages of other adpositions (such as *in*) whose reference point is the utterance time or deictic center. This concept proved difficult to apply and was (without good justification) used as a catch-all for intransitive usages of temporal prepositions. For v2, the new concept of *Interval* is broader in that it drops the deictic requirement (also covering *within*), while *Time* has been clarified to include intransitive usages of prepositions like *before* where the reference time can be recovered from discourse context.

---

11By contrast, *after* seems to strongly favor *Time~Interval*. *After a week, I had climbed all the way to the summit* is possible, but the conclusion that the climbing took a week may be an inference rather than something that is directly expressed.
2.2 **Locus**

Location, condition, or value. May be abstract.

(72) I like to sing at the gym.
    on Main St.
    in the shower

(73) The cat is on top of the dog.
    off
    beside
    near

(74) There are flowers between the trees.
    among

(75) When you drive north, the river is on the right.

(76) I read it in a book.
    on a website

(77) the data in the study

(78) The charge is on my credit card.

(79) We met on a trip to Paris.

(80) The Dow is at a new high.
    20,000
    [absolute scalar point value: see discussion at COMPARISONREF]

(81) That's in my price range.

The **Locus** may be a part of another scene argument: part of a figure whose static orientation is described, or a focal part of a ground where contact with the figure occurs:  

(82) She was lying on her back.

(83) a. She kissed me on the cheek.
    b. I want to punch you in the face.

Words that incorporate a kind of reference point are **Locus** even without an overt object:

(84) a. The cat is inside the house.
    b. The cat is inside.

\[12\] **PartPortion** was considered but rejected for these cases. Instead we assume the verb semantics would stipulate that it licenses a **Theme** as well as a (core) **Locus** which must be a part of that **Theme**.
a. All passengers are aboard the ship.

b. All passengers are aboard.

Locus also applies to in, out, off, away, back, etc. when used to describe a location without an overt object:

a. The doctor is in the office.

   out_of

   away_from

b. The doctor is in.

   out

   away

c. They are out to eat.

And to around meaning ‘nearby’ or ‘in the area’:

a. Will you be around in the afternoon?

b. She’s the best doctor around!

In a phenomenon called fictive motion (Talmy, 1996), dynamic language may be used to describe static scenes. We use construal for these:

a. A road runs through my property. (Locus—path)

b. John saw Mary through the window.\(^\text{13}\) (Locus—path)

   over the fence

(90) The road extends to the river. (Locus—goal)

(91) I saw him from the roof. (Locus—source)

(93) Protesters were kept from the area. (Locus—source)

   missing

(94) a. We live across from you. (Locus—source)

b. We’re just across the street from you. (Locus—source)

Construal is also used for prepositions licensed by scalar adjectives of distance, (95), and prepositions used with a cardinal direction, (96):

(95) a. We are quite close to the river. (Locus—goal)

b. We are quite far from the river. (Locus—source)

(96) a. The river is to the north. (Locus—goal) [cf. (75)]

\(^{13}\)The scene establishes a static spatial arrangement of John, Mary, and the window/fence, with only metaphorical motion. Yet this is a non-prototypical locus: it cannot be questioned with Where!, for example. Moreover, we understand from the scene that the object of the preposition is something with respect to which the viewer is navigating in order to see without obstruction.
b. The river is north of Paris. (\textit{Locus}$\rightarrow$\textit{Source})

See also \textit{Locus}$\rightarrow$\textit{Direction} for static distance measurements, described under \textit{Direction}.

Qualitative states of entities are analyzed as \textit{Characteristic}$\rightarrow$\textit{Locus}, as described under \textit{Characteristic}.

2.2.1 \textbf{Source}

Initial location, condition, or value. May be abstract.

For motion events, the initial location is where the thing in motion (the figure) starts out. \textit{Source} also applies to abstract or metaphoric initial locations, including initial states in a dynamic event.

In English, a prototypical \textit{Source} preposition is \textit{from}:

\begin{enumerate}
\item[(97)] The cat jumped \textit{from} the box.
\item[(98)] The cat jumped \textit{from} the ledge.
\item[(99)] I got it \textit{from} the internet.
\item[(100)] people \textit{from} France
\item[(101)] The temperature is rising \textit{from} a low of 30 degrees.
\item[(102)] I have arrived \textit{from} work.
\item[(103)] We discovered he was French \textit{from} his attire. [indication]
\item[(104)] I made it \textit{out_of} clay. [material]
\item[(105)] She awoke \textit{from} a coma.
\item[(106)] We are moving \textit{off_of} that strategy.
\end{enumerate}

The \textit{Source} use of \textit{from} can combine with a specific locative PP:

\begin{enumerate}
\item[(107)] I took the cat \textit{from} behind the couch.
\end{enumerate}

Note that \textit{away_from} is ambiguous between marking a starting point (\textit{Source}) and a separate orientational reference point (\textit{Direction}):

\begin{enumerate}
\item[(108)] At the sound of the gun, the sprinters ran \textit{away_from} the starting line.
\end{enumerate}
The bikers ride parallel to the river for several miles, then head east, away from the river. (Direction: bikers are never at the river)

Note, too, that off( of) and out( of) can also mark simple states:

(110) I am off medications. (Characteristic~ Locus) work

(111) The lights are off. (Characteristic~ Locus) out

(112) Stay out of trouble. (Characteristic~ Locus)

States are discussed at length under Characteristic. There is also a (negated) possession sense of out/out_of:

(113) We are out of toilet paper. (Possession)

Sometimes a specific Source is implicit, and the preposition is intransitive. But if no specific referent is implied, another label may be more appropriate:

(114) The cat was sitting on the ledge, then jumped off. (Source: implicit ‘of it’)

(115) He was offered the deal, but walked away. (Source: implicit ‘from it’)

(116) The bird flew away. (Direction: vaguely away from the viewpoint) off

Source is prototypically inanimate, though it can be used to construe animate Participants (especially Originator and Causer). Contrasts with Goal.

Agency as giving. When an Agent’s action to help somebody is conceptualized as giving, and the nominalized action as the thing given, then from can mark the Agent (metaphorical giver). If the from-PP is adnominal, Agent~ Source is used (117). However, if the from-PP is adverbial, and the verb relates to the metaphoric transfer rather than the event described by the action nominal, then the argument linking becomes too complicated for this scheme to express; simple Source is used by default (118):

(117) The attention from the staff made us feel welcome. (Agent~ Source)

(118) Source:
   a. I received great care from this doctor.
   b. I got a second chance from her.
   c. I need a favor from you.
2.2.2 **GOAL**

Final location (destination), condition, or value. May be abstract.

Prototypical prepositions include *to*, *into*, and *onto*:

(119) I ran *to* the store.
(120) The cat jumped *onto* the ledge.
(121) I touched my ear *to* the floor.
(122) She sank *to* her knees.
(123) Add vanilla extract *to* the mix.
(124) Everyone contributed *to* the meeting.
(125) The temperature is rising *to* a high of 40 degrees.
(126) We have access *to* the library’s extensive collections.
(127) She slipped *into* a coma.
(128) The drugs put her *in* a coma. *(GOAL~LOCUS)*
(129) **Result** *(Huddleston and Pullum, 2002, p. 1224)*:
  a. We arrived at the airport only *to* discover that our flight had been can-
     celed.
  b. May you live *to* be 100!

For motion events, a **GOAL** must have been reached if the event has progressed to completion (was not interrupted). **DIRECTION** is used instead for **toward(s)** and **for**, which mark an intended destination that is not necessarily reached:

(130) a. I headed *to* work. *(GOAL)*
    b. I headed *towards* work but never made it there. *(DIRECTION)*

**go to.** A conventional way to express one's status as a student at some school is with the expression *go to (name or kind of school)*. Construal is used when *go to* indicates student status, rather than (or in addition to) physical attendance:

(131) I went *to* (school at LOCUS) UC Berkeley. *(ORG~GOAL)*
(131’ ) I went *to* UC Berkeley for the football game. *(GOAL)*
Going to a business as a customer, going to an attorney as a client, going to a
doctor as a patient, etc. can also convey long-term status, but there is consider-
able gray area between habitual going and being in a professional relationship,
so we simply use \textit{Goal}:

\begin{equation}
(132) \text{ I go to Dr. Smith for my allergies. (GOAL)}
\end{equation}

\textbf{Locative as destination.} \quad \text{English regularly allows canonically static locative prepo-
sitions to mark goals with motion verbs like \textit{put}. We use the GOAL$\sim$LOCUS con-
strual to capture both the static and dynamic aspects of meaning:}

\begin{equation}
(133) \begin{align*}
\text{GOAL$\sim$LOCUS:} \\
a. & \text{ I put the lamp next to the chair.} \\
b. & \text{ I’ll just hop into the shower.} \\
c. & \text{ I put my CV on the internet.} \\
d. & \text{ The cat jumped on my face.} \\
e. & \text{ The box fell on its side.} \\
f. & \text{ We arrived at the airport.}
\end{align*}
\end{equation}

\textbf{Application of a substance.}

\begin{equation}
(134) \begin{align*}
a. & \text{ the paint that was applied to the wall (GOAL)} \\
b. & \text{ the paint that was sprayed onto the wall (GOAL)} \\
c. & \text{ the paint that was sprayed on the wall (GOAL$\sim$LOCUS)}
\end{align*}
\end{equation}

The wall is the endpoint of the paint, hence \textit{Goal} is the scene role. (Though the
wall can be said to be affected by the action, we prioritize the motion aspect of
the scene in choosing \textit{Goal} rather than \textit{Theme}.)

\textit{Goal} is prototypically inanimate, though it can be used to construe animate
\textbf{Participants} (especially \textit{Recipient}). Contrasts with \textit{Source}.

\subsection*{2.3 \textbf{Path}}

\begin{table}[h]
\centering
\begin{tabular}{|p{0.9\textwidth}|}
\hline
\textbf{The ground that must be covered in order for the motion to be complete.} \\
\hline
\textbf{The ground covered is often a linear extent with or without specific starting and ending points:} \\
\hline
(135) \quad \textbf{The bird flew over the building.} \\
\hline
\end{tabular}
\end{table}
The sun traveled across the sky.

Hot water is running through the pipes.

They dance in a circle. (PATH~LOCUS)

It can also be a waypoint/something that must be passed or encircled.

We flew to Rome via Paris.

I go by that coffee shop every morning.

The earth has completed another orbit around the sun.

If this is a portal in the boundary of a container, it is often construed as SOURCE, GOAL, or LOCUS:

The bird flew in the window. (PATH~LOCUS)

The bird flew out the window. (PATH~SOURCE)

A cool breeze blew into the window. (PATH~GOAL)

However, if the entirety of the motion event is simply located, LOCUS applies:

The bird was flying in the house. [The flying took place in the house.] (LOCUS)

They were running on the street. [The running took place on the street.] (LOCUS)

The prepositions around and throughout can mark a region in which motion that follows an aimless or complex trajectory is contained. Construal is used for these, whether or not the region is explicit:

LOCUS~PATH:
  a. The kids ran around.
  b. The kids ran around throughout the kitchen.
  c. The kids ran around in the kitchen.

See also: INSTRUMENT, MANNER

History. The v1 hierarchy distinguished many different subcategories of path descriptions. The labels TRAVERSED, 1DTRAJECTORY, 2DAREA, 3DMEDIUM, CONTOUR, VIA, TRANSIT, and COURSE have all been merged with PATH for v2.
2.3.1 **Direction**

How motion or an object is aimed/oriented.

A **Direction** expresses the orientation of a stationary figure or of a figure’s motion. Prototypical markers\(^{14}\) are *away* and *back*; *up* and *down*; *off*; and *out*, provided that no specific **Source** or **Goal** is salient:

\(148\) The bird flew **up**.

\(149\) I walked **over** to where they were sitting.

\(150\) The price shot **up**.

In addition, transitive **toward(s)**, **for**, and **at** can indicate where something is aimed or directed (but see discussion at **Goal**):

\(151\) The camera is aimed **at** the subject.

\(152\) The toddler kicked **at** the wall.

See discussion of **away_from** at **Source**.

**Distance.** **Locus~Direction** is used for expressions of static distance between two points:

\(153\) a. The mountains are 3 km **away**. (**Locus~Direction**)

\(154\) b. The mountains are 3 km **away_from** our house. (**Locus~Direction**)

This also applies to distances measured by travel time (the amount of time is taken to be metonymic for the physical distance):

\(154\) The mountains are an hour **away**. (**Locus~Direction**)

Compare **Extent**, which is the length of a path of motion or the amount of change.

\(^{14}\)Known variously as adverbs, particles, and intransitive prepositions.
Informal direction modifier in location description.

(155) They live (way) \textit{out past} the highway. (\textsc{locus} \textasciitilde \textsc{direction}) \textit{over by} the school

Cf. (64) at \textsc{interval}.

2.3.2 \textbf{Extent}

The size of a path, amount of change, or degree.

This can be the physical distance traversed or the amount of change on a scale:

(156) We ran \textit{for} miles.

(157) The price shot up \textit{by} 10%.

(158) an increase \textit{of} 10% (\textsc{extent} \textasciitilde \textsc{identity})

For static distance measurements, see \textsc{direction}.

For scalar \textit{as} (see §6.3.1), \textsc{extent} serves as the function (and sometimes also the role):

(159) a. I helped \textit{as} much as I could. (\textsc{extent})

       b. Your face is \textit{as} red as a rose. (\textsc{characteristic} \textasciitilde \textsc{extent})

       c. I stayed \textit{as} long as I could. (\textsc{duration} \textasciitilde \textsc{extent})

\textsc{extent} also covers degree expressions, such as the following PP idioms:

(160) a. I'm not tired \textit{at all}.

       b. The food is mediocre \textit{at best}.

       c. You should \textit{at least} try.

       d. It is the worst \textit{by far}.

       e. We've finished \textit{for the most part}.

       f. It was a success \textit{in every respect}.

       \hspace{1cm} \textit{on all levels}

       g. I hate it when they repeat a song \textit{to death}.

Typically these are licensed by a verb or adjective.
2.4 **Means**

Secondary action or event presented as playing an intermediate causal role in facilitating (but not instigating) the main event.

Prototypically a volitional action, though not necessarily (164). A volitional **Means** will often modify an intended result, though the outcome can be unintended as well (163).

(161) Open the door by turning the knob.
(162) They retaliated by shooting .

(163) The owners destroyed the company by growing it too fast.
(164) Chlorophyll absorbs the light by transfer of electrons.

**Means** is similar to **Instrument**, which is used for causally supporting entities and is a kind of **Participant**.

Contrast with **Explanation**, which characterizes why something happens. I.e., an **Explanation** portrays the secondary event as the causal instigator of the main event, whereas **Means** portrays it merely as a facilitator.

Contrast also with **Manner**. Both **Means** and **Manner** elaborate on the **how** of an event; however, a **Manner** describes a quality of the main event, rather than specifying a facilitating event.

**History.** In v1, **Means** was a subtype of **Instrument**, but with the removal of multiple inheritance for v2, the former was moved directly under **Circumstance** and the latter directly under **Participant**.

2.5 **Manner**

Qualitative description of a situation, adding color to the main scene.

**Manner** is used as the scene role for several kinds of descriptors which typically license some sort of **How?** question:

- The style in which an action is performed or an event unfolds, expressed adverbially (canonical use of the term “manner”):

  (165) He reacted with anger.\(^{15}\)  
  \[\text{in anger} \]
  \[\text{angrily} \]

\(^{15}\) He reacted out of anger is **Explanation**$\rightarrow$**Source**.
(166) He reacted with nervous laughter. [contrast: MEANS]
(167) I wrote the book in French. [contrast (402d)]
They chatted
(168) I made the decision by myself without anyone else on my own. [see §6.5.2]
(169) We talked in person.
(170) MANNER~COMPARISONREF:
  a. You eat like a pig (eats).
  b. You smell like a pig.
(171) Your father smells of elderberries. (MANNER~STUFF) [also (467)]
The soup tastes
(172) She loves teaching, and it shows in her smile. (MANNER~LOCUS)
By contrast, depictives characterizing a participant of an event have a scene role of CHARACTERISTIC:
(173) She entered the room in a stupor. (= she was in a stupor when she drunk entered) (CHARACTERISTIC~LOCUS) [repeated: CHARACTERISTIC]

• What + like (what he looks like, etc.): see (466) under COMPARISONREF.
• On a(n)...basis: There seems to be an event-modifying construction on a(n) MODIFIER basis where the modifier phrase reflects the scene role being filled. We use MANNER as the function:
(174) a. The legislation was passed on a bipartisan basis. (MANNER)
    b. I see them on a daily basis. (FREQUENCY~MANNER) [also (49)]

See also: MEANS, CHARACTERISTIC, COMPARISONREF.

History. In v1, MANNER was positioned as an ancestor of all categories that license a How? question, including INSTRUMENT, MEANS, and CONTOUR, as in (138). This criterion was deemed too broad, so MANNER has no subtypes in v2.
2.6 **EXPLANATION**

Assertion of *why* something happens or is the case.

This marks a secondary event that is asserted as the reason for the main event or state.

(175) I went outside *because of* the smell.

(176) The rain is *due to* a cold front.

(177) He reacted *out of* anger. *(EXPLANATION~SOURCE)*

(178) a. He thanked her *for* the cookies.
   b. Thank you *for* being so helpful.

When a preposition like *after* is used and the relation is temporal as well as causal, construal captures the overlap. While *since* and *as* can also be temporal, there are tokens where they cannot be paraphrased respectively with *after* and *when*:

(179) I joined a protest *after* the shameful vote in Congress. *(EXPLANATION~TIME)*

(180) Her popularity has grown *since* she announced a bid for president. *(EXPLANATION~TIME)*

(181) I will appoint him *since* he is most qualified for the job. *(EXPLANATION)*

   as
   #after
   #when


2.6.1 **PURPOSE**

A desired outcome presented as contingent on some event, situation, entity, or resource. The PURPOSE may be specific (e.g., an outcome that somebody tries to achieve by performing an action) or generic (e.g., an entity that was designed for or incidentally provides some affordance).

Central usages of PURPOSE explain the motivation behind (hence subtype of EXPLANATION) an action; the action serves as a means for achieving or facilitating the PURPOSE. Yet it is possible to complete the action without realizing the purpose.

Prototypical markers include *for* and infinitive marker *to*:
a. He rose to make a grand speech.
b. He rose for a grand speech.
c. surgery to treat a leg injury

Something directly manipulated/affected can stand in metonymically for the desired event:

a. I went to the store for eggs. [understood: ‘to acquire/buy eggs’]
b. surgery for a leg injury [understood: ‘to treat a leg injury’]

Less central usages present a potentially desirable outcome that could be brought about thanks to the availability of an entity, such as a tool, facility, or expendable resource.\(^\text{16}\)

a. There is some wood to start a fire (with).
b. Do you have a couch to sleep on for sleeping on?
c. This place is great for ping-pong.

However, this category excludes infinitival complements of modal and aspectual predicates that lack a direct object:

a. He wants/needs to leave. (\(^i\))
b. He is ready to leave. (\(^i\))
c. He started/managed to leave. (\(^i\))

The following tests help to clarify the boundaries of PURPOSE:

1. If a relation can be phrased as IN ORDER to VP or IN ORDER for NP to VP, it is a PURPOSE.

a. I arrived (IN ORDER) to see the movie.
b. I need $10 (IN ORDER) to see the movie.
c. It takes $10 (IN ORDER) to see the movie.
d. Bring the product to the store (IN ORDER) for us to service it.
e. Bring the product to the store (IN ORDER) for the part to be replaced.

2. If a relation can be phrased as for the PURPOSE OF NP, or for the PURPOSE of <inferred verb> NP (provided that the meaning is not better captured by another label, e.g. BENEFICIARY), or that <someone> INTENDS to VP, it is a PURPOSE.

\(^{16}\)In FrameNet as of v1.7, these sorts of purposes are labeled as Inherent_purpose. See, e.g., the example “MONEY [to support yourself and your family]” in the Money frame (https://framenet2.icsi.berkeley.edu/fnReports/data/lu/lu13361.xml?mode=annotation).
(187) a. I arrived for (the purpose of) the movie.
    b. I need $10 for (the purpose of seeing) the movie.
    c. I went to the store for (the purpose of buying) eggs.
    d. a couch for (the purpose of) sleeping on
    e. a couch to sleep on ⇒ a couch for the purpose of sleeping on
    f. I found a party (that I intend) to attend

Be careful, however, with inserting an inferred verb, as sometimes it is better captured by another label:

(188) a. I babysat for (the purpose of helping) my aunt and uncle (= as a favor) (Beneficiary)
    b. I made a cake for (the purpose of celebrating) your birthday (= on the occasion of your birthday) (Circumstance)

3. If a relation can be phrased as NP is good/bad for V-ing, it is a Purpose.¹⁷

(189) a. This is a good gym to lift weights at.
    ⇒ This is a good gym for (lifting) weights.
    ⇒ This gym is good for (lifting) weights.
    b. This cleaner is good for (cleaning) hardwood floors.

4. An infinitival modifier of an indefinite pronoun (anything, someone) or vague noun (thing, stuff) is Purpose if the pronoun or vague noun has an entity referent that is involved in the infinitival event.

(190) a. I can't think of anybody/a single person to ask.
    b. I found something to eat.

(191) I found something to do. (something/stuff does not refer to an entity) (i)

5. An infinitive clause not meeting the above criteria may express the result of an event, in which case the appropriate label is Goal: see (129).

6. Many uses of infinitives are not purposes, including complements of modal/aspectual predicates that lack a direct object (185), and syntactic constructions like clausal subjects and certain clefts:

(192) a. To see the movie is a joy. (i)
    b. It is fun to see the movie. (i)

¹⁷The positive or negative evaluation is being delimited to a particular purpose: (189a) is not claiming the gym is good in general, just with respect to lifting weights.
Commercial services. A special qualification to the above tests applies to commercial scenes (buying, paying, hiring, costing, etc.): for explicitly commercial scenes, if the PURPOSE tests pass, the appropriate label is Theme~Purpose. This expresses that the PURPOSE is not merely a desired outcome, but is actually promised and paid for in a transaction:

(193)  a. It costs $10 to see the movie. (Theme~Purpose)
   b. I hired John to fix the problem. (Theme~Purpose)

See additional examples at (222) under Theme.

Sufficiency and excess. Expressions of sufficiency/excess with an infinitival that passes the above tests for PURPOSE are labeled ComparisonRef~Purpose.

(194)  a bag large enough for the groceries (ComparisonRef~Purpose)
         to hold
   ⇒ a bag large enough for (the purpose of holding) the groceries

Sufficiency/excess usages failing the tests are ComparisonRef~Goal, as this is similar to how an infinitival can express a result—cf. (129) under Goal:

(195)  a forest canopy too dense to admit sunlight (ComparisonRef~Goal)
        a. *a forest canopy too dense in order to admit sunlight
        b. *a forest canopy too dense for the purpose of admitting sunlight [would imply that somebody was trying to admit sunlight]

There is additional discussion under ComparisonRef.

Versus Circumstance for ritualized occasions. PURPOSE applies to for when it marks a ritualized activity such as a meal or holiday/commemoration for which the main event describes a preparation stage:

(196)  PURPOSE:
        a. I walked to this restaurant for dinner. [walking is not a part of dinner]
        b. I bought food for dinner.
        c. We saved money for our annual vacation.

However, if the activity marked by for is interpreted as containing the main event, then we use Circumstance:

(197)  Circumstance:

\[18\] A more general predicate such as give, need, or request is not considered to evoke a commercial scene, even if it involves money exchanged for a service.
a. We ate there for dinner.
b. I received a new bicycle for Christmas.
c. I always drink eggnog for Christmas. [at and in celebration of Christmastime]
d. We were wearing costumes for Halloween.

If in doubt, CIRCUMSTANCE is broader: e.g., We went there for dinner if went is ambiguous between journeying and attending.

**History:** In v1, the usages illustrated in (184) were assigned a separate label, FUNCTION, which inherited from both ATTRIBUTE and PURPOSE. With the introduction of construal, v2.0–v2.3 labeled these CHARACTERISTIC~PURPOSE. As of v2.4 this distinction has been abandoned, as it was inconsistent with the policies for spatial and temporal labels: now purposes of entities are simply PURPOSE.

### 3 PARTICIPANT

**Thing, usually an entity, that plays a causal role in an event.**

Not used directly—see subtypes.

#### 3.1 CAUSER

Instigator of, and a core participant in, an event.

CAUSER is applied directly to inanimate things or forces conceptualized as entities, such as in a passive by-phrase (§6.2):

(198) the devastation of THEME the town wreaked by the fire

(199) CAUSER~GESTALT:

a. the devastation of the fire on THEME the town
b. the fire’s devastation of THEME the town

The CAUSER is sometimes construed as a SOURCE:

(200) CAUSER~SOURCE:

a. the devastation from the fire
b. fatalities from cancer
c. FDR suffered from polio.

See also: INSTRUMENT
3.1.1 Agent

Animate (and typically volitional) participant instigating an action or acting in a complementary way to the instigator.

Agent is most directly associated with the passive by-phrase (§6.2), but also permits other construals:

(201) the decisive vote by the City Council
(202) Agent→Gestalt:
   a. the decisive vote of the City Council
   b. the City Council’s decisive vote
   c. the president’s achievements
   d. they needed Joan’s help

When two symmetric Agents are collected in a single NP functioning as a set, it is marked as a Whole construal:

(203) There was a war between France and Spain. (Agent→Whole)
(204) a discussion among the board members (Agent→Whole)

Secondary agents. Many event predicates license multiple participants acting in complementary ways and portrayed as having independent agency. In such cases, an Agent scene role is allowed for either participant, even if one (typically realized in a syntactically more prominent position, such as subject) is perhaps understood as slightly more agentive:

(205) I fought in a war against the Germans. (Agent→Beneficiary)
(206) I talked with my roommate about cleaning duties. (Agent→Ancillary) argued

In other cases, a second “extra” participant may be portrayed as accompanying the first in the event—possibly acting volitionally, and possibly implying some sort of additional social interaction or alignment of goals, but not strictly necessary for that kind of event to take place. Together_with serves as a diagnostic for these participants, which are labeled simply Ancillary.

(207) (Together) with my roommate, I argued that it was unfair of the landlord to increase our rent. (Ancillary)

See also: Org, Originator, Source, Stimulus, Ancillary, SocialRel
3.2 **Theme**

Undergoer that is a semantically core participant in an event or state, and that does not meet the criteria for any other label.

Prototypical Themes undergo (nonagentive\(^{19}\)) motion, are transferred, or undergo an internal change of state (sometimes called patients). Adpositional Themes are usually, but not always, construed as something else:

(208)  
  a. Quit with the whining!  
  b. She helped me with my taxes.  
  c. Don't bother with an extra trip. waste time  
  d. I managed to cope with the heavy load my fear of heights

(209)  
  There's nothing wrong with the engine.

(210)  
  Fill the bowl with water. (Theme~Instrument)

(211)  
  a. The food was covered with grease. (Theme~Instrument)  
  b. The food was covered in grease. (Theme~Locus)

(212)  
  You shouldn't confuse Mozart with Rossini. (Theme~Ancillary) associate

(213)  
  My hovercraft is full of eels.

(214)  
  a copy of the key

(215)  
  a. Sheldukher looked for his laser pistol. searched  
     fumbled  
     [contrast with transitive verb plus Characteristic in (398)]  
  b. Sheldukher asked for his laser pistol. made a request  
  c. There is a significant demand for new housing.

---

\(^{19}\) We distinguish agentivity at the token level, unlike VerbNet, where the subject of motion verbs like *arrive* is Theme because it need not be agentive.
d. Let’s wait for Steve. 
    more information 
    the end of the party

(216) a. What happened to you?
    b. This species is specific/native to North America.
    c. Balancing of risk and reward is inherent to the game.
    d. The mechanic made a repair to the engine. (THEME~GOAL)
    e. Due to my injury, I am limited to working from home. (THEME~GOAL)
    f. It is important to adhere/keep/stick to your convictions. (THEME~GOAL)

(217) THEME THEME~GESTALT
    a. the approach of the waves 
       the waves' approach
    b. the death of a salesman 
       the salesman's death
       murder

(218) Someone in relation to a time period of their life:
    a. my time in grad school (THEME~GESTALT)
    b. I've never seen that in my life (THEME~GESTALT)

(219) a. The mechanic worked on the engine.
    b. We noshed on snacks.
    c. They spent $500 on the bicycle. (POSSESSION~THEME) [see POSSESSION]

(220) a. There was an increase in oil prices.
    b. Bad weather may result in a delay.
    c. I'm covered in bees! (THEME~LOCUS)
    d. I put a hole in the box. (= punctured the box) (THEME~LOCUS)

(221) a. The training saved us from almost certain death. (THEME~SOURCE)
    b. They prevented us from boarding the plane. (THEME~SOURCE)
Transfer, goods, and services. In a commercial scene, goods, services, and money are distinguished. **Possession** is used as the scene role for goods for sale. **Possession** also applies to a piece of property transferred between parties, lost, acquired, or carried, even if no money changes hands. **Theme** is the scene role for commercial services. **Cost** applies to the money asked, paid, or owed.

The construal **Theme~Purpose** is used for services marked by **to**, **for**, or similar:

(222) Services:
   a. They spent $500 on the repairs. (Theme)
   b. They charged/asked/paid/owed $500 for the repairs. (Theme~Purpose)
   c. $500 for the repairs was excessive. (Theme~Purpose)

See **Purpose** for additional discussion. Contrast (424) under **Possession**.

Between and among. When two symmetric undergoers are collected in a single NP functioning as a set, it is marked as a **Whole** construal:

(223) There was a collision in mid-air between two light aircraft. (Theme~Whole)
(224) Links between science and industry are important. (Locus~Whole)

Secondary themes. Often, multiple similarly situated entities meet the criteria for **Theme**, in which case both are labeled **Theme** for the scene role.\(^\text{20}\) For example, this can occur in concrete scenes of contact, separation, attachment, combination, and substitution of two similar entities.

(225) a. They replaced my old tires with new ones. [replacement]
   b. They substituted new tires for my old ones. [replacee]

(226) a. His bicycle collided with hers. (Theme~Ancillary)
   b. Combine butter with vanilla. (Theme~Ancillary)

(227) a. The boys were separated from the girls. (Theme~Source)
   b. Keep the dogs from the cats. (Theme~Source)
   c. The shin bone is connected to the knee bone. (Theme~Goal)

\(^{20}\) As with **Agent**, the scene role does not distinguish syntactically more prominent vs. more oblique positions.
More abstract examples where a secondary Theme PP cooccurs with a Theme direct object include (212) and (221).

By contrast, for similar scenes where the oblique argument is a ground-like entity (larger, less dynamic, more locational, etc. than the Theme), that entity is typically a Locus, Source, or Goal:

(228) Dynamic:
   a. Add vanilla to the mixture. (Goal)
   b. Stir vanilla into the mixture. (Goal)
   c. Detach the cable from the wall. (Source)

(229) Static:
   a. The cable is attached to the wall. (Locus→Goal)
      connects
   b. Protesters were kept from the area. (Locus→Source) [repeated: missing
      (93)]

For creation or transformation of a whole entity (or a group of entities, such as ingredients) into another entity, Source applies to the initial entity and Goal to the result.

Multiple Themes can also be licensed by 2-argument adjectives:

(230) We are ready/eligible/responsible/due for an upgrade. (Theme)

See also: ComparisonRef, Agent, Beneficiary

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3.2.1 Topic

Information content or subject matter in communication or cognition, or the matter something pertains to.

A variety of prepositions—including the vast majority of occurrences of about—can mark a Topic. The following subclasses warrant Topic as the scene role:
• **Communication** scenes: the content or subject matter of speech, writing, art, performance, etc.

(231)  
  a. I gave a presentation about/on politics.
  b. They wouldn't stop arguing over the plan.
  c. I was accused of treason.
  d. a picture of Whistler's mother
  e. three copies of the test versions
  f. **TOPIC~IDENTITY**—see discussion at **IDENTITY**:
     i. the topic/issue/question of semantics
     ii. the idea of raising money
  g. The ratings for this film are atrocious.
  h. I did not hazard a guess as to the cause.

• **Cognition** scenes: the content or subject matter of thought and knowledge—belief, opinion, decision, learning, study, interest, expertise, skill, etc.

(232)  
  a. Try not to think about it.
  b. We took a minute to think over the situation. 
  c. I plan on going again.
  d. I am focused on the task at hand.
  e. There is not enough research on the effects of global warming.
  f. She was dumbfounded as to why the police had done that.
  g. Think of all the possibilities!
  h. I have no memory of the incident.
  i. I am aware of the problem.
  j. You can have your choice of chicken or fish.
  k. I disagree with that statement.
  l. I am familiar with this topic.
  m. Are you interested in politics?
  n. I'm confident in your abilities.

(233)  
  a. My daughter excels in sports.

b. I'm an expert at baking cookies.
   talented
   good
c. I wouldn't hesitate in seeing a doctor.
   [but see (3) under CIRCUMSTANCE, which is syntactically parallel]

- Relations of regard: the entity, issue, or aspect that the governing predicate pertains to. The relation to the governor may be somewhat loose, skirting the boundary between semantics and information structure.

(234)  
  a. Be reasonable with your expectations!
  b. They are transparent with their fee.
  c. The discount should apply with other restaurants too.
  d. I approached the manager about the poor service. [implied communication]
  e. I am a big baby about needles. [implied cognition]
  f. The owner wouldn't budge on the price.
  g. They came through on all of their promises.
  h. She did not do the right thing for an item that was marked incorrectly.
  i. I'm fast at baking cookies. [cf. (233b)]
  j. They have almost anything you could want when it comes to in terms of

A few specific governors merit further discussion:

agree.

(235)  
  a. Let us agree on the deal. (TOPIC)
  b. Let us agree to the deal. (TOPIC~GOAL)
  c. I agree with the plan. (TOPIC)
  d. I agree with you. (EXPERIENCER~ANCILLARY)
answer, respond, etc.

(236)  **Topic〜Goal:**
   a. the answer to the question
   b. my response to your question

For *respond with* and similar, it depends whether the object is an action, a device facilitating communication, or some aspect of transferred information:

(237)  a. He responded to my kick with a punch. (**Means**)
   b. He responded to my accusation with a lawsuit. (**Means**)
   c. He responded to my accusation with dishonest emails. (**Instrument**)
   d. He responded to my accusation with falsehoods. (**Topic**)

**problem with, experience with, etc.**  These are simply **Topic:**

(238)  a. There was a problem with mice in the basement.
   We had
   b. I have limited experience with numerical methods.
   c. I had a bad experience with a vampire.
      my bad experience

See also: **Stimulus**

*History.* Previously, **Activity** covered usages such as in (233), but such usages were found to be infrequent and **Activity** was deemed too narrow.

3.3 **Ancillary**

A surplus participant in relation to an event (or state/situation).

An **Ancillary** participant accompanies another participant in the context of the event. The **Ancillary**’s participation is presented as similar to/in accordance with—but of secondary importance to—that of the other participant.

Sometimes called **comitative**.

Prototypical prepositions are with, without, along with, together with, and **together:**

(239)  a. Could you walk with me to the store?
   **along with**
   **together with**
b. Can you go to the store without me?
c. Can we go to the store together?

A participant may be considered surplus/secondary for just the function or also at the scene level. Ancillary is the function for adpositions like with that signal asymmetric togetherness or co-participation. More specific spatial and configurational (possession, part-whole, membership, etc.) relations take precedence at the scene level:

(240)  a. The girl is standing next_to her mother. (Locus)
   b. The girl is standing with her mother. (Locus~Ancillary)

(241)  a. The girl is by the pigeon. (Locus)
   b. The girl is with the pigeon. (presumably, close to and interacting with it or paying special attention to it) (Locus~Ancillary)
   c. Put the fork with the knives. (Goal~Ancillary)

(242)  a. I work with Steve. (SocialRel~Ancillary)
   b. I am with Grunnings. (Org~Ancillary)
   c. people with Grunnings (= Grunnings employees) (Org~Ancillary)

Some predicates have a role of primary semantic importance expressed via a with-PP. In such cases, Ancillary should be the function only. However, for many predicates it may be difficult to decide whether Ancillary should also be the scene role. As a diagnostic, we test whether together_with can be used—if not, there is another role of primary importance to the scene.

**Pure Ancillary (scene and function).** These license together-insertion:

(243)  a. I am admiring the paintings (together) with my friend
   [we probably infer that “friend” is paired with “I”, and thus also admiring or at least viewing the paintings, but this requires pragmatics]
   b. I am admiring the paintings (together) with the statues (= I am admiring the paintings, and the statues as well)
   [we infer that “statues” is paired with “paintings”, and thus also being admired, but this requires pragmatics]

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21 These can be called semantically core roles, though making a core/non-core distinction is in general problematic.

22 For the preposition without, the test is whether together with expresses its negation.
(244) (Together) **with** the president, the prime minister signed the declaration [explicit: president is together with somebody in the context of signing; inferred: president is together with the prime minister, and they probably both signed]

(245) a. I was traveling (together) **with** my friend/infant
b. my travels (together) **with** my friend

(246) I fought (together) **with** her to cure cancer. (= we fought on the same side)

**Ancillary function only, predicate-licensed scene role.** These resist *together-* insertion:

(247) **Agent**~**Ancillary:**
   a. Why don't you talk (*together) **with** your friend?
   b. I fought (*together) **with** her for a week. (= we argued opposite sides)
   c. Please trade places (*together) **with** John.

(248) I’ll have to check (*together) **with** my supervisor. (**Recipient**~**Ancillary**)

(249) He was not ready to share a house (*together) **with** her. (**Possessor**~**Ancillary**)

(250) I agree (*together) **with** John. (= we share the same opinion) (**Experiencer**~**Ancillary**)

(251) Don’t compare me (*together) **with** my sister! (**ComparisonRef**~**Ancillary**)

(252) Why do people associate bats (*together) **with** death? (**Theme**~**Ancillary**)

See further examples at **Theme**.

**Item in one’s possession.** If the object denotes an item that the governor has on hand in their possession, then the construal **Possession**~**Ancillary** is used:

(253) I walked in **with** an umbrella. (**Possession**~**Ancillary**)

**X_i bring/take/... Y with PRON_i.** This construction involves a **with**-PP that is coreferent with the subject and analyzed as **Locus**~**Ancillary.**

\[^{23} \text{Bring and similar verbs (} \text{take, carry, etc.) specify motion-} \text{with-possession in their most literal sense (e.g., bringing a backpack). If applying supersenses also to subjects and objects (Shalev et al., 2019; see also footnotes 25 and 26) we would use } \text{Possession/Possessor as the scene roles of the subject/object respectively. But if the object is volitional (e.g., bringing a friend), the possession is bleached away, so just } \text{Agent/Theme would apply to the subject/object. In either case, the } \text{with-PP emphasizes that the other entity is located with the bringer, so it receives Locus/Ancillary.}\]

42
(254)  a. I brought my backpack/friend with me. ([LOCATION]〜[ANCELLARY])
[emphasizes that the backpack/friend is located with the speaker]
   b. I brought my backpack/friend.

**Together.** The word *together*, when not followed by *with*, can denote reciprocal accompaniment and is analyzed like *with each other*:

(255)  a. We were sitting/eating/working together.
   b. The duck and the chick are together. ([LOCATION]〜[ANCELLARY])
   c. John and Mary are together (= a couple). ([SOCIAL_RELATION]〜[ANCELLARY])

**Versus Ensemble.** *Ancillary* describes a relation of an entity to an event/situation, whereas *ensemble* is used for a relation directly between entities.

See also: *Instrument*, *Manner*

*History.* Prior to v2.5, a single label, *Accompanier* (under *Configuration*), covered both entity-entity and event-entity relations. In v2.5, *Accompanier* was split into *Ancillary* and *Ensemble*.

### 3.4 Stimulus

That which is perceived or experienced (bodily, perceptually, or emotionally).

*Stimulus* does not seem to have any prototypical adposition in the languages we have looked at. In English, it can be construed in several ways:

(256)  My affection for you (*Stimulus*〜*Beneficiary*)
(257)  Scared by the bear (*Stimulus*〜*Causer*)
(258)  You should listen to the music. (*Stimulus*〜*Goal*)
   pay attention
(259) *Stimulus*〜*Direction*:
   a. We were looking at the photo.
   b. I was angry at him. [cf. (260e)]
   c. I startled at the noise.
(260) *Stimulus*〜*Topic* is assigned to cases where the PP describes the topic or content of one's emotion:
   a. I care about you.
b. That’s what I love **about** the show.
c. I took pride in the results.
d. I was proud **of** the results.
   happy **with**
e. I was angry **with** him. [cf. (259b)]
f. I was in **characteristic-locus** love **with** him. [cf. (413a)]
g. They bored me **with** their incessant talk about cats.

(261) **Stimulus→Beneficiary:**
   a. Her disdain **for** customers was apparent.
   b. He has/feels compassion **towards** animals.

(262) I am thankful **for** your help. (**Stimulus→Explanation**) grateful
See also: **Topic, Beneficiary**
Counterpart: **Experiencer**

### 3.5 **Experiencer**

**Experiencer** Animate who is aware of a bodily sensation, perception, emotion, or mental state.

**Experiencer** does not seem to have any prototypical adposition in the languages we have looked at. In English, it can be construed in several ways:

(263) a. The anger **of** the students (**Experiencer→Gestalt**)  
b. The students’ anger (**Experiencer→Gestalt**)  

(264) a. Running is enjoyable **for** me (**Experiencer→Beneficiary**)  
b. The pizza was (too) salty **for** me (**Experiencer→Beneficiary**)  

(265) a. It feels hot **to** me (**Experiencer→Goal**)  
b. That was astounding **to** me (**Experiencer→Goal**)  
c. This is **my** favorite movie (**Experiencer→Gestalt**)  

(266) a. The answer is known **by** me (**Experiencer→Agent**)  
b. The answer is known **to** me (**Experiencer→Goal**)  
c. That is **my** opinion (**Experiencer→Gestalt**)  
d. That was **my** experience (**Experiencer→Gestalt**)
Bodily events with an **EXPERIENCER** are limited to **perceptions** like seeing and hearing, and **sensations** such as pain and hunger. The undergoer of an involuntary bodily event like sneezing, bleeding, falling asleep, breaking a limb, or dying would instead be a **THEME**, as these events are primarily physical in nature.

One whose **mental state** (including events of knowledge, memory, belief, desire, intention) or **emotion** is described is an **EXPERIENCER**. However, the individual is an **AGENT** if exhibiting or acting on their thoughts/emotions, even internally (e.g. making a decision).

Less canonically, **EXPERIENCER** applies to semi-pragmatic usages meaning ‘from the perspective of’:

(267) a. For John, the party was not fun at all. (**EXPERIENCER**→**BENEFICIARY**)
    b. For John, there was no reason to attend. (**EXPERIENCER**→**BENEFICIARY**)

Elsewhere, the term **cognizer** is sometimes used for one whose mental state is described.

**Counterpart:** **STIMULUS**

### 3.6 **ORIGINATOR**

Animate who is the initial possessor or creator/producer of something, including the speaker/communicator of information. Excludes events where transfer/communication is not framed as unidirectional.

A “source” in the broadest sense of a starting point/condition. Contrasts with **RECIPIENT** if there is transfer/communication.

**English construals:**

(268) **ORIGINATOR**→**AGENT** (passive-*by* or adnominal *by*):

a. works *by* Shakespeare [cf. (269a, 270a)]

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24 Interestingly, many uses of *for* carry an information structural association of delimiting the scope of an assertion. For John, the party was not fun at all makes no commitment regarding how fun the party was to others. This food is good *for* dinner/*for* BENEFICIARY folks with dietary constraints and *He is short* *for* COMPARISONREF a basketball player also have this property. As the present scheme targets semantic relations, it is not equipped to formalize pragmatic aspects of the meaning.

25 If we consider subject position as an **AGENT** construal and direct object position as a **THEME** construal (Shalev et al., 2019; cf. footnotes 23 and 26), then we can add examples like *She talked to her editor* (**ORIGINATOR**→**AGENT**) and *They robbed her of her life savings* (**ORIGINATOR**→**THEME**). **ORIGINATOR** does not apply to the subject of events like exchange or *talk/chat (with)*, which involve a back-and-forth between multiple **AGENTS**.
b. The telephone was invented by Alexander Graham Bell.
c. The story was given to her by her editor.
   told
(269) **Originator~Source:**
   a. works of Shakespeare [cf. (268a, 270a)]
   b. The story was obtained from an anonymous White House employee.
   c. I bought it from this company.
   d. I heard the news from Larry.
(270) **Originator~Gestalt:**
   a. Shakespeare’s works [cf. (269a, 268a)]
   b. Rodin’s sculptures
   c. the restaurant’s food
   d. John’s question
      speech

**learn from.** If the source of learning is an individual (or group of individuals, organization, etc.) who provides information, **Originator~Source** applies. Otherwise, it is simply **Source:**

(271) We learned a lot from Miss Zarves. (**Originator~Source**)
(272) We learned a lot from that book. (**Source**)

experience

**History.** **Originator** merges v1 labels **Donor/Speaker** and **Creator,** which were difficult to distinguish in the case of authorship. **Donor/Speaker** was a subtype of **InitialLocation,** which inherited from **Location** and **Source.** **Creator** was a subtype of **Agent.** Moving **Originator** directly under **Participant** puts it in a neutral position with respect to its possible construals.

3.7 **Recipient**

The party (usually animate) that is the endpoint of (actual or intended) transfer of a thing or message, becoming the final **Possessor** or **Gestalt.** Excludes events where transfer/communication is not framed as unidirectional.

A “goal” in the broadest sense of an ending point/condition. Contrasts with **Originator.**
English construals:26

(273) She gave the story to her editor. (RECIPIENT~GOAL)
   spoke

(274) What title did you give to your essay? [inanimate] (RECIPIENT~GOAL)

(275) news for our readers (RECIPIENT~DIRECTION)

(276) He is yelling at me to get ready! (RECIPIENT~DIRECTION27)

(277) The news was not well received by the White House. (RECIPIENT~AGENT)

(278) Timmy's piano lesson (RECIPIENT~GESTALT)

(279) I’ll have to check with my supervisor. (RECIPIENT~ANCILLARY)

RECIPIENT does not apply to events like exchange/talk/chat (with), which involve a back-and-forth between multiple AGENTS:

(280) She swapped stories with her friends. (AGENT~ANCILLARY)
    chatted

See also: BENEFICIARY

History. In v1, RECIPIENT was the counterpart to DONOR/SPEAKER: RECIPIENT was a subtype of DESTINATION, which inherited from LOCATION and GOAL. Moving RECIPIENT directly under PARTICIPANT puts it in a neutral position with respect to its possible construals.

3.8 Cost

An amount (typically of money) that is linked to an item or service that it pays for/could pay for, or given as the amount earned or owed.

The governor may be an explicit commercial scenario:

(281) I bought the book for $10.
    sold

(282) I got a refund of $10.

26 Shalev et al. (2019) propose generalizing SNACS supersenses to include subjects and objects (see also footnotes 23 and 25). If subject position is viewed as an AGENT construal, then an active subject of a transfer verb like get or receive is RECIPIENT~AGENT. If direct object position is viewed as a THEME construal, then She informed her editor is RECIPIENT~THEME.

27 While yell at often has a connotation of shouting criticism towards somebody, and criticism would suggest BENEFICIARY, the RECIPIENT aspect of the meaning is more explicit and essential: yelling from a distance at someone does not imply criticism, and criticism about someone who is absent is not yelling at them.
(283) **Cost** ~ **Locus:**
   a. The book is priced **at** $10.
   b. I bought it **at** a great price/rate.

Or the **Cost** may be specified as an adjunct with a non-commerical governor:

(284) You can ride the bus **for** free.

$1

**Cost** is specifically about payment requested in exchange for goods or services (including income and revenue). If an amount of money is simply treated as property given, acquired, or possessed, then **Possession** is appropriate:

(285) I bestowed the winner **with** a bicycle. (**Possession**) [repeated at **Possession**]

$100

See discussion of transfer, goods, and services at **Possession** and **Theme**.

**History.** This category was not present in v1, which had the broader category **Value**. VerbNet (Kipper et al., 2008; Palmer et al., 2017) has a similar category called **Asset**; we chose the name **Cost** to emphasize that it describes a relation rather than an entity type (it does not apply to money with a verb like **possess** or **transfer**, for instance).

3.9 **Beneficiary**

Animate or personified undergoer that is (potentially) advantaged or disadvantaged by the event or state.

This label does not distinguish the polarity of the relation (helping or hurting, which is sometimes termed **maleficiary**).

(286) Vote **for** Pedro! **against**

(287) Junk food is bad **for** your health.

(288) My parrot died **on** me.

(289) a. These are clothes **for** children.
   b. These are children's clothes. (**Beneficiary** ~ **Possessor**)

(290) Fortunately **for** the turkey's future, he received a presidential pardon.

Specific subclasses include:
• Animate who will potentially experience a benefit or harm as a result of something but is not an experiencer or recipient of the main predicate itself. (May be an experiencer or recipient of the result.)
• Animate target of emotion or behavior, discussed below.
• Animate who someone supports or opposes (e.g., vote for, cheer for, Hooray for).
• Intended user/usee:

    (291) (We sell) clothes for children

    (292) a gallows for criminals

    (293) This is the car for you! [advertising idiom]

• Something characterized as good/appropriate (or not) for some kind of animate user or usee, delimiting the applicability of a descriptor to that kind of individual:

    (294) a. This place is great for young children.

    b. This is a great place for young children.

The first and last items above have analogues with PURPOSE. The key difference is that BENEFICIARY applies to an animate participant, whereas PURPOSE applies to an intended consequence or one of its inanimate participants.

**Targets of behavior versus emotion.** A preposition can mark an individual in the context of evaluating how someone else is treating them, with a noun or adjective governor. If behavior is more salient than emotion, then BENEFICIARY is the scene role. If emotion is highly salient, then STIMULUS is the scene role.

(295) Behavior-focused:

    a. She exhibits rudeness towards customers. (BENEFICIARY~→DIRECTION)

    b. He is rude to women. (BENEFICIARY~→GOAL)

    c. He is gentle and compassionate with animals. (BENEFICIARY~→THEME)

(296) Emotion-focused, repeated from (261):

    a. Her disdain for customers was apparent. (STIMULUS~→BENEFICIARY)

    b. He has/feels compassion towards animals. (STIMULUS~→BENEFICIARY)

Note that the emotion-focused examples can describe private emotional states directly, while the behavior-focused examples are behavior-based judgments or inferences about emotional states.

An obligation directed at somebody is analyzed like targeted behavior:
We have a solemn responsibility to our armed forces. (Beneficiary~Goal)

Similar to the behavior-focused examples, inanimate causes can have the potential to positively or negatively affect somebody. Ability and permission modalities are included here:

a. The strategy is beneficial for investors. (Beneficiary)
   risky
   an option
b. The strategy is helpful to investors. (Beneficiary~Goal)
   poses a risk
   is available

Versus Recipient. Beneficiary applies to the classic English benefactive construction where it is ambiguous between assistance and intended-transfer:

John baked a cake for Mary. [to help Mary out, and/or with the intention of giving her the cake]

However, if transfer (or communication) is the main semantics of the scene and benefit or harm is no more than an inference, then the scene role is Recipient:

a message for my mother (Recipient~Direction)
gift
(301) a package for the front office (Recipient~Direction)

See also: Experiencer, Org

3.10 Instrument

An entity that facilitates an action by applying intermediate causal force.

Prototypically, an Agent intentionally applies the Instrument with the purpose of achieving a result:

a. I broke the window with a hammer.
b. I destroyed the argument with my words.

Less prototypically, the action could be unintentional:

I accidentally poked myself in the eye with a stick.
The key is that the Instrument is not sufficiently “independently causal” to instigate the event.

However, to downplay the agency of the individual operating the instrument, the instrument can be placed in a passive by-phrase, which construes it as the instigator:

(304)  a. The window was broken by the hammer. (InSTRUMENT~CaUSER)
   b. My headache was alleviated by aspirin. (InSTRUMENT~CaUSER)

Note that the examples in (304) can be rephrased in active voice with the InSTRUMENT as the subject.

A device serving as a mode of transportation or medium of communication counts as an InSTRUMENT, but is often construed as a LocUS or Path:

(305) Communicate by phone. (InSTRUMENT)
     email
(306) Talk on the phone. (InSTRUMENT~LocUS)
(307) Send it over email. (InSTRUMENT~Path)
     via
(308) Travel by train. (InSTRUMENT)
(309) Escape with a getaway car. (InSTRUMENT)
(310) Escape in the getaway car. (InSTRUMENT~LocUS)

This includes some expressions which incorporate the InSTRUMENT in a noun:

(311) ride on horseback (InSTRUMENT~LocUS)
(312) hold at knifepoint (InSTRUMENT~LocUS)

Other non-prototypical instruments that can be construed as paths include waypoints from Source to Goal, and people/organizations serving as intermediaries:

(313) We flew to London via Paris. (InSTRUMENT~Path)
(314) I found out the news via Sharon. (InSTRUMENT~Path)
(315) Joan bought her house through a real estate agent. (SocialRel~InSTRUMENT)
(316) For my Honda I always got replacement parts through the dealership. (Org~InSTRUMENT)

Conversely, roadways count as Paths but can be construed as Instruments:

(317) Escape through the tunnel. (Path)
(318) Escape by tunnel. (Path~InSTRUMENT)

Compare Means, which is used for facilitative events rather than entities. See also Topic.
4 **Configuration**

Thing, usually an entity or property, that is involved in a static relationship to some other entity.

Not used directly—see subtypes.

4.1 **Identity**

A category being ascribed to something, or something belonging to the category denoted by the governor.

Prototypical prepositions are of (where the governor is the category) and as (where the object is the category):

(319) the state of Washington [as opposed to the city]

(320) The liberal state of Washington has not been receptive to Trump's message.

(321) As a liberal state, Washington has not been receptive to Trump's message.

(322) I like Bob as a colleague. [but not as a friend]

(323) What a gem of a restaurant! [exclamative idiom: both NPs are indefinite]

(324) the problem/task/hassle of raising money

(325) the age of eight

(326) They did a great job of cleaning my windows.

(327) **Topic**→**Identity**, with a governing noun in the domain of communication or cognition:

a. the topic/issue/question of semantics

b. the idea of raising money

Something may be specified with a category in order to disambiguate it (319), or to provide an interpretation or frame of reference with which that entity is to be considered. In some cases, like (327), the category is a *shell noun* (Schmid, 2000) requiring further specification.

Categorizations may be situational rather than permanent/definitional:

(328) a. She appears as Ophelia in *Hamlet*.

b. He is usually a bartender, but today he is working as a waiter.
Paraphrase test: “(thing) IS (category) [in the context of the event]”: “Washington is a liberal state”, “opening a new business is a hassle”, “She is Ophelia”, etc. Note that as+category may attach syntactically to a verb, as in (322) and (328), rather than being governed by the item it describes.

If the object of the preposition is a property (as opposed to a category), the scene role is CHARACTERISTIC:

(329) Adnominal: CHARACTERISTIC~IDENTITY
   a. a car of high quality
   b. a man of honor
   c. a business of that sort [contrast with SPECIES, §4.2]

(330) Secondary predicate adjective: CHARACTERISTIC~IDENTITY
   a. She described him as sad.
   b. He strikes me as sad.

See also: COMPARISONREF

History. Generalized from v1, where it was called INSTANCE and restricted to the “(category) of (thing)” formulation. The relevant usages of as were labeled ATTRIBUTE.

4.2 SPECIES

A category qualified by sort, type, kind, species, breed, etc. Includes variety, selection, range, assortment, etc. meaning ‘many different kinds’.

(331) a. that sort of business
   b. A good type of ant to keep is the red ant.
   c. certain strains of Escherichia coli
   d. Modern breeds of these homing pigeons return reliably
   e. Some poor sap applied the wrong brand of paint
   f. This store offers a wide selection of footstools

(332) an example of Italian Renaissance architecture
      the epitome

SPECIES is not used if the sort/variety noun is the object rather than the governor:

(333) a business of that sort (CHARACTERISTIC)
4.3 **Gestalt**

Generalized notion of “whole” understood with reference to a component part, possession, set member, or characteristic. See Characteristic.

**Gestalt**—the supercategory of WhOLE, POSSESSOR, ORG, and QUANTITYITEM—applies directly for entities and eventualities which can loosely be conceptualized as containing or possessing something else, but for which neither WhOLE nor POSSESSOR is a good fit.

**Properties.** The holder of a property if the property is the governor:

(334) a. the blueness of the sky               the sky’s blueness
    b. the size of the crowd                the crowd’s size
    c. the price of the tea                the tea’s price
    d. the start time of the party         the party’s start time
    e. the power of the president          the president’s power

(335) It was the chairman’s fault/responsibility/right.

(336) the restaurant’s extensive menu[^28] [cf. (394a)]

(337) a new way of thinking

(338) the amount of time allowed [but see (389)]

(339) the food/service at this restaurant (**Gestalt~Locus**)

By extension, a possessor of an item in relation to an attribute of that item is **Gestalt**:

(340) my odometer number (= my car’s odometer’s number) [contrast (347)]

The property may be a fact or detail conventionally associated with someone in life for which there is no more specific role:

(341) my address; my price range; my home team; my career; my record of accomplishments

[^28]: The word *menu* (literally an information artifact) can be read as standing metonymically for the dishes available for order, to be created and served by the restaurant. Semantically, the restaurant frame defines various specific actions/relationships involving the menu and items on it. **Gestalt** is highly general and therefore an appropriate selection when none of these particular actions or relationships are in focus.
Containers. The construal LOCUS\textsubscript{GESTALT} is used for a container denoted by the governor:

\begin{equation}
\text{(342)} \quad \text{the room’s 2 beds (LOCUS\textsubscript{GESTALT})}
\end{equation}

Discourse-associated item. A referent temporarily associated with another referent in the discourse and used to help identify it:

\begin{equation}
\text{(343)} \quad \text{Sam’s dog (= the dog that Sam mentioned seeing earlier in the conversation)}
\end{equation}

Other possessive constructions. GESTALT is the construal for many uses of possessive syntax where the semantic criteria for POSSESSOR are not met. For instance, s-genitive marking of participant roles (AGENT, EXPERIENCER, etc.) are analyzed with GESTALT as the function. Moreover, the s-genitive construction, unlike of, is never analyzed with WHOLE as the function, so WHOLE\textsubscript{GESTALT} is used. See §6.1 for discussion of possessive constructions.

4.3.1 POSSESSOR

Animate party that has a piece of property (something potentially with monetary value: the POSSESSION) on a permanent or temporary basis. The POSSESSION must be alienable, i.e. not a part or attribute of the POSSESSOR.

Prototypically expressed with the s-genitive ($6.1: \text{’s}$ and possessive pronouns), and of (the of-genitive):

\begin{itemize}
\item \text{(344)} \quad \begin{align*}
&\text{a. the house of the Smith family} \quad \text{the Smith family’s house} \\
&\text{b. the corgis of Queen Elizabeth} \quad \text{Queen Elizabeth’s corgis}
\end{align*}
\end{itemize}

POSSESSOR is not limited to cases of ownership, but also includes temporary forms of possession, such when something is on loan to or under the control of the possessor. The POSSESSOR may be borrowing, renting, wearing, or holding the property:

\begin{itemize}
\item \text{(345)} \quad \text{John’s hotel room [the room John is staying in as a guest]}
\item \text{(346)} \quad \text{Mary’s delivery truck [the company truck that Mary drives as an employee]}
\end{itemize}

There may be an implicit piece of property of which the stated item is a part:

\begin{itemize}
\item \text{(347)} \quad \text{My windshield (= the windshield of my vehicle) is foggy. [contrast (340)]}
\end{itemize}

A wearer of attire may be construed in multiple ways:
Pets, by default, are treated as property rather than family members (344b).

Abstract possession. For POSSESSOR/POSSESSION to apply to an abstract piece of property, the property must be a commodity in the financial/commercial domain, or information stored externally to the POSSESSOR in physical or electronic media.

Commodity:
   a. my shares of stock
   b. my insurance (= insurance that I "own")

Stored information:
   a. my computer file
   b. my website
   c. the campaign’s email list
   d. my contract

This excludes other abstract notions that can be metaphorically possessed or transferred:

   a. the president’s power (GESTALT)
   b. my memories of childhood (EXPERIENCER~GESTALT)

Creation or transfer of an item. ORIGINATOR should be preferred as the scene role wherever it is clear that the party in question created the item:

Rodin’s sculptures (ORIGINATOR~GESTALT) [(270b)]
the restaurant’s food (ORIGINATOR~GESTALT) [(270c)]

In cases of explicit transfer, the initial possessor of something is labeled ORIGINATOR, and the final possessor of something transferred is the RECIPIENT. However, when there is a possessed item whose transfer is merely assumed from context or world knowledge (and the party in question is not the creator), default to POSSESSOR:

The shopkeeper’s merchandise is fantastic. [item to be sold]
store’s

Waiter, is my food ready? [item identified or ordered for purchase]
(357) Use my money (the money that I gave you) wisely! [item that was transferred]

Possessed nouns like gift and contribution that refer to an entity but lexically imply a previous transfer event should be POSSESSOR unless another argument of the noun disambiguates ORIGINATOR vs. RECIPIENT by process of elimination:

(358)   a. That was my gift. (POSSESSOR)
   b. That was my gift to\textsubscript{RECIPIENT~\textsc{~GOAL}} John. (ORIGINATOR~\textsc{~GESTALT})
   c. That was my gift from\textsubscript{ORIGINATOR~\textsc{~SOURCE}} Mary. (RECIPIENT~\textsc{~GESTALT})

Communication. Communicative acts are treated as transfer of information, and thus ORIGINATOR and RECIPIENT apply to the communicator and addressee, respectively.

See also ANCILLARY, BENEFICIARY, ORG, ORGMEMBER, and §6.1: Genitives/-Possessives.

4.3.2 Whole

Something described with respect to its part, portion, subevent, subset, or set element. See PARTPORTION.

(359) \begin{tabular}{ll}
\textbf{Whole} & \textbf{Whole~\textsc{~GESTALT}} \\
\hline
a. the new engine of the car & the car’s new engine \\
b. the flaxen hair of the girl & the girl’s flaxen hair \\
c. the body of Lord Voldemort & Lord Voldemort’s body \\
d. the 3 layers of the cake & the cake’s 3 layers \\
e. the 3 prongs of the strategy & the strategy’s 3 prongs \\
f. the tastiest bit of the cake & the cake’s tastiest bit \\
g. the southern tip of the island & the island’s southern tip \\
h. the interior of the shopping bag & the shopping bag’s interior \\
i. the end of the journey & the journey’s end \\
j. the 14 episodes of a TV series & a TV series’s 14 episodes
\end{tabular}

(360) the south of France

(361) The remainder of the cake rest

(362) \textbf{Whole~\textsc{~LOCUS}:
   a. the 14 episodes in a TV series

57
b. the new engine in the car
c. the escape key on the keyboard
d. the flaxen hair on the girl

(363) the clothes in that pile are dirty (WHOLE~LOCUS)
(364) There are several options to choose from. (WHOLE~SOURCE)
(365) Sets and ratios:
   a. This is one of the worst restaurants in town. (WHOLE)
   better
   b. 2 in 10 American children are redheads. (WHOLE~LOCUS)
   c. 2 out of 10 American children are redheads. (WHOLE~SOURCE)
   d. Out of the 10 children in the class, only Mary is a redhead. (WHOLE~SOURCE)
   e. Among the 10 children in the class, only Mary is a redhead. (WHOLE)

If the governor narrows the reference to a certain amount of the WHOLE, the construal QUANTITYITEM~WHOLE is used—see (391). Note that this only applies if the governor is a measure term; it does not apply to distinctive parts like “layers” (359d) and “prongs” (359e), even if a count is specified.

Used to construe geographic and temporal “containers”:

(366) Famous castles of the valley (LOCUS~WHOLE)
(367) a. the 15th of March (TIME~WHOLE)
   Ides
   b. March of 44 BC (TIME~WHOLE)

The prepositions between and among can impose WHOLE construals by combining two or more items in the object NP (contrast with (365e)):

(368) The negotiations between the parties went well. (AGENT~WHOLE)

(368′) The negotiations by the parties went well. (AGENT)

History. In v1, SUPERSET was distinguished as a subtype of WHOLE for examples such as (365), but the distinction was dropped for v2 (as was ELEMENTS: see PART-PORTION).
4.3.3 **Org**

An organization/institution when mentioned in relation to an OrgMember, i.e., an individual who has a stable affiliation with that organization, such as membership or a business relationship.

We define organization as an established group of people with some social or societal purpose/function; this includes families, performing arts groups, schools, businesses, and governmental units:

(369)  
   a. employees of the company (Org→Gestalt)  
   b. I work for the United Nations (Org→Beneficiary)  
   c. actors in the troupe (Org→Locus)

Stative scenes include someone belonging to, being an employee of, or being in a business relationship with an Org; dynamic scenes include someone joining or leaving/beginning or ending an engagement with an Org.

(370)  
   I was hired by Microsoft. (Org→Agent)

Relations between organizations such as partnerships, subsidiaries, and super-organization/sub-organization are *not* covered by Org, nor are general mentions of organizations:

(371)  
   My business was destroyed by Microsoft. (Agent)

(372)  
   Microsoft’s cloud services division (Whole)

Org lacks any prototypical adpositions in English, but participates in numerous construals:

(373) Org→Gestalt with the institution as possessor:
   
   a. the chairman of the board
   b. the president of France
   c. employees of Grunnings

(374)  
   a. Mr. Dursley works for Grunnings. (Org→Beneficiary)  
   b. Mr. Dursley works at Grunnings. (Org→Locus)  
   c. Mr. Dursley is from Grunnings. (Org→Source)  
   d. Mr. Dursley is with Grunnings. (Org→Ancillary)  
   e. Mr. Dursley is employed by Grunnings. (Org→Agent)
(375)  **ORG**～**ANCILLARY**:
   a. I always do business **with** this company.
   b. I bank **with** TSB.
   c. my phone service **with** Verizon

(376)  For my Honda I always got replacement parts **through** the dealership. [intermediary business] (**ORG**～**INSTRUMENT**)

(377)  I serve **on** the committee. (**ORG**～**LOCUS**)

   A family counts as an institution construed as a **WHOLE** (set of its members) or as a **LOCUS**:

(378)  I am the baby **of** the family. (**ORG**～**WHOLE**)

(379)  people **in** my family (**ORG**～**LOCUS**)

   For a relation between a unit and a larger institution, use **WHOLE**:

(380)  the Principals Committee **of** the National Security Council (**WHOLE**)

See also: **STUFF**

**History:** In v1, **PROFESSIONAL**.**ASPECT** marked relations between an employee and an employer, supervisor, or coworker. In v2.0, this was revised to **ORG**.**ROLE**, for relations between an individual and an organization, and a supertype **SOCIAL**.**REL** covering all established social relationships. This was further refined in v2.5, when **ORG**.**ROLE** was split into two supersenses, **ORG** and **ORG**.**MEMBER**, so the directionality of the (asymmetric) relation would be specified. Instead of being under **SOCIAL**.**REL**, these are under **GESTALT** and **CHARACTERISTIC**, respectively.

   The separation of individual–organization and individual–individual relations follows the precedent of the Abstract Meaning Representation (AMR; Banerescu et al., 2013, 2015), where have-**org**.**role**-91 captures relations between an individual and an institution (such as an organization or family), and have-**rel**.**role**-91 is used for relations between two individuals.

4.3.4 **QUANTITY**.**ITEM**

   **Something measured by a quantity denoted by the governor (the **QUANTITY**.**VALUE**).**

   The governor may be a precise or vague count/measurement. This includes nouns like “lack”, “dearth”, “shortage”, “excess”, or “surplus” (meaning a too-small or too-large amount).

   Question test: the governor answers “How much/many of (object)?”

   The main preposition is **of**.
• Simple QuantityItem:

(381) Pour me a bottle(’s worth) of beer. [but see (436)]

(382) I have 2 years of training.

(383) a. I ate 6 ounces of cake.
   a piece
   b. An ounce of compassion

(384) There’s a dearth of cake in the house.

(385) This cake has thousands of sprinkles.

(386) They number in the tens of thousands.

(387) a. I have a number of students.
   handful
   b. I have a lot of students.
   c. We did a lot of traveling.
   d. There is a lot of wet sand on the beach.

(388) A pair of shoes

• If the measure includes a word like “amount”, “quantity”, or “number”\(^\text{29}\) the construal QuantityItem~GESTALT is used (because the amount of something can be viewed as an attribute):

(389) QuantityItem~GESTALT:

   a. A generous amount of time
   b. A large number of students

But if “amount”, “quantity”, etc. is used without a measure as its modifier, it is simply GESTALT: see (338).

• If the governor is a collective noun not denoting an organization, the construal QuantityItem~STUFF is used (note that a “consisting of” paraphrase is possible):

(390) QuantityItem~STUFF:

   a. Can you outrun a herd of wildebeest?
   b. Put 3 bales of hay on the truck.
   c. A group of vacationers just arrived.
   2 groups
   A throng

\(^{29}\)Excluding the expression “a number” meaning ‘several’, as in (387a).
For organizational collectives, see OrgMember.

• Otherwise, if the object refers to a specific item or set, and the quantity measures a portion of that item (whether a quantifier, absolute measure, or fractional measure), the construal QuantityItem~Whole is used:

(391) QuantityItem~Whole:
  a. I ate 6 ounces of the cake in the refrigerator.
  b. I ate half of the cake.
  c. All/many/lots/a lot of the town’s residents are students.
  d. I have seen all of the city. (= the whole city)
  e. A lot of the sand on the beach is wet.
  f. 2 of the children are redheads.
  g. 2 of the 10 children in the class are redheads.

However, simple Whole is used if the portion is specified as “the rest”, “the remainder”, etc., as in (361).

History. Prior to v2.5, this was called Quantity, which was inconsistent with other supersense names as the quantity itself is denoted by the governor rather than the object of the preposition.

4.4 Characteristic

Generalized notion of a part, feature/property/attribute name or value, qualitative state/condition, possession, or the contents or composition of something, understood with respect to that thing (the Gestalt).

Labels Possession, PartPortion and its subtype Stuff, OrgMember, and QuantityValue and its subtype Approximator are defined for some important subclasses.

Characteristic applies directly to:

• A property value:

(392) Adnominal: Characteristic~Identity
  a. a car of high quality
  b. a man of honor
  c. a business of that sort [contrast with Species, §4.2]
Secondary predicate adjective: **CHARACTERISTIC~IDENTITY**

a. She described him as sad.
b. He strikes me as sad.

• Role of a complex framal **GESTALT** that has no obvious decomposition into parts:

(394) a. the restaurant with a convenient location [cf. (336)]
    an extensive menu
b. a party with great music

• That which is located in a container denoted by the governor:

(395) a room with 2 beds [beds are among the things in the room]

(396) **CHARACTERISTIC~STUFF** where the object of the preposition is construed as describing the contents in their entirety:

a. a shelf of rare books
b. a cardboard box of snacks

• With a transitive verb like **search**, **examine**, or **test**, the attribute of the **THEME** that is being examined:

(397) He examined the vase for damage.

(398) He searched the room for his laser pistol. [contrast intransitive **THEME**, (215a)]

(399) He was tested for low blood sugar.

• The scale or dimension by which items are compared:

(400) The children are sorted by height
    screened

(401) a. She exceeds him in height
    b. There is no difference in height

• The **form or shape** that an entity takes, or in which elements are arranged. This includes language of communication within an information source, and unit of measure (only the unit, not a full measurement) in relation to the attribute measured:

(402) **CHARACTERISTIC~LOCUS**:

a. The ribbon is (tied) in a bow.
b. The sand is in a pyramid shape.
c. I skipped lunch for three days \textsuperscript{FREQUENCY} in a row. [see (51b)]
the third day

d. The book is \textsuperscript{French} in French. [contrast (167)]

e. music \textsuperscript{C major} in C major

f. the desk’s height (measured) \textsuperscript{inches} in inches

• An adverbial \textbf{deictive} characterizing a participant of an event:

(403) She entered the room \textsuperscript{a stupor} in a stupor. (= she was in a stupor when
drunk she entered) (\textsc{Characteristic} $\mapsto$ \textsc{Locus}) [repeated at \textsc{Manner} for contrast]

• Anything that is borderline between the \textbf{Possession} and \textbf{PartPortion} subcategories.

• The \textbf{state or condition} that an entity is in. The PP or intransitive preposi-
tion is used (especially predicatively) to describe a qualitative state or
condition of an entity that is not simply a relation of location, time, pos-
session, quantity, causation, etc. between governor and object. For exam-
ple:

- With the noun \textit{state}, \textit{condition}, etc.:

(404) \textsc{Characteristic} $\mapsto$ \textsc{Locus}:

a. The chairs are \textbf{in} excellent shape.

b. I’m \textbf{in} no condition to go outside.

- Bodily/medical conditions presented as applying to the governor:

(405) John is \textbf{on} his back. (\textsc{Characteristic} $\mapsto$ \textsc{Locus})

\hspace{1cm} \textbf{on} antibiotics

\hspace{1cm} \textbf{on} the ventilator

\hspace{1cm} \textbf{in} pain

\hspace{1cm} \textbf{in} a coma

- Miscellaneous qualitative senses of specific prepositions used sta-
tively:

(406) John is \textbf{for} the war. [opinion] (\textsc{Characteristic} $\mapsto$ \textsc{Beneficiary})

\hspace{1cm} \textbf{against}

(407) John is \textbf{into} sports. [hobbies/interests] (\textsc{Characteristic} $\mapsto$ \textsc{Goal})

- Idiomatic PPs expressing states, for example:\footnote{30}{Often the object of the preposition is determinerless (\textit{in} \textit{business}) (Baldwin et al., 2006) or has a fixed determiner (\textit{in} \textit{a hurry}).}

64
(408) on fire (contrast in the fire), on time (contrast at the time), in trouble, in love, in tune, in a hurry, at odds, out of business, out of control (CHARACTERISTIC~LOCUS)

– Intransitive prepositions expressing a qualitative state (not location, time, etc.):

(409) CHARACTERISTIC~LOCUS:
  a. The lights are on. [also at SOURCE for contrast]

  off

  out

  b. Political TV shows are in. [in fashion]

Contrast intransitive predicative prepositions describing an event:

(410) The party tomorrow is on. (TEMPORAL~LOCUS) [see: TEMPORAL]

A few observations about these state PPs are in order.

1. In a reversal of the usual asymmetry between governor and adpositional object, semantically, the PP defines the kind of scene that the governor participates in. To an extent, this may be true of all predicative PPs, but the state PPs are often such that the object of the preposition is neither an event nor a referential entity. I.e., John is in a hurry does not exactly express a relation between the entities John and a hurry; rather, it expresses something qualitative about the entity John’s condition.

2. The most idiomatic of the state PPs seem to resist questions of the form What?+NP-supercategory with a stranded preposition:

(411) More productive prepositional usages:
  a. The party is in January. → What month is the party in? [Or: When is the party?] (TIME)

  b. John is on aspirin. → What medication is John on?31 (CHARACTERISTIC~LOCUS)

(412) Less productive/more idiomatic preposition + NP combinations:
  a. John is in a hurry. → What _ is John in?32 (CHARACTERISTIC~LOCUS)

  a coma

  b. John is on fire. → What _ is John on? (CHARACTERISTIC~LOCUS)

3. Typically these states are binary: something is either on fire/on time, or not. For some, the negation may be expressed by substituting a contrasting preposition: an orchestra that is not in tune is out of tune.

31 Or, colloquially, with a suspected mind-altering substance: What is John on?!
32 What condition/state is John in? does work, but is quite vague.
**State PPs with complements.** The **CHARACTERISTIC~LOCUS** construal is also used when there is effectively a preposition+NP+preposition combination that links two arguments:

(413) **CHARACTERISTIC~LOCUS:**
   a. John is in love (with **STIMULUS~TOPIC** Mary). [cf. (260f)]
   b. That is at odds with **COMPARISONREF~TOPIC** our agreement.

**Change-of-state PPs.** Note that **CHARACTERISTIC** does not apply to an initial or result state, where **SOURCE** and **GOAL** are the respective scene roles (collapsing the usual state/location distinction):

(414) John came **out of** a coma. (**SOURCE**)
(415) John slipped **into** a coma. (**GOAL**)
(416) The drugs put John **in** a coma. (**GOAL~LOCUS**)
(417) They chopped the wood **in** pieces. (**GOAL~LOCUS**)

For some usages but not all, one of “**GESTALT** {HAS, CONTAINS} **CHARACTERISTIC**” is entailed. This does not help to distinguish subtypes.

**Versus CIRCUMSTANCE.** State PPs like **at odds** and **on medication**, which receive the construal **CHARACTERISTIC~LOCUS**, are similar to situating events like **at the party** and **on vacation**, which are analyzed as **CIRCUMSTANCE~LOCUS**. What matters for the scene role is whether the object of the preposition is an event or not.

**Versus MANNER.** If a property pertains to an entity—whether that entity is the syntactic governor or not—then **CHARACTERISTIC. MANNER** is limited to descriptors of events.

**History.** The v1 label **ATTRIBUTE** was intended to apply to features of something, but was vaguely defined. With the overhaul of the **CONFIGURATION** subhierarchy, **ATTRIBUTE** has primarily been replaced by **CHARACTERISTIC** and its subtypes and **IDENTITY**.
4.4.1 **Possession**

Piece of **property** (something potentially with monetary value) that an animate party (the **Possessor**) has on a permanent or temporary basis, or that is transferred between parties. The **Possession** must be **alienable**, i.e. not a part or attribute of the **Possessor**.

The **Possessor** may own or may be borrowing, renting, wearing, or holding the property.

Prototypical prepositions are **with** and **without**:

(418) People **with** money
   **without**

There is also a (negated) possession sense of **out/** **out_of**:

(419) a. We are **out_of** toilet paper.
   b. Toilet paper? We are **out**.

Attire may be construed in multiple ways:

(420) the kid **with** a vest (on)
   makeup

(421) the kid **in** a vest (**Possession~$\rightarrow$** **Locus**)

Immediate concrete possession uses an **Ancillary** construal:

(422) Hagrid exited the shop **with** (= carrying) a snowy owl. (**Possession~$\rightarrow$** **Ancillary**)

**Transfer, goods, and services.** In a commercial scene, goods, services, and money are distinguished. **Possession** is used as the scene role for goods for sale. **Possession** also applies to a piece of property transferred between parties, lost, acquired, or carried, even if no money changes hands. **Theme** is the scene role for commercial services. **Cost** applies to the money asked, paid, or owed.

The construal **Possession~$\rightarrow$** **Theme** is used for goods marked by **on**, **for**, etc., whereas **with** can be simple **Possession**:

(423) Simple change of possession and transfer:
   a. I bestowed the winner **with** a bicycle. (**Possession**) [repeated at **Cost**]
      $100
   b. They robbed her **of** her life savings. (**Possession~$\rightarrow$** **Theme**)

(424) Goods:
   a. They spent $500 **on** the bicycle. (**Possession~$\rightarrow$** **Theme**) [also at **Theme**]
b. They charged/asked/paid/owed $500 for the bicycle. (POSSESSION→THEME)
c. $500 for the bicycle was excessive. (POSSESSION→THEME)

Contrast (222) under THEME.
Paraphrase test: “POSSESSOR POSSESSES POSSESSION”, “POSSESSOR is IN POSSESSION OF POSSESSION”, or “POSSESSOR HAS ON POSSESSION” for stative possession; “RECIPIENT ACQUIRES POSSESSION” or “ORIGINATOR LOSES POSSESSION OF POSSESSION” for change of possession. “IN POSSESSION OF” is especially appropriate for immediate concrete stative possession.

See further discussion at POSSESSOR.

4.4.2 PARTPORTION

A part, portion, subevent, subset, or set element (e.g., an example or exception) of some WHOLE.

Anything directly labeled with PARTPORTION is understood to be incomplete relative to the WHOLE. This includes body parts and partial food ingredients.

Prototypical prepositions include with, without; such as, like for exemplification; and but, except, except for for exceptions:

(425)  a. a car with a new engine
   b. a strategy with 3 prongs
   c. the girl with flaxen hair
   d. a man with a wooden leg named Smith
   e. a valley with a castle
   f. a quintet with 2 cellos
   g. a performance with a guitar solo
   h. a cake with 3 layers
   i. a sandwich with wheat bread
   j. soup with carrots (in it)
   k. a chicken sandwich with ketchup (on it)

(426) Bread without gluten

Some can be paraphrased with INCLUDES, but this is not determinative.
Elements and Exceptions. PartPortion is used for adpositions marking a member or non-member of a set:

(427) strategies such as divide-and-conquer
(428) Everyone except/but Bob plays trombone.

Set-membership can be construed as comparison:

(429) strategies like divide-and-conquer [same reading as (427)]

(PartPortion~\rightarrow\text{ComparisonRef})

The set may be an organizational collective:

(430) A piano quintet is a chamber group with a piano (in it)

(OrgMember~\rightarrow\text{PartPortion}) [repeated at OrgMember]

Diverse Examples. In describing a set or whole, a sort of scanning with from...to can be used indicate diversity or coverage of the items/parts:

(431) Everyone from PartPortion~\rightarrow\text{Source} the peasants to PartPortion~\rightarrow\text{Goal} the lord and lady gathered for the feast.

Start with, end with, etc. Along similar lines as (431), with can be used with an aspectual verb to indicate an item in a sequence: start with, continue with, end with, and similar. Here the scene role PartPortion applies (though note that it is a part with respect to another argument of the verb, not the verb itself):

(432) PartPortion~\rightarrow\text{Means}:
    a. My teacher started the lesson with a quiz.
    b. The lesson started with a quiz.

(433) The meal started with an appetizer. (PartPortion~\rightarrow\text{Instrument})

History. In v1, instead of this category, there were separate categories Elements for set members, Comparison/Contrast for exemplification, and Attribute for other parts (grouped with properties, which are now Gestalt). (Superset was removed along with Elements: see Whole.)
**STUFF**

The members comprising a group/ensemble, or the material comprising some unit of substance. **STUFF** is distinguished from other instances of **PORTION** in fully covering (or “summarizing”) the aggregate whole.

Paraphrase test: “**WHOLE** CONSISTS OF **STUFF**”

(434)  
  a. A clump **of** sand  
  b. A piece **of** wood  
  c. An evening **of** Brahms  
  d. A meal **of** salmon

(435) A salad **of** mixed greens

with

(436) This bottle is **of** beer (and that one is of wine). (**CHARACTERISTIC**→**STUFF**)  
[but see (381)]

(437) A group/throng **of** vacationers (**QUANTITYITEM**→**STUFF**) [governor is collective noun not denoting an organization; more at **QUANTITYITEM**]

(438) **ORGMEMBER**→**STUFF**:
  a. An order **of** nuns [repeated at **ORGMEMBER**]  
  b. A chamber group **of** 5 players [repeated at **ORGMEMBER**]

  **STUFF** has no specific counterpart under **WHOLE**.

4.4.3 **ORGMEMBER**

Individual(s) who are members of an organization, when mentioned in relation to the organization (**ORG**).

(439) **ORGMEMBER**→**GESTALT** with possessive marking on the individual:
  a. *my* school/gym [that I attend]
  b. *my* work [the place where I work]
  c. *my* landscaping company [that I hired]
  d. the family **of** Miss Zarves
  e. Miss Zarves’s family

(440) **ORGMEMBER**→**POSSESSOR** if the individual is understood to possess authority within or as a representative of the institution:
a. my small business [that I own or operate]
b. the president’s administration

(441) OrgMember~PartPortion if the governor is an organizational collective noun and the object of the preposition denotes a subset of members:
a. A piano quintet is a chamber group with a piano (in it) [repeated at PartPortion]

(442) OrgMember~Stuff if the governor is an organizational collective noun and the object of the preposition describes the full membership:
a. An order of nuns [repeated at Stuff]
b. A chamber group of 5 players [repeated at Stuff]

OrgMembers are generally people; sub-organizations within a larger organization are excluded.

Note that relations between persons, even in the context of an organization, fall under SocialRel (e.g. my boss).

A member of an organization is only labeled OrgMember when the relationship to the Org is in focus: e.g., an activity done as part of a job with an organization will not trigger OrgMember:

(443) At the restaurant we were seated by the host. (Agent)

History. See history note at Org.

4.4.4 QuantityValue

The amount marked as the quantity of something (the QuantityItem).

Except for its subtype Approximator, there are no prototypical adpositions for this category in English: wherever quantity–quantified relations are marked by a preposition, the preposition is on the quantified thing, and is thus labeled QuantityItem.

QuantityValue can, however, appear as the scene role with very specific predicates like in (444a):

(444) a. The deaths numbered in the thousands. (QuantityValue~Locus)
b. There were thousands of deaths. (QuantityItem)
**APPROXIMATOR**

An adposition that converts a point value (or pair of values) into an approximate value or range, without establishing a relation between two items/values to be compared.

This includes:

- **Prepositions of approximation:** *about, around, in_the_vicinity_of*
- **Prepositions of scalar comparison:** *over, under, between, at_least, at_most, more_than, less_than, greater_than, and fewer_than*

For instance:

(445) a. We have *about* a dozen eggs left.
   b. We have *in_the_vicinity_of* a dozen eggs left.
   c. We have *over* a dozen eggs left.
   d. We have *between* 3 and 6 eggs left.

(446) The lake is *around/at_least* a mile wide.

**APPROXIMATOR** prepositions can also apply to expressions of spatial and temporal distance (see **DIRECTION** and **INTERVAL**). The syntactic analysis of these constructions is not obvious; here the policy is simply to apply the label **APPROXIMATOR** while remaining agnostic as to the precise syntax.³³

Note, however, that a simple relative comparison of an unknown value against a point on a scale qualifies as **COMPARISON_REF~Locus** (see discussion at **COMPARISON_REF**):

(447) expenses *under* $100 (**COMPARISON_REF~Locus**)  
(448) Your score is *above* 100. (**COMPARISON_REF~Locus**)  
   over  
   at_least

(448) features a copular sentence with a preposition at the beginning of a predicate complement. In cases like this, is arguably ambiguous as to whether the preposition acts as a modifier of the quantity, which would suggest **APPROXIMATOR**, or establishes a relation between subject and predicate, which would suggest **COMPARISON_REF~Locus**. In general we prefer the latter analysis.

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³³These constructions are markedly different from most PPs; it is even questionable whether these usages should count as prepositions. Without getting into the details here, even if their syntactic status is in doubt, we deem it practical to assign them with a semantic label in our inventory because they overlap lexically with “true” prepositions.
4.5 **Ensemble**

**Entity that another entity is grouped with.**

**Ensemble** labels a connective that relates two things (typically entities) to indicate that they form a general semantic grouping of some kind. In this grouping, they are on roughly equal footing—neither is a part, member, possession, location, or containing event for the other—though one may be presented as slightly more prominent in the discourse.

Ensemble relations in English are prototypically expressed with conjunctions like *and*, but may also be construed via **Ancillary** adpositions:

(449) **Ensemble**→**Ancillary**:

a. rice *with* beans (= served or mixed together) *without*

b. A smile *with* a nod was his answer.

**Versus Ancillary.** **Ensemble** is used for a relation directly between entities, whereas **Ancillary** describes a relation of an entity to an event/situation.

**History.** Prior to v2.5, a single label, **Accompanier** (under **Configuration**), covered both entity–entity and event–entity relations. In v2.5, **Accompanier** was split into **Ancillary** and **Ensemble**.

The term “ensemble” is borrowed from Lindstromberg (2010, pp. 214), though it is applied more narrowly here.

4.6 **ComparisonRef**

The reference point in an explicit comparison (or contrast), i.e., an expression indicating that something is **similar/analogous to**, **different from**, **the same as**, or an **alternative to** something else.

The marker of the "something else" (the ground in the figure–ground relationship) is given the label **ComparisonRef**:  

73
(450) a. She is taller than me.
b. She is taller than I am.
c. She is taller than she is wide.
d. She is better at math than at drawing.
e. The shirt is more gray than black.

(451) a. She is as tall as I am.
b. Your face is (as CHARACTERISTIC~EXTENT) red as a rose. (more on as-as comparatives: §6.3.1)
c. Your surname is the same as mine.

(452) Harry had never met anyone quite like Luna.

(453) It was as if he had insulted my mother.

like

The comparison is often made with respect to some dimension or attribute, the CHARACTERISTIC, which may or may not be scalar. The comparison may be figurative, employing simile, hyperbole, or spatial metaphor (close to in the sense of ‘similar to’). The COMPARISONREF may even be a desirable or hypothetical/irrealis event or state (It was as it should have been).

Prototypical prepositions include than, as (including the second item in the as–as construction), like, unlike. Prominent construals are to (GOAL for similar-thing) and from (SOURCE for dissimilar-thing).

LOCUS construal for relative locative position on scale. Prototypically-locative prepositions that are relative (above, below, between, under, etc.—in contrast to the absolute ones like at, in, and on)—invite a comparison between two things. Where the relation between governor and object exists mainly to compare two items (or their values) on an abstract scale, and the preposition metaphorically expresses this relation as a relative location, COMPARISONREF~LOCUS applies. Examples include:

(454) COMPARISONREF~LOCUS:

a. Scale of measurement: Your heart rate is above 100 bpm.

b. Reference point for cost: The price is within my budget.

c. Scale of progress: My team is ahead of your team in the tournament.

d. Relative preference: I prefer this restaurant over that one.34 [paraphrase: I like this restaurant better than that one.]

34This is closely related to the notion of an alternative as in (473).
This excludes absolute prepositions, as in (455), as well as prepositional phrases conveying circumstantial information about a scene (e.g. place, time, manner) or cost (456).

(455)  a. Your heart rate is at 70 bpm. (LOCUS)
       b. That’s in my price range. (LOCUS)
       c. The book is priced at $10. (COST~LOCUS)

(456)  a. restaurants within 10 miles [physical location] (LOCUS)
       b. I will explain my argument below. [discourse location] (LOCUS)
       c. The guests will arrive after 6:00. (TIME)
       d. The book is priced below $10. (COST~LOCUS)

See also APPROXIMATOR.

**SOURCE and GOAL construals.**  Resemblance and equivalence may be expressed with to, while difference may be expressed with from:

(457)  **COMPARISONRef~GOAL:**
       a. Shall I compare thee to a summer’s day?
       b. Her height is equal to mine.

(458)  **COMPARISONRef~SOURCE:**
       a. We need to distinguish what is achievable from what is desirable.
       b. Her height is different from mine.35

**Ancillary construal.**

(459)  Don’t compare me with my sister! (COMPARISONRef~Ancillary)

**Category as standard.**  An indirect comparison can be made by relating something to a category to which it may or may not belong. The category stands for its members or prototypes. For example, in:

(460)  He is short for a basketball player. (COMPARISONRef)

the category basketball player serves as the standard against which he is deemed short.

35 American English. Interestingly, different to occurs in British English.
Sufficiency and excess. Sufficiency and excess can be expressed with adverbs (too, enough, insufficiently, etc.) and adjectives (insufficient) that license a PP or infinitival expressing the consequence.36 For example:

(461) \text{COMPARISONRef} \rightarrow \text{PURPOSE}:

a. He is too short for basketball.  
not tall enough to play
b. His height is insufficient for basketball.

Playing basketball is the desired outcome, but it is conditional on some scalar property relative to an implicit point on the scale—in (461), a minimum height associated with playing basketball. As a consequence, the desired outcome may or may not be blocked. Thus, the consequence phrase helps to establish a reference point of comparison.

As discussed under \text{PURPOSE}, if the consequence phrase in such a construction meets the criteria for purposes, it is labeled \text{COMPARISONRef} \rightarrow \text{PURPOSE}. Otherwise, the non-purpose consequence is labeled \text{COMPARISONRef} \rightarrow \text{Goal}.

\text{MANNER} \rightarrow \text{COMPARISONRef} construal. This applies to an analogy describing the how of an event (be it agentive or perceptual):

(462) \text{MANNER} \rightarrow \text{COMPARISONRef}:

a. You eat like a pig (eats).

b. You smell like a pig.

However, where an analogy is an external comment on an event rather than filling in a role of the event, it is simply \text{COMPARISONRef}. Contrast:

(463) You ate a whole pie like my cousin did.

a. Role reading: The way in which you ate a pie was similar. (\text{MANNER} \rightarrow \text{COMPARISONRef})

b. External comment reading: You ate a whole pie, and so did my cousin. (\text{COMPARISONRef})

\footnote{36See the Degree-Consequence construction (Bonial et al., 2018).}
Analogy and non-analogy readings of like. In descriptions, adverbial like, as if, etc. can be ambiguous, especially in a scene of perception. For example:

(464) This looks like a Van Gogh painting.
   a. Analogy reading: This looks similar to a Van Gogh painting. (MANNER~COMPARISONRef)
   b. Conclusion reading: This looks to be a Van Gogh painting (it probably is one). (THEME~COMPARISONRef)

(465) It sounded like/as if
   a. ...he had drunk a gallon of helium. (MANNER~COMPARISONRef: analogy reading more likely)
   b. ...they weren't taking me seriously. (THEME~COMPARISONRef: conclusion reading more likely)

Similarly for seem like, feel like, etc.

Another ambiguity can arise when like occurs with what as its extracted object. In the following sentences, the most likely interpretation is not one of analogy between two things, but rather an open-ended description. (Who does it look like?, by contrast, implicates an analogy to an individual.) We therefore treat like what as a PP idiom, and label it MANNER~COMPARISONRef:

(466) MANNER~COMPARISONRef:
   a. I know what_ Steve looks _like. (I know how Steve looks.)
   b. What_ does her hair look _like? (How does her hair look?)
   c. What_ is the party _like? (How is the party?)

A how-paraphrase is generally possible, though how may suggest a positive or negative evaluation is available, whereas what is more neutral.

Contrast unaccusative perception verb + of combinations:

(467) Your father smells of elderberries. (MANNER~STUFF) [also (171)]
The soup tastes

Category exemplars and set members. When governed by an NP naming a category or set, like is ambiguous between exemplifying a member, as in (468b) and (469b), and merely indicating similarity, as in (468a) and (469a):

(468) Colbert frequently promotes comedians like himself.
   a. (Exclusive/restrictive reading: similar to himself (but not including himself)) (COMPARISONRef)
b. [Inclusive/nonrestrictive reading: such as including himself (he promotes himself, among others)] (PART~PORTION\~COMPARISONRef)

(469) a. I don't know anyone else like her. [anyone else similar to her] (COMPARISONRef)
   b. It must be great to have a wonderful doctor like her. [It must be great to have her because she is a wonderful doctor] (IDENTITY\~COMPARISONRef)

Instead-of alternatives. COMPARISONRef also applies to a default or already established thing for which something else stands in or is chosen as an alternative.

(470) I ordered soup instead_of salad. rather_than
(471) Instead_of ordering salad, I ordered soup.
(472) The new shirts were gray instead_of black.

May be construed spatially:

(473) I chose soup over salad. (COMPARISONRef\~Locus)

This is similar to the static-preference use of over illustrated in (454d). See also Ancillary and Theme.

History. A separate category instead_of was introduced in v2.0 for alternatives, but in v2.5 it was merged with COMPARISONRef after the distinction became fraught for some uses of instead_of and rather_than.

4.7 Rate\_Unit

Unit of measure in a rate expression.

This is for constructions using per or by to specify a unit:

(474) a. The cost is $10 per item.
   b. A fuel efficiency of 40 miles per gallon (of gas)
   c. Pizza is sold by the slice.
   d. They charge by the hour.

Paraphrase: The adposition can be paraphrased as “for each/every”.

78
4.8 **SocialRel**

Party (individual, group of persons, or institution) with which another party has a stable affiliation.

Typically, SocialRel applies directly to interpersonal relations (versus Org and OrgMember for relations involving an organization). It does not have any prototypical adpositions. Construals include:

(475) a. I work with Michael. (SocialRel~Ancillary)
    b. Joan has a class with Miss Zarves. (SocialRel~Ancillary)
(476) people with children (SocialRel~Characteristic)
(477) SocialRel~Gestalt
   a. Joan is the sister of John.       Joan is John’s sister. wife
   b. Joan is a student of Miss Zarves. Joan is Miss Zarves’s student.
   c. the rivalry of the teams          the teams’ rivalry
(478) the rivalry between the teams (SocialRel~Whole) [see (368)]
(479) Joan is studying under Prof. Smith. (SocialRel~Locus)
(480) Joan is married to John. (SocialRel~Goal)
(481) Joan is divorced from John. (SocialRel~Source)
(482) Joan bought her house through a real estate agent. [intermediary] (SocialRel~Instrument)

Note, however, that work with is ambiguous between being in an established professional relationship (475a), and engaging temporarily in a joint productive activity:

(483) I was working with Michael after lunch. (Agent~Ancillary)

It is up to annotators to decide from context which interpretation better fits the context.

*History.* Renamed from v1 label ProfessionalAspect, which was borrowed from Srikumar and Roth (2013a,b). The name SocialRel reflects a broader set of stative relations involving an individual in a social context, including kinship and friendship. See also note under Org.
5 Constraints on Role and Function Combinations

The present scheme emerged out of extensive descriptive work with corpus data. Given the abundance of rare preposition usages, this document does not claim to cover every possible role/function combination for English, let alone other languages. Below are the few categorical restrictions that seem warranted for English.

5.1 Supersenses that are purely abstract

*Participant* and *Configuration* are intended only to organize subtrees of the hierarchy, and not to be used directly.

5.2 Supersenses that cannot serve as functions

For English prepositions and possessives, *Experimenter, Stimulus, Originator, Recipient, SocialRel, Org, OrgMember, Ensemble, and Quantity-Value* can only serve as scene roles, not functions. Though scenes of perception, transfer, and interpersonal/organizational relationships are fundamental in language, they always seem to exploit construals from other domains (motion, causation, possession, and so forth). (They may be marked more canonically by other English constructions, or by adpositional and case constructions in other languages.)

For example, (484a) is clearly *Recipient* at the scene level—Sam acquires possession of the box—but also fits the criteria for *Goal* because Sam is an endpoint of motion (and *to* frequently marks *Goals* that are not *Recipients*). (484b) and (484c) reflect *Recipient~Agent* and *Recipient~Gestalt* construals, respectively.

(484)  a. Give the box to Sam. (*Recipient~Goal*)
   b. the box received by Sam (*Recipient~Agent*)
   c. Sam’s receipt of the box (*Recipient~Gestalt*)

Though the *Goal* construal is arguably the most canonical expression of *Recipient*, there is no preposition with a primary meaning of *Recipient* independent of one of these other domains.

Additional constraints on functions arise in the context of specific constructions (§6). For instance,

- the s-genitive requires either *Possessor* or *Gestalt* as its function (§6.1)
- passive by requires *Agent* or *Causer* as its function (§6.2)
5.3 Supersenses that cannot serve as roles

In the present scheme, there are no supersenses that are restricted to serving as functions.

5.4 No temporal-locational construals

Temporal prepositions never occur with a function of LOCUS, PATH, or EXTENT.

Languages routinely borrow from spatial language to describe time, and spatial cognition may underlie temporal cognition (e.g., Lakoff and Johnson, 1980; Núñez and Sweetser, 2006; Casasanto and Boroditsky, 2008). A liberal use of construal would treat arriving in the afternoon as TIME~LOCUS, sleeping through the night as DURATION~PATH, running for 20 minutes as DURATION~EXTENT, and so forth. However, for simplicity and practicality, we elect not to annotate LOCUS, PATH, or EXTENT construals on ordinary temporal adpositions. Thus:

(485)  a. arriving in the afternoon (TIME)
        b. sleeping through the night (DURATION)
        c. running for 20 minutes (DURATION)

TIME~DIRECTION is possible, however, as are other atemporal functions:

(486)  a. Schedule the appointment for Monday. (TIME~DIRECTION)
        b. January of last year (TIME~WHOLE)
        c. Will you attend Saturday’s class? (TIME~GESTALT)
        d. It took a year’s work to finish the book. (DURATION~GESTALT)

Note that the above is qualified to ‘ordinary temporal adpositions’. When the first argument of a comparative construction is marked with as, the function is always EXTENT, even if the scene role is temporal. See §6.3.1.

5.5 Construals where the function supersense is an ancestor or descendant of the role supersense

Ordinarily, if a construal holds between two (distinct) supersenses, these are from different branches of the hierarchy. In a few cases, however, one is the ancestor of the other.
Role is ancestor of function.

- Setting events or situations with a salient spatial metaphor are CIRCUMSTANCE~LOCUS or CIRCUMSTANCE~PATH.
- Fictive motion (the extension of a normally dynamic preposition to a static spatial scene) can warrant LOCUS~GOAL or LOCUS~SOURCE, as discussed under LOCUS.
- Complete contents of containers are CHARACTERISTIC~STUFF.

Function is ancestor of role.

- Some s-genitives are annotated as WHOLE~GESTALT: see §6.1.
- When an organization is framed via a genitive construction in relation to its members, ORG~GESTALT is used.
- For amount/number/etc. + of + ITEM, QUANTITYITEM~GESTALT is used.
- When a locative PP is coerced to a goal, as with put, GOAL~LOCUS is used.

6 Special Constructions

This section discusses notable constructions that are not limited to a single supersense.

6.1 Genitives/Possessives

Blodgett and Schneider (2018) detail the application of this scheme to English possessive constructions: the so-called s-genitive, as in (487), and of-genitive, as in (488):

(487)  a. the Smith family’s house (POSSESSOR)
       their
    b. the tea’s price (GESTALT)
       its

(488)  a. the house of the Smith family (POSSESSOR)
    b. the price of the tea (GESTALT)

Note that the s-genitive is realized with case marking (clitic ‘s or possessive pronoun37) rather than a preposition, and the case-marked NP in the s-genitive alternates with the object of the preposition in the of-genitive. (This may feel un-intuitive: annotators looking at the s-genitive construction are often tempted to focus on the role occupied by the head noun rather than the case-marked noun.)

37 For ease of indexing, ‘s or s’ is preferred over possessive pronouns for s-genitive examples in this document.
The s-genitive and of-genitive are particularly associated with **Possessor** (which applies to a canonical form of possession) and the more general category **Gestalt**; both supersenses are illustrated above (487, 488). In addition, both genitive constructions can mark participant roles and other kinds of relations, including **Whole** and **SocialRel** relations. When the s-genitive is used, the function is always either **Gestalt** (most cases) or **Possessor** (when the possession is sufficiently canonical). While overlapping in scene roles with the s-genitive, of is considered compatible with some additional functions, including **Whole, Source, and Theme**; thus of-genitives with such roles do not need to be construed as **Gestalt** or **Possessor**:

(489) **SocialRel~Gestalt**:
   a. the grandfather **of** Lord Voldemort
   b. Lord Voldemort’s grandfather
      **his**

(490) a. the hood **of** the car (**Whole**)  
   b. the nose **of** He-Who-Must-Not-Be-Named (**Whole**)  
   c. the car’s hood (**Whole~Gestalt**)  
      **its**  
   d. He-Who-Must-Not-Be-Named’s nose (**Whole~Gestalt**)  
      **his**

(491) a. the arrival **of** the queen (**Theme**)  
   b. the queen’s arrival (**Theme~Gestalt**)  
      **her**

(492) Shakespeare’s works (**Originator~Gestalt**)  
      **his**

(493) These are children’s clothes.\(^38\) [clothes intended for use and possession by children] (**Beneficiary~Possessor**)  

The literature on the genitive alternation examines the factors that condition the choice of construction; important factors include the length and animacy of the possessed NP. In addition, **of** participates in certain constructions that are not really possessives—e.g. **this sort of sweater** (**Species**).

Some difficult cases are clarified below.

\(^38\)Cannot readily be paraphrased with **their** because children is not referential, but rather refers to a kind. This construction has been termed the **descriptive genitive** (Quirk et al., 1985, pp. 322, 327–328).
**Person in relation to a place or travel.** In relation to an act of travel, the person is treated as a (possibly non-volitional) participant in a motion event. Otherwise, a person in relation to an associated place is **GESTALT**.

(494)  
my destination (**THEME**~**GESTALT**)

journey

travels

(495)  
my hometown (**GESTALT**)

birthplace

**Idioms.** Certain idioms require an s-genitive argument that does not participate in any transparent semantic relationship; for these, `S is used (§7.4).

6.2 **Passives**

The construction for passive voice (in verbs and nominalizations thereof) involves an optional **by-PP**; the object of **by** alternates with the subject in active voice. While a variety of scene roles can be expressed with this phrase, the functions associated with passive **by** are limited to **AGENT** and **CAUSER**:

(496)  
a. the decisive vote **by** the City Council (**AGENT**)

b. the devastation wreaked **by** the fire (**CAUSER**)

c. This story was told **by** my grandmother. (**ORIGINATOR**~**AGENT**)

d. The news was not well received **by** the White House. (**RECIPIENT**~**AGENT**)

e. Mr. Dursley is employed **by** Grunnings. (**ORG**~**AGENT**)

f. The window was broken **by** the hammer. (**INSTRUMENT**~**CAUSER**)

g. scared **by** the bear (**STIMULUS**~**CAUSER**)

6.3 **Comparatives and Superlatives**

Various constructions express a comparison between two arguments.

**COMPARISONREF for second argument.** When the second argument (the point of reference) is adpositionally marked, **COMPARISONREF** is used, regardless of its complement’s syntactic type:

(497)  
a. Your face is as red **as** a rose. (**COMPARISONREF**)

mine is

b. Your face is redder **than** a rose. (**COMPARISONREF**)

mine is

See further examples at **COMPARISONREF**.
6.3.1 **As-as comparative construction**

**Extent argument.** In an as-as comparison, the scene role of the first argument (the object of the first as) is the role that would be operative if the construction were removed and only the first argument remained: e.g., *I stayed as long as I could* → *I stayed long*. The function of the first as is always Extent to reflect that it marks the degree on a scale:

(498)  
- a. I helped as much as I could. *(Extent)*  
- b. Your face is as red as a rose. *(Characteristic→Extent)*  
- c. I helped as carefully as I could. *(Manner→Extent)*  
- d. I stayed as long as I could. *(Duration→Extent)*  
- e. I helped as often as I could. *(Frequency→Extent)*  
- f. I’ve eaten (twice) as much (food) as you. [amount of something] *(Approximator→Extent)*

**Second argument:** **ComparisonRef.** See (497) above.

6.3.2 **Superlatives**

*Whole* is used for the superset or gestalt licensed by a superlative:

(499)  
- the youngest of the children *(Whole)*

See more at *Whole*.

6.4 **Infinitive Clauses**

In its function as infinitive marker, *to* is not generally considered to be a preposition. Nevertheless, we consider all uses of *to* for adposition supersense annotation because infinitive clauses (infinitivals) can express similar semantic relations as prepositional phrases.

6.4.1 **Infinitival varieties of Purpose**

Most notably, infinitival purpose adjuncts alternate with *for*-PP purpose adjuncts:

(500)  
- **Purpose:**
  - a. i. Open the door *to* let in some air.  
    ii. Open the door *for* some air.  
  - b. i. I flew to headquarters *to* meet with the principals.  
    ii. I flew to headquarters *for* a meeting with the principals.
Thus, from a practical point of view, we might as well treat infinitival to as capable of marking a **Purpose**.

The following list summarizes semantic analyses that we consider for infinitivals, which are detailed under **Purpose**:

- **Purpose adjuncts**, whether are adverbial or adnominal. These are labeled **Purpose**. Some can be paraphrased with *in order to*.
- In a **commercial scene**, a service to performed in exchange for payment; labeled **Theme~Purpose**. Repeated from the discussion under **Theme**:

  (501)  
  a. They asked $500 to make the repairs.  (**Theme~Purpose**)  
  b. $500 to make the repairs was excessive. (**Theme~Purpose**)

- **Result** infinitives, such as those in (129), are labeled **Goal**.
- **Constructions of sufficiency and excess**—too short to ride, not tall enough to ride, etc., where the assertion of sufficiency or excess licenses an infinitival—are labeled **ComparisonRef~Purpose** or **ComparisonRef~Goal**. See discussions at **ComparisonRef** and **Purpose**.

The non-semantic label `i applies to all other uses of the infinitive.

### 6.4.2 Infinitivals with for-subject

In (500), the infinitive clause has no local subject—rather, an argument of the matrix clause doubles as the subject of the infinitive clause (control). However, a separate subject can be introduced with *for*, in which case *for*+NP is treated as a dependent of the infinitive verb and labeled `i:

(502)  
  a. I opened the door [*for* Steve to**Purpose** take out the trash].  
  b. It cost $500 [*for* the mechanic to**Theme~Purpose** make the repairs].

### 6.4.3 For_to infinitives

These occur in some English dialects: *for to* infinitives

### 6.4.4 Other infinitivals

Examples of infinitival tokens that do not receive a semantic label appear in §7.3: **Other Infinitive** (`i`).

86
6.5 PP Idioms

Many PPs exhibit some amount of lexicalization or idiomaticity. This is especially true of PPs that tend to be used predicatively. In general it is extremely difficult to establish tests to distinguish idiomatic PPs from fully productive combinations. However, the usual criteria apply for the supersense analysis.

For example, if the PP answers a Where? question, it qualifies as Locus; whereas qualitative states usually have Characteristic as the scene role:

(503) He is out_of town. (Locus)
(504) The company is out_of business. (Characteristic~Locus)

See further discussion at Characteristic.

6.5.1 PP Idioms vs. Multiword Prepositions

A PP idiom is a fixed or semi-fixed expression consisting of an adposition plus its complement (usually an NP, AdjP, or AdvP), which must be a complete phrase. In some of these expressions the complement may take variable modifiers (e.g., on_ ONE's_ own: see §7.4). The PP idiom as a whole does not take a complement (is intransitive). A fixed expression ending in a transitive preposition like of or as (in_search_of, as_long_as) requires a complement, and thus is not a PP idiom.39

6.5.2 Reflexive PP Idioms

Certain idiomatic constructions involve a preposition that requires a reflexive direct object.

PERFORM-ACTIVITY for oneself.

- When something is done for one's own benefit rather than someone else's:

(505) I took a vacation for myself (Beneficiary)

- When something is done in a way that affords direct rather than second-hand information:

(506) You should try out the restaurant for yourself! (Agent~Beneficiary)

39Infinitive marker to counts as a transitive preposition for purposes of this definition.
PERFORM-ACTIVITY by oneself.

- When something is done without accompaniment (the negation would be with others):

  (507) I had lunch (all) by myself ['alone'] (ANCILLARY⁴⁰)

- When something is accomplished independently, without assistance:

  (508) I made the decision (all) by myself. (MANNER)
  (509) The computer rebooted all by itself. (MANNER)

BE by oneself. Alone; unaccompanied:

(510) I am by myself right now. (ANCILLARY)

6.6 Ages

An individual’s age is a temporal property, licensing both Time and Characteristic prepositions:

(511)  
  a. a child of (age) 5 (years) (CHARACTERISTIC)
  b. Martha was already reading at/by/before (the age of IDENTITY) 5 (years). (TIME)

6.7 Fixed expressions considered non-adpositional

- Named entities, including multiword names (e.g., Out of Africa, The Taming of the Shrew), are treated as single lexemes and should receive a nominal/entity type, not a SNACS supersense.

- Grammaticalized multiword expressions like the hedges in (512) and the semi-auxiliaries in §7.3 should not receive a SNACS supersense.

  (512) I’m kind_of hungry. (non-SNACS)

- Verb-particle combinations where the particle is not adding a compositional spatial meaning are treated as verbal multiword expressions and do not receive a SNACS supersense.

  (513) Compositional spatial meanings:

  a. The leaves blew up. (= blew into the air) (DIRECTION)

⁴⁰Though myself is not literally accompanying I, the PP as a whole describes the nature of accompaniment (or lack thereof).
b. The fan blew the leaves up. (Direction)

(514) Idiomatic/non-spatial meanings:
   a. i. I blew up the balloon. (= inflated) (non-SNACS)
       ii. I blew the balloon up. (= inflated) (non-SNACS)
   b. The bomb blew up. (= literally exploded) (non-SNACS)
   c. My friend blew up at me. (= exploded in anger) (non-SNACS)

• Where a verb or other content word absolutely requires a transitive preposition to receive the correct meaning, as in (516), it is treated as a content multiword expression and does not receive a SNACS supersense.

(515) I decided to wait for someone. (How long did you wait?) (Theme)

(516) At the library I came across an interesting book. (#When did you come?) (non-SNACS)

7 Special Labels

For annotating data, there needs to be a way to indicate that none of the adposition supersenses apply to a particular token.

7.1 DISCOURSE (’d)

Discourse connectives and other markers that transition between ideas or convey speaker attitude/hedging/emphasis/attribution but do not belong to propositional content. Examples include:

(517) according to; after all, of course, by the way; for chrissake (interjection); above all, to boot; in other words, on the other hand; in my experience, in my opinion

This label also covers “additive focusing markers” (Huddleston and Pullum, 2002, p. 592) with a meaning similar to ‘also’ or ‘too’, where an item is added to something already established in the discourse:

(518) a. I shot the sheriff as well.
     b. They serve coffee, and tea as well.

These can be called integral prepositions. Verbs with integral prepositions constitute a sub-type of prepositional verbs, i.e. verbs that select for a particular preposition. Both (515) and (516) can be considered prepositional verbs.
It also covers topicalization markers:

(519) **As for** the sheriff, well, I shot ’im.

Finally, ’d applies to adpositions relating a metalinguistic mention of a speech act to the speech content itself—whether the adposition introduces this speech act mention, as in (520a), or links the discourse expression to a subordinate statement, as in (520b).

(520)  
  a. **To** sum it up: It was a terrible experience.
  b. I will sum it up **with:** It was a terrible experience.

7.2 **COORDINATOR** (’c)

Coordinating conjunctions and similar expressions where the two elements in the relation are semantically on an equal footing, rather than in a figure/ground relationship:

(521) They serve coffee **as well as** tea. [‘They serve coffee and also tea’]

7.3 **OTHER INFINITIVE** (’i)

As described in §6.4, infinitive clauses are analyzed with a supersense if and only if they serve as a purpose adjunct, or in certain purpose-related constructions (result; complement of entity-referring indefinite pronoun; commercial service; that which something is good or bad for, or sufficient or excessive for). The special label ’i is reserved for all other uses of infinitival **to**, as well as **for** whenever it introduces the subject of an infinitive clause.42

Infinitivals warranting ’i include:

(522)  
  a. I want **to** meet you. [complement of control verb]
  b. I would _like_ to try the fish. [would _like_ is a polite alternative to want]
  c. It seems **to** be broken. [complement of raising verb]
  d. You have an opportunity **to** succeed. [complement of noun]
  e. I’m ready **to** leave. [complement of adjective]
  f. I’m glad **to** hear you’re engaged! [complement of emotion adjective]
  g. These new keys are expensive **to** copy. [tough-movement]
  h. My plan is **to** eat at noon. [infinitival as NP]

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42 Essentially, our position is that these uses of infinitivals are more like syntactically core elements (subject, object) than obliques, and thus should be excluded from semantic annotation under the present scheme.
i. It’s impossible to get an appointment. [infinitival as NP, with cleft]

j. I know how to lead. [complement of wh-word]

k. I have something to do. [complement of indefinite pronoun that doesn’t refer to an entity]

Multiword auxiliaries—such as quasi-modals have_to ‘must’, ought_to ‘should’, etc., as well as have_yet_to—subsume the infinitival to, so no label on to is required:

(523) You have_to choose a date.

Whenever for introduces a subject of an infinitival clause, the for token is labeled `i (regardless of whether to receives a semantic label; see §6.4):

(524) a. I need [for `i you to `i help me].
b. I opened the door [for `i Steve to_PURPOSE take out the trash].

7.4 OPAQUE POSSESSIVE SLOT IN IDIOM (‘$)

Semantic supersenses are used where possible for genitive/possessive constructions, as discussed in §6.1. However, there are a few idioms which require a possessive pronoun that does not participate transparently in any semantic relation; these are designated with the special label ‘$:

(525) a. I am eating on_ my _own today.
b. She tried her best.
c. He’s not your average baseball player.
d. Billy knows his ABCs!

It is also used for the possessive in the way construction: contrast

(526) I like her way of eating—it is very polite. (GESTALT)

(527) She will arrive soon: she is on_ her _way. (‘$) [see (13)]

(528) I don’t want to drive there because it is out_of_ my _way. (‘$)

8 Changelog

8.1 Changes from earlier versions of this document

• Version 2.5 (April 1, 2020): Several structural changes to the hierarchy for better internal consistency and clarity:
  – CO-AGENT has been merged with AGENT, and CO-THEME with THEME.
accompanier has been split into ancillary and ensemble.

insteadof has been merged with comparisonref (github issue #5).

orgrole, which was under socialref, has been split into org
(under gestalt) and orgmember (under characteristic) in or-
der to reflect the asymmetry of the relation.

quantity has been renamed quantityitem, and its inverse quan-
tityvalue has been added. approximator has been moved under
quantityvalue.

revised the definition of approximator, and established the use of
comparisonref~locus for some uses of relative locative prepo-
sitions (see comparisonref: “locus construal for relative locative
position on scale”) (#59, #16, #20).

added §1.4: construal (#64).

an example labeled theme~purpose, (230), has been relabeled to
plain theme for consistency with current guidelines for purpose;
and responsible has been added as one of the governors in the exam-
ple (#55).

added example of unit of measure in relation to attribute (#58).

• version 2.4 (january 2, 2020):

  • overhauled definition and criteria for purpose versus other in-
finitives. updated comparisonref, §6.4: infinitive clauses, §7.3: oth-
er infinitive (’) accordingly.

  • new section: §6.7: fixed expressions considered non-adpositional

  • several more possessive clarifications under gestalt, possessor,
§6.1: genitives/possessives, §7.4: opaque possessive slot in id-
iom (‘$’) (github issues #32, #33, #34, #35, #37, #38)

  • several more verbs that select for prepositions under theme (#4, #15,
#22, #24, #28, #42) and species (#39)

  • added an example of an informational locus (#14).

• version 2.3 (august 18, 2019):

  • added §6.5.1: pp idioms vs. multiword prepositions.

  • possessor, possession: substantially revised to clarify their scope.

  • added some difficult possessive examples in gestalt, and elsewhere
for agent~gestalt, theme~gestalt, socialref~gestalt, and
experiencer~gestalt construals

  • possession, theme: added discussion of transfer, goods, and ser-
VICES. Goods and other transferred items are now possession, while
services remain as theme.

  • cost: clarified the explanation of when money should be treated
like any other possession.

- **Reclassified adverbial and predicative entity-descriptions (depictives, shapes, states) from MANNER to CHARACTERISTIC, and revised their definitions accordingly.**
- **Specified that TEMPORAL should be used directly for aspeceful prepositions (previously it was an abstract category: §5.1).**
- Moved journey-type PPs from MANNER to CIRCUMSTANCE.
- **Means:** Revised the definition and clarified relationship to MANNER.
- **SocialRel:** Reworded the definition and added a kinship example for SocialRel→Characterisitic.
- Clarified that EXPERIENCER applies to bodily sensations (not physical bodily changes), and added cognition examples.
- Changed the treatment of replacees from INSTEADOF to Co-Theme.
- List PP idioms in the index.
- **Path:** Clarified that motion events can be located as points (LOCUS), and relocated (138) from MANNER.
- Rectified inconsistent treatment of a family member in relation to the family (now always ORGRole).
- Organizational collective members: now ORGROLE; PARTPORTION, formerly ORGROLE→PARTPORTION, CHARACTERISTIC.
- Added dotted version number to title and adjusted author list.

**Version 2.2 (July 2, 2018):**

- Policy changes reflected in STREUSLE 4.0:
  - Rewrote §6.1: Genitives/Possessives and updated corresponding examples to reflect a clarified policy on possessive constructions. Moved wearer from GESTALT to POSSESSOR and attire from CHARACTERISTIC to POSSESSION.
  - Added §6.2: Passives and updated corresponding examples.
- Policy changes that are reflected in STREUSLE 4.1:
  - In §6.3.1, changed the function of the first as in the as-as construction to EXTENT (was IDENTITY).
  - Changed the function of ORIGINATOR possessives to GESTALT (was POSSESSOR).
  - Expanded documentation and removed inconsistencies around containers and collective nouns (see STUFF, QUANTITY, CHARACTERISTIC, ORGROLE).
  - Specified MANNER→COMPARISONRef for certain adverbial uses of like.
  - Revised the definition of RECIPIENT to relax the requirement of animacy.
* Mentioned conditions as a subclass of Circumstance.
* Renamed Part/Portion to PartPortion to avoid technical complications of the slash.
  – Added §5: Constraints on Role and Function Combinations.
  – Added §6.6: Ages.
  – A few additional examples and fixes.
  – Added an index of construals by function.
  – Changes from v1 had neglected to mention the removal of Affector, Undergoer, Place, Elements, and Superset (thanks to Ken Litkowski for pointing this out).

**Version 2.1 (January 16, 2018):**
  – Broadened and clarified DeicticTime, moved it up a level in the hierarchy, and renamed it to Interval. Clarified the distinction between Interval and Duration.
  – Clarified Locus, Source, Goal, Path, and Direction, especially with regard to (i) intransitive prepositions, (ii) distance measurements, and (iii) inherent parts.
  – Significantly expanded the scope of Manner to cover states of entities and depictives.
  – Clarified like as ComparisonRef with regard to categories and sets, and PartPortion with regard to elements and exceptions.
  – Clarified with in regard to Topic and Stimulus.
  – Added discussion of the ambiguity of temporal over: Duration versus Time→Duration.
  – Extensively clarified Purpose and Beneficiary, and their relationship to ComparisonRef, Recipient, Experiencer, and Stimulus.
  – Clarified that goods and services are Theme; expanded on Co-Theme examples.
  – Frequency used for an iteration.
  – Various selectional verbs and miscellaneous constructions.
  – Added examples of ’s possessive/genitive marking.
  – Added section for special syntactic constructions (§6).
  – Added special labels (§7).
  – Added an index of adpositions and supersenses, and an index of construals.
  – Revised the title, abstract, and introductory material.

**Version 2.0 (April 7, 2017):** See §8.2
8.2 Major changes from v1

Changes that affect only a single label are explained below the relevant v2 labels.

- **Removed multiple inheritance.** The v1 network was quite tangled. The structure is greatly simplified by analyzing some tokens as *construals* (§1.4; Hwang et al., 2017).
- **Revised and expanded the Configuration subhierarchy.**
- **Removed the locative concreteness distinction.** In v1, labels LOCATION, INITIALLOCATION, and DESTINATION were reserved for concrete locations, and the respective supertypes LOCUS, SOURCE, and GOAL used to cover abstract locations. This distinction was found to be difficult and without apparent relevance to preposition system of English or the other languages considered. The concrete labels were thus removed.
- **Removed the location/state/value distinction.** The v1 scheme attempted to make an elaborate distinction between values, states, and other kinds of abstract locations. However, the English preposition system does not seem particularly sensitive to these distinctions. (We are not aware of any prepositions that mark primarily values or primarily states; rather, productive metaphors allow locative prepositions to be extended to cover these, and there are cases where teasing apart abstract location vs. state vs. value is difficult.) Therefore, STATE, STARTSTATE, ENDSATE, VALUE, and VALUECOMPARISON were removed.
- **Revised the treatment of comparison and related notions.** Removed COMPARISON/CONTRAST, SCALAR/RANK, VALUECOMPARISON; moved APPROXIMATOR under QUANTITY.
- **Greatly simplified the Path subhierarchy.** See §2.3.
- **Simplified the Temporal subhierarchy.** See §2.1.
- **Removed Activity** (mostly replaced with CIRCUMSTANCE and TOPIC), RECIPROCATION (mostly merged with EXPLANATION), and MATERIAL (merged with SOURCE).
- **Removed abstract labels** AFFECTOR, UNDERGOER, and PLACE.
- **Removed the theme/patient distinction.** THEME now includes patients.
- **Removed the primary/secondary participant distinction.** Whereas v1 had CO-[AGENT,PATIENT,THEME], v2.5 allows multiple AGENT arguments or multiple THEME arguments of the same predicate.
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Index

's, 5, 7, 32, 33, 35, 46–48, 54–57, 59, 70, 71, 79–83, 94
's, 9, 84, 91, 92
'c, 90
'd, 89, 90
'i, 29, 30, 86, 90–92
1DTrajectory, 23
2DArea, 23
3DMedium, 23
aboard, 18
about, 37–39, 43, 44, 72
above, 72, 74, 89
above_all, 89
Accompanier, 6, 43, 73, 92
according_to, 89
across, 18, 23
across_from, 18
Activity, 95
adhere_to, 35
Affecto, 94, 95
after, 6, 10, 11, 15, 16, 28, 75, 89
after_all, 89
afterward, 15
against, 33, 48, 64
Age, 10
AGENT, 7, 20, 33, 33, 34, 36, 37, 42, 44–47, 50, 55, 58, 59, 71, 79, 80, 84, 87, 91, 92, 95
ago, 11, 14–16
agree, 39
ahead_of, 74
along_with, 40
among, 17, 33, 58
Ancillary, 6, 33, 34, 36, 39, 40, 40–43, 47, 57, 59, 60, 67, 73, 75, 78, 79, 88, 92
answer, 40
apart, 4, 24
Approximator, 62, 71, 72, 72, 73, 75, 85, 92, 95
around, 18, 23, 72
as, 3, 8, 10, 11, 25, 28, 52, 53, 63, 74, 81, 84, 85, 87, 89, 93
as_for, 90
as_if, 74, 77
as_long_as, 9, 87
as_soon_as, 10
as_to, 38
as_well, 89
as_well_as, 90
Asset, 48
at, 6, 8–12, 17, 22, 24, 25, 38, 39, 43, 47, 48, 51, 54, 59, 65, 66, 72, 74, 75, 88
at_all, 25
at_best, 25
at_least, 25, 72
at_most, 72
Attribute, 10, 32, 53, 66, 69
away, 4, 18, 20, 24
away_from, 18–20, 24
back, 15, 18, 24
because_of, 28
before, 4–6, 11, 12, 15, 16, 88
beforehand, 15
below, 74, 75
Beneficiary, 29, 30, 33, 37, 43–45, 47, 48, 48–50, 57, 59, 64, 83, 87, 89, 94
beside, 17
between, 17, 33, 36, 58, 72, 74, 79
but, 4, 68, 69
have_to, 91
have_yet_to, 91
her, 83, 91
his, 83, 91

IDENTITY, 25, 38, 52, 53, 62, 63, 66, 78, 88, 93
in_every_respect, 25
in_my_experience, 89
in_my_opinion, 89
in_order_to, 86
in_other_words, 89
in_search_of, 87
in_terms_of, 39
in_the_vicinity_of, 72
inherent_to, 35
INHERENT_PURPOSE, 29
INITIALLOCATION, 46, 95
inside, 17
INSTANCE, 53
instead_of, 78
INSTEADOF, 6, 78, 92, 93
INSTRUMENT, 23, 26, 27, 32, 34, 40, 43, 50, 51, 60, 69, 79, 84
integral preposition, 89
INTERVAL, 11, 12, 14, 14–16, 25, 72, 94
into, 14, 21, 23, 37, 64, 66
its, 82, 83
keep_to, 35
kind_of, 88
learn_from, 46
less_than, 72
like, 27, 68, 69, 74, 76–78, 93, 94
limited_to, 35
LOCATION, 46, 47, 95


MANNER, 9, 13, 23, 26, 27, 43, 64, 66, 76, 77, 85, 88, 93, 94
MATERIAL, 95
MEANS, 26, 26, 27, 40, 51, 69, 93
more_than, 72
my, 35, 44, 54–57, 70, 71, 84, 91

native_to, 35
near, 17
next_to, 22, 41

of_course, 89
off, 10, 17–20, 24, 65
off_of, 20
off_of, 19
on, 6–11, 13, 17, 22, 23, 25, 27, 35, 36, 38, 39, 48, 51, 56, 58, 60, 64–67, 74, 87, 89
on_a_bipartisan_basis, 27
on_a_daily_basis, 13, 27
on_all_levels, 25
on_my_own, 27
on_my_own, 91
on_occasion, 13
on_the_other_hand, 89
on_the_way, 9
on_their_way, 9
on_top_of, 17
onto, 7, 21, 22
ORG, 6, 21, 33, 41, 50, 51, 54, 57, 59, 59, 60, 70, 71, 79, 80, 82, 84, 92
78, 83, 84, 86, 89, 91, 92, 94, 95  
through, 8, 12, 14, 18, 23, 51, 60, 79, 81  
throughout, 14, 23  
till, 12  
Time, 6, 8, 9, 10, 10–12, 14–16, 28, 58, 65, 75, 81, 88, 94  
TimeDirection, 15  
to, 5, 7, 9, 11, 12, 18, 21, 22, 25, 28–31, 35–37, 39, 40, 43, 44, 47, 49, 50, 69, 74–76, 79, 80, 85–87, 89–91  
to_boot, 89  
to_death, 25  
together, 4, 40, 41, 43  
together_with, 33, 40, 41  
Topic, 8, 37, 37–40, 43, 44, 51, 52, 66, 94, 95  
toward(s), 21, 24  
towards, 21, 44, 49  
Transit, 23  
Traversed, 23  
under, 72, 74, 79  
Undergoer, 94, 95  
unlike, 74  
until, 12  
up, 24, 88, 89  
up_to, 12  
upon, 10  
Value, 48, 79, 95  
ValueComparison, 95  
Via, 23  
via, 23, 51  
when_it_comes_to, 39  
Whole, 7, 8, 33, 36, 54, 55, 57, 57–60, 62, 68–70, 79, 81–83, 85  
with, 8, 26, 27, 33, 34, 36, 38–44, 47–51, 59, 60, 63, 67–71, 73, 75, 79, 88, 90, 94  
within, 13, 15, 16, 74, 75  
without, 27, 40, 41, 67, 68, 73  
your, 91
## Index of Construals by Scene Role

<table>
<thead>
<tr>
<th>Scene Role</th>
<th>Construals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent</td>
<td>Ancillary, 33, 42, 47, 79</td>
</tr>
<tr>
<td>Agent</td>
<td>Beneficiary, 33, 87</td>
</tr>
<tr>
<td>Agent</td>
<td>Gestalt, 33, 92</td>
</tr>
<tr>
<td>Agent</td>
<td>Source, 20</td>
</tr>
<tr>
<td>Agent</td>
<td>Whole, 33, 58</td>
</tr>
<tr>
<td>Approximator</td>
<td>Extent, 85</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Direction, 49, 89</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Goal, 49, 50</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Possessor, 48, 83</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Theme, 49</td>
</tr>
<tr>
<td>Causer</td>
<td>Gestalt, 32</td>
</tr>
<tr>
<td>Causer</td>
<td>Source, 32</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Beneficiary, 64</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Extent, 25, 74, 85</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Goal, 64</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Identity, 53, 62, 63</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Locus, 9, 13, 19, 20, 27, 44, 63–66, 87</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Purpose, 32</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Stuff, 63, 70, 82</td>
</tr>
<tr>
<td>Circumstance</td>
<td>Locus, 8, 9, 66, 82</td>
</tr>
<tr>
<td>Circumstance</td>
<td>Path, 8, 82</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Ancillary, 42, 75</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Goal, 31, 75, 76, 86</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Locus, 72, 74, 78, 92</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Purpose, 31, 76, 86</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Source, 75</td>
</tr>
<tr>
<td>ComparisonRef</td>
<td>Topic, 66</td>
</tr>
<tr>
<td>Cost</td>
<td>Locus, 48, 75</td>
</tr>
<tr>
<td>Duration</td>
<td>Extent, 25, 81, 85</td>
</tr>
<tr>
<td>Duration</td>
<td>Gestalt, 81</td>
</tr>
<tr>
<td>Duration</td>
<td>Path, 81</td>
</tr>
<tr>
<td>Ensemble</td>
<td>Ancillary, 73</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Agent, 44</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Ancillary, 39, 42</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Beneficiary, 44, 45</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Goal, 44</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Locus, 21, 22, 66, 82</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Purpose, 32</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Stuff, 63, 70, 82</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Source, 18, 19, 37, 82</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Whole, 36, 58</td>
</tr>
<tr>
<td>Frequency</td>
<td>Extent, 85</td>
</tr>
<tr>
<td>Frequency</td>
<td>Manner, 13, 27</td>
</tr>
<tr>
<td>Gestalt</td>
<td>Locus, 54</td>
</tr>
<tr>
<td>Goal</td>
<td>Ancillary, 41</td>
</tr>
<tr>
<td>Goal</td>
<td>Locus, 21, 22, 66, 82</td>
</tr>
<tr>
<td>Identity</td>
<td>ComparisonRef, 78</td>
</tr>
<tr>
<td>Instrument</td>
<td>Causer, 51, 84</td>
</tr>
<tr>
<td>Instrument</td>
<td>Locus, 51</td>
</tr>
<tr>
<td>Instrument</td>
<td>Path, 51</td>
</tr>
<tr>
<td>Locus</td>
<td>Ancillary, 41–43</td>
</tr>
<tr>
<td>Locus</td>
<td>Direction, 19, 24, 25</td>
</tr>
<tr>
<td>Locus</td>
<td>Gestalt, 55</td>
</tr>
<tr>
<td>Locus</td>
<td>Goal, 18, 37, 82</td>
</tr>
<tr>
<td>Locus</td>
<td>Path, 18, 23, 25</td>
</tr>
<tr>
<td>Locus</td>
<td>Source, 18, 19, 37, 82</td>
</tr>
<tr>
<td>Locus</td>
<td>Whole, 36, 58</td>
</tr>
<tr>
<td>Manner</td>
<td>ComparisonRef, 27, 76, 77, 93</td>
</tr>
<tr>
<td>Manner</td>
<td>Extent, 85</td>
</tr>
<tr>
<td>Manner</td>
<td>Locus, 27</td>
</tr>
<tr>
<td>Manner</td>
<td>Stuff, 27, 77</td>
</tr>
<tr>
<td>OrgMember</td>
<td>Gestalt, 70</td>
</tr>
<tr>
<td>OrgMember</td>
<td>PartPortion, 69, 71</td>
</tr>
<tr>
<td>OrgMember</td>
<td>Possessor, 70</td>
</tr>
</tbody>
</table>
OrgMember~Stuff, 70, 71
Org~Agent, 59, 84
Org~Ancillary, 41, 59, 60
Org~Beneficiary, 59
Org~Gestalt, 59, 82
Org~Goal, 21
Org~Instrument, 51, 60
Org~Locus, 59, 60
Org~Source, 59
Org~Whole, 60
Originator~Agent, 45, 84
Originator~Gestalt, 46, 56, 57, 83
Originator~Source, 46, 57
Originator~Theme, 45
PartPortion~ComparisonRef, 69, 78
PartPortion~Goal, 69
PartPortion~Instrument, 69
PartPortion~Means, 69
PartPortion~Source, 69
Path~Goal, 23
Path~Instrument, 51
Path~Locus, 23
Path~Source, 23
Possession~Ancillary, 42, 67
Possession~Locus, 67
Possession~Theme, 35, 67, 68
Possessor~Ancillary, 42
Possessor~Locus, 56
QuantityItem~Gestalt, 61, 82
QuantityItem~Stuff, 61, 70
QuantityItem~Whole, 58, 62
QuantityValue~Locus, 71
Recipient~Agent, 47, 80, 84
Recipient~Ancillary, 42, 47
Recipient~Direction, 47, 50
Recipient~Gestalt, 47, 57, 80
Recipient~Goal, 46, 47, 57, 80
Recipient~Theme, 47
Scene Role~Function, 7
SocialRel~Ancillary, 41, 43, 79
SocialRel~Characteristic, 79, 93
SocialRel~Gestalt, 79, 83, 92
SocialRel~Goal, 79
SocialRel~Instrument, 51, 79
SocialRel~Locus, 79
SocialRel~Source, 79
SocialRel~Whole, 79
Stimulus~Beneficiary, 43, 44, 49
Stimulus~Causer, 43, 84
Stimulus~Direction, 43
Stimulus~Explanation, 44
Stimulus~Goal, 43
Stimulus~Topic, 43, 66
Supersense~Supersense, 7
Temporal~Locus, 9, 10, 65
Theme~Ancillary, 34, 36, 42
Theme~ComparisonRef, 77
Theme~Gestalt, 35, 83, 84, 92
Theme~Goal, 35, 36
Theme~Instrument, 34
Theme~Locus, 34, 35
Theme~Purpose, 31, 36, 86, 92
Theme~Source, 35, 36
Theme~Whole, 36
Time~Direction, 81
Time~Duration, 11, 14, 94
Time~Gestalt, 81
Time~Goal, 11
Time~Interval, 11, 14–16
Time~Locus, 81
Time~Source, 11
Time~Whole, 58, 81
Topic~Goal, 39, 40
Topic~Identity, 38, 52
Whole~Circumstance, 8
Whole~Gestalt, 55, 57, 82, 83
Index of Construals by Function

**EXPERIENCER~AGENT, 44**
**ORG~AGENT, 59, 84**
**ORIGINATOR~AGENT, 45, 84**
**RECIPIENT~AGENT, 47, 80, 84**
**AGENT~ANCILLARY, 33, 42, 47, 79**
**COMPARISON REF~ANCILLARY, 42, 75**
**ENSEMBLE~ANCILLARY, 73**
**EXPERIENCER~ANCILLARY, 39, 42**
**GOAL~ANCILLARY, 41**
**LOCUS~ANCILLARY, 41–43**
**ORG~ANCILLARY, 41, 59, 60**
**POSSESSION~ANCILLARY, 42, 67**
**POSSESSOR~ANCILLARY, 42**
**RECIPIENT~ANCILLARY, 42, 47**
**SOCIAL REL~ANCILLARY, 41, 43, 79**
**THEME~ANCILLARY, 34, 36, 42**

**AGENT~BENEFICIARY, 33, 87**
**CHARACTERISTIC~BENEFICIARY, 64**
**EXPERIENCER~BENEFICIARY, 44, 45**
**ORG~BENEFICIARY, 59**
**STIMULUS~BENEFICIARY, 43, 44, 49**

**INSTRUMENT~CAUSER, 51, 84**
**STIMULUS~CAUSER, 43, 84**
**SOCIAL REL~CHARACTERISTIC, 79, 93**
**WHOLE~CIRCUMSTANCE, 8**
**IDENTITY~COMPARISON REF, 78**
**MANNER~COMPARISON REF, 27, 76, 77, 93**
**PART PORTION~COMPARISON REF, 69, 78**
**THEME~COMPARISON REF, 77**
**BENEFICIARY~DIRECTION, 49, 89**
**LOCUS~DIRECTION, 19, 24, 25**
**RECIPIENT~DIRECTION, 47, 50**
**STIMULUS~DIRECTION, 43**
**TIME~DIRECTION, 81**
**TIME~DURATION, 11, 14, 94**
**STIMULUS~EXPLANATION, 44**
**APPROXIMATOR~EXTENT, 85**
**CHARACTERISTIC~EXTENT, 25, 74, 85**
**DURATION~EXTENT, 25, 81, 85**
**FREQUENCY~EXTENT, 85**
**MANNER~EXTENT, 85**
**SCENE ROLE~FUNCTION, 7**
**AGENT~GESTALT, 33, 92**
**CAUSER~GESTALT, 32**
**DURATION~GESTALT, 81**
**EXPERIENCER~GESTALT, 44, 56, 92**
**LOCUS~GESTALT, 55**
**ORG~GESTALT, 59, 82**
**ORG MEMBER~GESTALT, 70**
**ORIGINATOR~GESTALT, 46, 56, 57, 83**
**QUANTITY ITEM~GESTALT, 61, 82**
**RECIPIENT~GESTALT, 47, 57, 80**
**SOCIAL REL~GESTALT, 79, 83, 92**
**THEME~GESTALT, 35, 83, 84, 92**
**TIME~GESTALT, 81**
**WHOLE~GESTALT, 55, 57, 82, 83**
**BENEFICIARY~GOAL, 49, 50**
**CHARACTERISTIC~GOAL, 64**
**COMPARISON REF~GOAL, 31, 75, 76, 86**
**EXPERIENCER~GOAL, 44**
**LOCUS~GOAL, 18, 37, 82**
**ORG~GOAL, 21


PartPortion~Goal, 69
Path~Goal, 23
Recipient~Goal, 46, 47, 57, 80
SocialRel~Goal, 79
Stimulus~Goal, 43
Theme~Goal, 35, 36
Time~Goal, 11
Topic~Goal, 39, 40

Characteristic~Identity, 53, 62, 63
Extent~Identity, 25
Topic~Identity, 38, 52
Org~Instrument, 51, 60
PartPortion~Instrument, 69
Path~Instrument, 51
SocialRel~Instrument, 51, 79
Theme~Instrument, 34
Time~Interval, 11, 14–16

Characteristic~Locus, 9, 13, 19, 20, 27, 44, 63–66, 87
Circumstance~Locus, 8, 9, 66, 82
ComparisonRef~Locus, 72, 74, 78, 92
Cost~Locus, 48, 75
Gestalt~Locus, 54
Goal~Locus, 21, 22, 66, 82
Instrument~Locus, 51
Manner~Locus, 27
Org~Locus, 59, 60
Path~Locus, 23
Possession~Locus, 67
Possessor~Locus, 56
QuantityValue~Locus, 71
SocialRel~Locus, 79
Temporal~Locus, 9, 10, 65
Theme~Locus, 34, 35
Time~Locus, 81

Whole~Locus, 57, 58
Frequency~Manner, 13, 27
PartPortion~Means, 69
OrgMember~PartPortion, 69, 71
Circumstance~Path, 8, 82
Duration~Path, 81
Instrument~Path, 51
Locus~Path, 18, 23, 25
Beneficiary~Possessor, 48, 83
OrgMember~Possessor, 70
Characteristic~Purpose, 32
ComparisonRef~Purpose, 31, 76, 86
Theme~Purpose, 31, 36, 86, 92

Agent~Source, 20
Causer~Source, 32
ComparisonRef~Source, 75
Explanation~Source, 26, 28
Locus~Source, 18, 19, 37, 82
Org~Source, 59
Originator~Source, 46, 57
PartPortion~Source, 69
Path~Source, 23
SocialRel~Source, 79
Theme~Source, 35, 36
Time~Source, 11
Whole~Source, 58
Characteristic~Stuff, 63, 70, 82
Manner~Stuff, 27, 77
OrgMember~Stuff, 70, 71
QuantityItem~Stuff, 61, 70
Supersense~Supersense, 7
Beneficiary~Theme, 49
Originator~Theme, 45
Possession~Theme, 35, 67, 68
<table>
<thead>
<tr>
<th>Term</th>
<th>Whole</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipient~Theme</td>
<td>Whole</td>
<td>47, 66</td>
</tr>
<tr>
<td>Explanation~Time</td>
<td>Whole</td>
<td>28, 66</td>
</tr>
<tr>
<td>ComparisonRef~Topic</td>
<td>Whole</td>
<td>66, 79</td>
</tr>
<tr>
<td>Stimulus~Topic</td>
<td>Whole</td>
<td>43, 66</td>
</tr>
<tr>
<td>Agent~Whole</td>
<td>Whole</td>
<td>33, 58</td>
</tr>
<tr>
<td>Locus~Whole</td>
<td></td>
<td>36, 58</td>
</tr>
<tr>
<td>Org~Whole</td>
<td></td>
<td>60, 81</td>
</tr>
<tr>
<td>QuantityItem~Whole</td>
<td></td>
<td>58, 62</td>
</tr>
<tr>
<td>SocialRel~Whole</td>
<td></td>
<td>79, 81</td>
</tr>
<tr>
<td>Theme~Whole</td>
<td></td>
<td>36, 62</td>
</tr>
<tr>
<td>Time~Whole</td>
<td></td>
<td>58, 81</td>
</tr>
</tbody>
</table>

109