

Synchronizing the Pattern Dictionary of English Prepositions and Preposition Supersense Tags

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Introduction

The Pattern Dictionary of English Prepositions (PDEP, Litkowski, 2014) contains 29 fields of data for each of 1040 senses. The guidelines for English adposition and cases supersenses provide detailed descriptions for 50 categories, particularly indicating [prepositions exemplifying the categories](#) (the Preposition Supersense Tags, PSSTs). We begin a process that tags the PDEP sense for the preposition in each example. We create a table of eleven items describing each category, linking the guideline examples with the PDEP fields. This begins with the PSST [definition](#), its [history](#), and glossed [comments](#). The table then lists all the [instances](#) containing a preposition; the preposition is underlined and then the appropriate PDEP sense is appended to the instance.

The [direct tags](#) lists the PDEP definition for all the prepositions in the instances. Based on earlier developments of the guideline, known as a PrepWiki, a supersense¹ was included in the PDEP data (582 out of 1040 senses); we identify the senses have the [same supersense tag](#), possibly adding senses that were not exemplified in the guidelines. PDEP has a field identifying [substitutable prepositions](#), entered by the TPP lexicographer for 779 senses; when this field is present, it is worth examining as potential to include the preposition as a candidate for the category.² PDEP has two fields that characterize classes/clusters of senses, with values for a class and a subclass; we can consider other senses in [PDEP hierarchy](#) that belong to the same PSST category.

Several changes in the set of PSST categories have occurred over the years, affecting the tagging in STREUSLE. Examining how the [previous PSSTs](#) migrated into the latest tagging is useful. With all the data from above, a further examination of the [preposition definitions](#) might identify other senses that might belong into the category; this analysis can use the PDEP definitions. Further detail of how any the [functions](#) have been used in the STREUSLE data.

An earlier attempt to map v1 supersenses to v2 supersenses was more of a coarse process that still raised several questions. A fine-grained analysis provides a much better mapping. This process focuses on the example sentences (in some cases, phrases) in each category. Specifically,

¹The major object of this synchronization is to fill this field with the appropriate PSST for each PDEP sense.

²In general, the substitutable prepositions do not identify the specific sense of the substitute. Correspondence analysis can be used to show which senses might be the closest sense of polysemous prepositions.

this process identifies the PDEP sense for the preposition in each example. There are several steps in this process, working through the characterizations of each v2 category, into a table containing the components of each step, starting with Guide. [Table 1](#) summarizes the v2 categories, with a line for each category, with the first column identifying the number of the hierarchy level, the second containing the name. The next columns identify the number of examples in the category, the number of different prepositions, the number of senses that have been identified as appropriate to the supersense, the number of distinct hierarchical (class, subclass) items, and the number of PDEP senses with these hierarchies. [Table 2](#) examines and analyzes the instances tagged with the v2 categories in the STREUSLE corpus. the number with an indication of those tagged with the v1 categories, the number of distinct prepositions, and those that were identified as a PDEP preposition. ([nextPSST](#))

1. Analyzing a Supersense Category

The source for the Guidelines was used to extract the detail for each of the 50 categories. The source for each category was saved in a text file, one for each, used as the basis for the analysis. The text for a category begins with the name for the category in a hierarchical definition and continues until the next category. The analysis extracts the examples in the category, essentially identifying a line beginning with “\ex”. Within each example, we focused on the preposition(s), containing an item inside a brace following “\p”, which is bolded in the PDF paper. The text may also include other prepositions that are not in example lines. Such bolded prepositions occur in other discussions about a preposition; such material is generally not used for the analysis.

To analyze a supersense, we set up a new [template](#), create a bookmark and a link, supersense definition, history, instances (underlining preposition and disambiguating), direct tags (preposition, sense number, and definition), same v2 SST in PDEP, substitutables, v1 SST, definition analysis, comment. In [Table 1](#), the first column contains a bookmark that enables a link to the row summarizing the findings for the category.³ The second column identifies the name of the category and contains a link to the template for the category, where all the details are available. Each template contains the category number and the category name.

2. The Supersense Definition

The first line in the template contains exactly the definition from the Guide.

3. The Supersense History

Many of the categories contain a description of the history of the category, indicating the relation between v1 and v2. The history also contains exactly as it appears in the Guide, when it exists. Frequently, the history may provide links to itself or to other categories (perhaps simply

³The basic information for a category (its number, name, definition, history, and glossed comments needs to be checked with earlier values of these items. When these are checked for the category, its number has a preceding asterisk.

identifying closely related categories). The history may also identify supersense names from v1, particularly of categories that have now been deleted.

When a category was used in v1 and is used in v2, there is usually no history. In a few cases, there is no history and the category was not used in v1 (e.g., [InsteadOf](#)).

4. Instances

All the examples in the Guide for the category that highlight a preposition. Do not include possessive examples or idioms that are clearly idioms that should not be tagged with a preposition sense (e.g., *over and over*). If an example is identified as having a construal (i.e., a role and a function), group the examples with the same construal. When an instance is tagged with an RF (role, function), include the RF for the instance. Underline the preposition in the example. Identify the PDEP sense(s) for the example, i.e., disambiguate the preposition, parenthesizing the PDEP sense at the end of the example. These will be listed in [Direct Tags](#) row. In the summary table of the categories, count the number of examples and the number of distinct senses in the instances. These preposition disambiguations are key to the effective mapping from v1 to v2.

5. Direct Tags

The “direct tags” row lists the senses that have been used in [Instances](#), followed in parentheses by the PDEP definitions.

6. Same Supersense Tag

Search the PDEP properties for senses that have the v2 category in the v1 'ssense' field (supersense tag), i.e., both v2 and v1 have the same supersense name. In some cases, there may be differences in use of the same name, as indicated in the History field. Some times may identify variant preposition (e.g., *thru* for *through*). Use "SELECT prep, sense, ssense FROM `prepprops` WHERE ssense like '%Recipient%'" in clresDB phpmyadmin. Some times, the PDEP supersense may also include other supersenses that were conflated in v1. Because there may be multiple supersenses for a sense and there are several different supersenses in the field, the union of the sets is likely smaller than the total number of senses that meet the criterion.

7. Substitutable Prepositions

For each sense in Direct Tags and Same SST, record the PDEP Substitutable Prepositions field. Examine their senses to determine if they should have the category in the new supersense.

8. PDEP Hierarchy

Locate the tagged senses for the category in the PDEP class hierarchy, considering the other senses as the class as potential belonging in the category. Search definitions in 'prepdefs' for other

senses that can be included in category. To obtain the definitions for a specific class and subclass "SELECT prepdefs.prep, prepdefs.sense, prepdefs.def FROM `prepprops`, `prepdefs` WHERE prepprops.prep = prepdefs.prep and prepprops.sense = prepdefs.sense and prepprops.sup = "MeansMedium" and prepprops.subc = "Instrument";". The identification of senses by searching the database may be problematic, and also possibly useful. First, it may become evident that some senses are assigned incorrectly. Second, the analysis may improve the class and subclass assignments. On the other hand, unlike the same [supersense tag field](#), the set of senses meeting the criteria will be distinctive. (next) ([nextPSST](#))

9. V1 SST

When the supersense was not in v1, it is necessary to examine how it might have been used with the original set. This can be done by examining how the SREUSLE instances were tagged before. Search for instances that begin with “\tp\[A-Za-z]+”. From this we can identify lines that have this and use them to find the prepositions with the instances.

10. Definition Analysis

11. Functions

Record the functions used in the STREUSLE tagging for each category (role) and the number of instances for each function. These are available in the **Maps** folder in files with the name of the category (role) followed by “.map1to2.txt”. When opening such a file, the regex “[A-Za-z]+ ~> [A-Za-z]+” will obtain all Role->Function occurrences and used to count the functions. If the category was used in the v1 tagging, it will be noted with an asterisk. In the file **allcats.txt**, the role occurs with the regex “v1 tag = “ following by the category name.

12. Comment

Hierarchy	Category	Examples	Prepositions	Senses	Hiers	HierCnt
*1.0.0.0	Circumstance	20	7	12	7	174
*1.1.0.0	Temporal	3	2	2	2	50
*1.1.1.0	Time	19	13	16	6	93
*1.1.1.1	StartTime	2	1	1	1	7
*1.1.1.2	EndTime	4	4	8	3	67
*1.1.2.0	Frequency	8	4	6	5	120
*1.1.3.0	Duration	19	7	7	1	32
*1.1.4.0	Interval	0	0	0	0	0
*1.2.0.0	Locus	35	18	29	14	287
*1.2.1.0	Source	17	3	11	6	129
*1.2.2.0	Goal	22	7	14	9	210

Table 1
Examples of Supersense Categories

Hierarchy	Category	Examples	Prepositions	Senses	Hiers	HierCnt
*1.3.0.0	Path	10	9	10	4	116
*1.3.1.0	Direction	2	1	1	1	26
*1.3.2.0	Extent	3	3	3	2	49
*1.4.0.0	Means	5	2	2	2	14
*1.5.0.0	Manner	12	7	10	7	132
*1.6.0.0	Explanation	6	5	5	2	28
*1.6.1.0	Purpose	15	1	2	2	13
*2.0.0.0	Participant	0	0	0	0	0
*2.1.0.0	Causer	5	3	3	2	33
*2.1.1.0	Agent	8	6	7	5	98
*2.2.0.0	Theme	43	8	22	17	343
*2.2.1.0	Topic	47	11	25	14	267
*2.3.0.0	Ancillary	4	4	4	2	29
*2.4.0.0	Stimulus	20	9	12	8	138
*2.5.0.0	Experiencer	9	4	4	3	47
*2.6.0.0	Originator	8	3	4	2	29
*2.7.0.0	Recipient	6	5	5	5	77
*2.8.0.0	Cost	5	3	3	1	13
*2.9.0.0	Beneficiary	13	6	8	5	109
*2.10.0.0	Instrument	16	8	13	7	133
*3.0.0.0	Configuration	0	0	0	0	0
*3.1.0.0	Identity	10	2	3	3	54
*3.2.0.0	Species	6	1	2	1	28
*3.3.0.0	Gestalt	8	2	4	4	58
*3.3.1.0	Possessor	4	2	2	1	8
*3.3.2.0	Whole	22	5	7	3	103
*3.3.3.0	Org	19	9	10	6	74
*3.3.4.0	QuantityItem	24	1	1	1	21
*3.4.0.0	Characteristic	31	7	18	13	268
*3.4.1.0	Possession	11	7	9	7	90
*3.4.2.0	PartPortion	21	7	7	3	55
*3.4.2.1	Stuff	6	2	2	2	49
*3.4.3.0	OrgMember	5	2	2	2	49
*3.4.4.0	QuantityValue	1	1	1	1	35
*3.4.4.1	Approximator	2	2	2	2	49
*3.5.0.0	Ensemble	3	2	2	2	35
*3.6.0.0	ComparisonRef	20	12	13	7	198
*3.7.0.0	RateUnit	4	2	2	1	35
*3.8.0.0	SocialRel	11	7	9	6	77
		594	237	345	210	4149

Analysis of Category Tokens in v2

Table 2 provides the counts for the 5496 tokens in v2 that were the 14th STREUSLE column in each v2 category supersense. The table shows the hierarchy number for the category and the category name, with a link that describes the category (definition, history, example instances in the Guide, etc.). The table is based on the token number (sentid:tok). The sum of the 3rd (**v1 Old**) and the 5th (**v2 New**) columns is the count of how many tokens with tagged with the category. The 3rd column identifies the number of sentid:tok items that were tagged in v1. The 4th column (**Diff**) identifies the number of tokens that were tagged with different names in v1. The 5th column identifies the number of tokens that were newly tagged with the category in the latest tagging.

The 6th column (**Preps**) identifies the distinct prepositions occurring in the category; the 7th column (**PDEP**) indicates the number of prepositions included in the PDEP preposition inventory. The 8th column (**ADP**) indicates the tokens that were characterized as adpositions. The 9th column (**MWE**) identifies the number of prepositions (from the 7th column) characterized as multi-word expressions, i.e., containing a space. The 10th column (**Funct**) identifies the distinct different “functions” (the 15th column in STREUSLE).

Hierarchy	Category	v1 Old	Diff	v2 New	Preps	PDEP	ADP	MWE	Funct
1.0.0.0	Circumstance	76	39	7	25	13	62	17	3
1.1.0.0	Temporal	0	0	0	0	0	0	0	0
1.1.1.0	Time	352	205	5	39	19	231	21	8
1.1.1.1	StartTime	29	3	0	4	2	19	2	1
1.1.1.2	EndTime	29	0	1	4	3	17	1	1
1.1.2.0	Frequency	7	0	2	6	4	6	2	3
1.1.3.0	Duration	88	11	2	12	6	86	6	3
1.1.4.0	Interval	4	4	0	1	0	0	0	1
1.2.0.0	Locus	624	597	21	64	36	573	26	7
1.2.1.0	Source	66	60	8	7	4	72	4	1
1.2.2.0	Goal	210	208	24	17	11	212	5	3
1.3.0.0	Path	27	27	1	12	11	24	1	3
1.3.1.0	Direction	116	8	21	13	9	11	1	2
1.3.2.0	Extent	40	8	2	17	7	20	11	3
1.4.0.0	Means	17	2	0	4	4	8	0	2
1.5.0.0	Manner	90	58	8	31	9	81	22	6
1.6.0.0	Explanation	119	34	2	10	8	55	5	4
1.6.1.0	Purpose	328	86	35	8	4	130	4	3
2.0.0.0	Participant	0	0	0	0	0	0	0	0
2.1.0.0	Causer	5	2	1	4	3	5	0	3
2.1.1.0	Agent	33	6	128	15	5	32	0	5
2.1.1.1	Co-Agent	21	1	14	1	1	35	0	1
2.2.0.0	Theme	124	52	95	14	8	151	0	10

Table 2
Analysis of v1 Tagging to v2 Tagging

Hierarchy	Category	v1 Old	Diff	v2 New	Preps	PDEP	ADP	MWE	Funct
2.2.1.0	Co-Theme	12	7	2	5	5	11	0	3
2.2.2.0	Topic	180	57	37	12	10	180	3	3
2.3.0.0	Stimulus	96	41	27	9	9	115	0	8
2.4.0.0	Experiencer	22	5	85	11	4	21	0	4
2.5.0.0	<u>Originator</u>	56	56	74	12	4	58	0	4
2.6.0.0	<u>Recipient</u>	92	10	30	8	4	111	0	4
2.7.0.0	<u>Cost</u>	49	49	1	8	5	49	3	4
2.8.0.0	Beneficiary	80	11	14	11	6	81	0	6
2.9.0.0	Instrument	22	17	1	9	8	23	1	5
3.0.0.0	<u>Configuration</u>	0	0	0	0	0	0	0	0
3.1.0.0	Identity	56	56	0	5	5	40	0	2
3.2.0.0	<u>Species</u>	39	1	1	1	1	40	0	1
3.3.0.0	Gestalt	81	81	116	18	6	78	0	5
3.3.1.0	Possessor	4	3	320	12	2	4	0	3
3.3.2.0	Whole	75	44	68	14	5	76	1	5
3.4.0.0	Characteristic	114	114	25	43	11	123	35	8
3.4.1.0	Possession	40	40	5	8	8	45	1	5
3.4.2.0	PartPortion	62	62	1	15	12	43	8	5
3.4.2.1	Stuff	9	9	0	1	1	9	0	1
3.5.0.0	<u>Accompanier</u>	28	8	0	4	3	25	1	2
3.6.0.0	<u>InsteadOf</u>	9	9	1	3	2	1	3	2
3.7.0.0	ComparisonRef	117	117	39	14	13	88	2	7
3.8.0.0	<u>RateUnit</u>	5	5	0	2	2	5	0	1
3.9.0.0	Quantity	192	119	4	2	2	193	1	4
3.9.1.0	Approximator	72	3	4	14	7	10	7	2
3.10.0.0	SocialRel	11	11	210	12	3	24	0	3
3.10.1.0	OrgRole	64	64	62	17	9	71	1	11
Total		3992	2410	1504	578	314	3354	195	181

Category 1.0.0.0 - Circumstance	
<u>Definition</u>	Macrolabel for labels pertaining to space and time, and other relations that are usually semantically non-core properties of events.
<u>History</u>	None
<u>Instances</u>	<p><u>In</u> arguing for tax reform, ... (in (11(8)))</p> <p>You crossed the line <u>in</u> sharing confidential information. (in (11(8)))</p> <p>I found out <u>in</u> our conversation that she speaks 5 languages. (in (11(8)))</p> <p>Bipartisan compromise is unlikely <u>with</u> the election just around the corner. (with (1(1)-1))</p> <p>My tutor was helpful <u>in</u> giving concrete examples and exercises. (in (11(8)))</p> <p>You were correct <u>in</u> answering the question. (in (11(8)))</p> <p>You were correct <u>in</u> your answer. (in (6(4a)))</p> <p>I was involved <u>in</u> a car accident. (in (7(5)))</p> <p>I bought her a bike <u>for</u> Christmas. (for (6(5)))</p> <p>I had peanut butter <u>for</u> lunch. (for (6(5)))</p> <p>Let's discuss the matter <u>over</u> lunch. (over (14(5)))</p> <p>Whether you can leave depends <u>on</u> whether your work is done. (on (9(3a)))</p> <p><u>Circumstance</u>~><u>Locus</u></p> <p>I haven't seen them <u>in</u> that setting. (in (7(5)))</p> <p><u>In</u> that case, I wouldn't worry about it. (in (5(4)))</p> <p>We are having fun <u>at</u> the party. (at (1(1)))</p> <p>We are having fun <u>on</u> vacation. (on (19(9)))</p> <p>We are <u>at</u> the party. (at (1(1)))</p> <p>We are <u>on</u> vacation. (on (19(9)))</p> <p>They are <u>on</u> a journey (on (14(7)))</p> <p><u>Circumstance</u>~><u>Path</u></p> <p>We have to keep going <u>through</u> all these challenges. (through (9(2b)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Activity, Ongoing):22; (Backdrop, Supplementing): 28; (Topic, Connection): 12; (Membership, Group): 28; (Cause, Reason): 12; (Temporal, Period): 32; (Spatial, SimplePosition): 40
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	83 instances: * <u>Circumstance</u> (64), <u>Locus</u> (18), <u>Path</u> (1)
<u>Comment</u>	Circumstance is used directly for Contextualization (helps situate the background context in which the main event takes place), Setting events (the object of the preposition is a noun denoting a containing event), Occasions , and Conditions .

Category 1.1.0.0 - Temporal	
<u>Definition</u>	Supercategory for temporal descriptions: when , for how long , how often , how many times , etc. something happened or will happen.
<u>History</u>	The v1 category AGE (e.g., <i>a child of five</i>) was a mutual subtype of Temporal and ATTRIBUTE . Being quite specific and rare, for v2 it was removed, licensing both Time and Characteristic prepositions. Combined with the changes to Time subcategories (see below), this reduced to 3 the number of labels in the Temporal subtree, bringing it to 7.
<u>Instances</u>	<p>The plans are in progress. (in (5(4)))</p> <p>The plans are on hold. (on (19(9)))</p> <p>The plans are in limbo. (in (5(4)))</p>

Category 1.1.0.0 - Temporal	
<u>Direct Tag</u>	on (19(9)) (engage in) in (5(4)) ((often followed by a noun without a determiner) expressing a state or condition)
<u>Same SST</u>	
Substitutables	in (3(2)): during (?) in (5(4)): under (?)
<u>PDEP Hierarchy</u>	(Backdrop, Supplementing): 28; (Activity, Ongoing): 22
V1 SST	Used State (had 77 instances, but most were phrases, but tagged as Manner~>Locus, which don't seem to be Temporal, including both <i>on hold</i> and <i>in limbo</i>) Used Activity (had 18 instances, but did not seem to be Temporal, include <i>on duty</i> and <i>on business</i>)
Definition Analysis	Not yet identified some to search for
<u>Functions</u>	No instances
Comment	Applies directly only to event descriptors with an aspectual quality that do not fit any of the subcategories (Time, StartTime, EndTime). No instances in STEUSLE (4.4).

Category 1.1.1.0 - Time	
<u>Definition</u>	When something happened or will happen, in relation to an explicit or implicit reference time or event.
<u>History</u>	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. RELATIVETIME inherited from Time and was reserved for the displaced temporal prepositions, as well as subclasses StartTime, EndTime }, DEICTICTIME, and CLOCKTIMECXN}. For v2, RELATIVETIME was merged into Time : the distinction was found to be entirely lexical and lacked parallelism with the spatial hierarchy. CLOCKTIMECXN was also merged with Time , the usages covered by the former (expressions of clock time like <i>ten to seven</i>) being exceedingly rare and not very different semantically from prepositions like before . DEICTICTIME became Interval .
<u>Instances</u>	We ate <u>in</u> the afternoon (in (3(2))) We ate <u>during</u> the afternoon (during (1(1))) (+1, 23b) We ate <u>at</u> 2:00 (at (2(2))) We ate <u>on</u> Friday (on (17(8))) Let's talk <u>at</u> lunch. (at (3(2a))) They will greet us <u>on</u> our arrival. (on (18(8a))) They will greet us <u>upon</u> our arrival. (upon (18(8a))) I succeeded <u>on</u> the fourth attempt. (on (18(8a))) I will finish <u>after</u> tomorrow. (after (1(1))) I will finish <u>by</u> tomorrow. (by (17(4))) I bought a new car---that was <u>since</u> the breakup. (since (1(1))) We left the party <u>after</u> an hour. (after (1(1))) The alarm rang at \a quarter <u>after</u> 8. (after (3(1b))) The alarm rang at \a quarter <u>past</u> 8. (past (3(2))) The alarm rang 15 minutes <u>before</u> 8. (before (1(1))) <u>Time~>Duration</u> He arrived in town <u>over</u> the weekend. (over (14(5))) <u>Time~>Goal</u> The alarm rang at a quarter <u>to</u> 8. (to 4(1c)) <u>Time~>Source</u> The alarm rang at a quarter <u>of</u> 8. (of 18(9)))
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	

Category 1.1.1.0 - Time	
<u>PDEP Hierarchy</u>	(Temporal, Period): 32; (Temporal, SimpleTime): 15; (Temporal, Following): 7; (Temporal, SimpleTime:Finished): 5; (Temporal, SimpleTime:Origin): 7; (Temporal, Preceding): 27
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	357 instances: <u>Direction</u> (2), <u>Duration</u> (1), <u>Extent</u> (2), <u>Gestalt</u> (3), <u>Goal</u> (1), <u>Interval</u> (31), <u>*Time</u> (313), <u>Whole</u> (4)
<u>Comment</u>	

Category 1.1.1.1 - StartTime	
<u>Definition</u>	When the event denoted by the governor begins.
<u>History</u>	None - Used in v1
<u>Instances</u>	The show will run <u>from</u> 10 a.m. to 2 p.m. (from (3(2))) a document dating <u>from</u> the thirteenth century (from (3(2)))
<u>Direct Tags</u>	from (3(2)) (indicating the point in time at which a particular process, event, or activity starts)
<u>Same SST</u>	frae (3(2)) (same as from (3(2))) from(5(3a)) (indicating the date at which something was created) since (1(1)) (in the intervening period between (the time mentioned) and the time under consideration, typically the present)
<u>Substitutables</u>	from (5(3a)): of (?)
<u>PDEP Hierarchy</u>	Temporal->SimpleTime:Origin: 7 "as far as", "2(n)", "in the intervening period between (the time mentioned) and the time under consideration, typically the present" "as from", "1(1)", "used to indicate the time or date from which something starts" "frae", "3(2)", "indicating the point in time at which a particular process, event, or activity starts" "frae", "5(3a)", "indicating the date at which something was created" "from", "3(2)", "indicating the point in time at which a particular process, event, or activity starts" "from", "5(3a)", "indicating the date at which something was created" "since", "1(1)", "in the intervening period between (the time mentioned) and the time under consideration, typically the present" <u>Analysis (Questionable)</u> as of (1(1)): "used to indicate the time or date from which something starts" come (1(1)): "on or at the arrival of (a specified date, time or season)"
<u>Functions</u>	29 instances: <u>*StartTime</u> (29)
<u>Comment</u>	Note that simple <u>Time</u> is used with verbs like <i>start</i> and <i>begin</i> : the event directly described by the PP is the starting, not the thing that started. 29 instances with all 29 <u>StartTime</u> function. Of 12 <i>since</i> instances, 9 are subordinating conjunctions, not prepositions.

Category 1.1.1.2 - EndTime	
<u>Definition</u>	When the event denoted by the governor finishes.
<u>History</u>	None - Used in v1.
<u>Instances</u>	The show will run from 10 a.m. <u>to</u> 2 p.m. (to (3(1b))) Add the cider and boil <u>until</u> the liquid has reduced by half. (until (1(1))) If we have survived <u>up to</u> now what is stopping us from surviving in the future? (up to (2(1a))) They will be in London from March 24 <u>through</u> May 7. (through (11(4)))

Category 1.1.1.2 - EndTime	
<u>Direct Tags</u>	to (3(1b)) (expressing a point reached at the end of a range or after a period of time) until (1(1)) (up to (the point in time or the event mentioned)) up to (2(1a)) (until) through (11(4)) (up to and including (a particular point in an ordered sequence))
<u>Same SST</u>	thro', thru (11(4)) (same as through (11(4))) till (1(1)) (same as until (1(1)))
<u>Substitutables</u>	to (3(1b)): till, until until (1(1)): till, through, to, up to up to (2(1a)): till, through, to, up to through (11(4)): till, until
<u>PDEP Hierarchy</u>	by (17(4)): "indicating a deadline or the end of a particular time period" (Scalar, Scale): 35; (Temporal, Preceding): 27; (Temporal, SimpleTime:Finished): 5
<u>Functions</u>	30 instances: * <u>EndTime</u> (30)
<u>Comment</u>	12 of the <u>until</u> instances and the 1 <u>till</u> instances are tagged as SCONJ:IN, where these are not prepositions, but are subordinating conjunctions followed by subordinate clauses. Other until instances are ADP:IN tags.

Category 1.1.2.0 - Frequency	
<u>Definition</u>	At what rate something happens or continues, or the instance of repetition that the event represents.
<u>History</u>	No history. Used in v1.
<u>Instances</u>	Guests were arriving <u>at</u> a steady clip. (at (10(5a))) The risk becomes worse <u>by</u> the day. (by (14(3b))) I see them <u>on</u> occasion. (on (18(8a))) The camcorder failed <u>for</u> the third time. (for (14(12))) I skipped lunch <u>for</u> three days in a row. (for (12 (10))) I skipped lunch <u>for</u> the third day in a row. (for (14(12))) We arrived <u>for</u> our (third) visit. (for (14(12))) <u>Frequency</u> ~> <u>Manner</u> I see them <u>on</u> a daily basis. (on (9(3a)))
<u>Direct Tag</u>	at (10(5a)) (expressing an incomplete or attempted action, typically involving repeated movements) by (14(3b)) (in phrases indicating something happening repeatedly or progressively, typically with repetition of a unit of time) for (12(10)) (indicating the length of (a period of time)) for (14(12)) (indicating an occasion in a series) on (8(3)) (having (the thing mentioned) as a topic; about) on (9(3a)) (having (the thing mentioned) as a basis) on (18(8a)) (at the time of)
<u>Same SST</u>	after (2(1a)) ((in phrases indicating something happening continuously or repeatedly) in the time following (an event or another period of time)) at (5(3)) (denoting a particular point or level on a scale) (?) (Frequency, Value)
<u>Substitutables</u>	for (12(10)): during on (18(8a)): upon
<u>PDEP Hierarchy</u>	(Cause, Target): 26; (MeansMedium, Manner): 35; (Temporal, SimpleTime): 15; (Temporal, Period): 32; (Topic, Connection): 12
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	9 instances: * <u>Frequency</u> (7), \psst{Extent} (1), \psst{Manner} (1)
<u>Comment</u>	

Category 1.1.3.0 - Duration	
Definition	Indication of how long an event or state lasts (with reference to an amount of time or time period/ larger event that it spans).
History	No history. Used in v1
Instances	<p>I walked <u>for</u> 20 minutes. (for (12(10)))</p> <p>I walked <u>in</u> 20 minutes. (in (3(2)))</p> <p>I walked to the store <u>in</u> 20 minutes. (in (3(2)))</p> <p>I walked to the store <u>within</u> 20 minutes. (within (6(3)))</p> <p>I walked a mile <u>in</u> 20 minutes. (in (3(2)))</p> <p>I walked a mile <u>within</u> 20 minutes. (within (6(3)))</p> <p>I mowed the lawn <u>for</u> an hour. (for (12(10)))</p> <p>I mowed the lawn <u>in</u> an hour. (in (3(2)))</p> <p>I mowed the lawn <u>within</u> an hour. (within (6(3)))</p> <p>I walked <u>for</u> the entire race. (for (12(10)))</p> <p>I walked <u>throughout</u> the night. (throughout (2(1a)))</p> <p>I walked <u>through</u> the night. (through (7(2)))</p> <p>I walked well <u>into</u> the night. (into (1(1)-1))</p> <p>The deal was negotiated <u>over</u> (the course of) a year. (over (14(5)))</p> <p>John went to the store <u>for</u> an hour. (for (12(10)))</p> <p>John left the party <u>for</u> an hour. (for (12(10)))</p> <p>I lifted weights <u>for</u> an hour. (for (12(10)))</p> <p>I walked to the store <u>for</u> a year. (for (12(10)))</p> <p>He arrived in town <u>over</u> the weekend. (over (14(5)))</p>
Direct Tags	<p>for (12(10))</p> <p>in (3(2))</p> <p>within (6(3))</p> <p>throughout (2(1a))</p> <p>through (7(2))</p> <p>over (14(5))</p> <p>into (1(1)-1)</p>
Same SST	across (1(1)-1), down (5(2)), during (1(1)), during (2(1a)), for (12(10)), in the midst of (1(1)), into (1(1)-1), o'er, over (14(5)), thro', through, thru (7(2)) (9(2b)), throughout (2(1a))
Substitutables	
PDEP Hierarchy	(Temporal, Period): 32
V1 SST	
Definition Analysis	
Functions	90 instances: Duration (86), Gestalt (2), Extent (2)
Comment	

Category 1.1.4.0 - Interval	
Definition	A marker that points retrospectively or prospectively in time, and if transitive, marks the time elapsed between two points in time.
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.
Instances	No preposition instances (see Comment)
Direct Tags	
Same SST	
Substitutables	

Category 1.1.4.0 - Interval	
PDEP Hierarchy	None
V1 SST	
Definition Analysis	
Functions	4 instances: Interval (4)
Comment	Discussion of this category primarily focuses on instances in the function position (Time ~> Interval , 31 instances), where the only instances of Interval ~> Interval used the adverb back .

Category 1.2.0.0 - Locus	
Definition	Location, condition, or value. May be abstract.
History	None
Instances	<p>I like to sing <u>at</u> the gym. (at (1(1)))</p> <p>I like to sing <u>on</u> Main St. (on (2(1a))) (+1, 75)</p> <p>I like to sing <u>in</u> the shower. (in (1(1))) (+1, 86a)</p> <p>The cat is <u>on top of</u> the dog. (on top of (2(1a)))</p> <p>The cat is <u>off</u> the dog. (off (4(3)))</p> <p>The cat is <u>beside</u> the dog. (beside (1(1)))</p> <p>The cat is <u>near</u> the dog. (near (1(1)))</p> <p>There are flowers <u>between</u> the trees. (between (1(1)))</p> <p>There are flowers <u>among</u> the trees. (among (1(1)))</p> <p>I read it <u>in</u> a book. (in (9(7))) (+1, 77)</p> <p>I read it <u>on</u> a website. (on (12(6))) (+1, 78)</p> <p>We met <u>on</u> a trip to Paris. (on (14(7)))</p> <p>The Dow is <u>at</u> a new high. (at (5(3)))</p> <p>That's <u>in</u> my price range. (in (6(4a)))</p> <p>She was lying <u>on</u> her back. (on (4(1c)))</p> <p>She kissed me <u>on</u> the cheek. (on (1(1)))</p> <p>I want to punch you <u>in</u> the face. (in (2(1a)))</p> <p>The cat is <u>inside</u> the house. (inside (1(1)))</p> <p>All passengers are <u>aboard</u> the ship. (aboard (1(1)))</p> <p>The doctor is <u>out of</u> the office. (out of (6(5)))</p> <p>Locus~>Path</p> <p>A road runs <u>through</u> my property. (through (5(1d)-1))</p> <p>John saw Mary <u>through</u> the window. (through (5(1d)-1))</p> <p>John saw Mary <u>over</u> the fence. (over (13(4b)))</p> <p>We're just <u>across</u> the street from you. (across (2(2)))</p> <p>Locus~>Goal</p> <p>The road extends <u>to</u> the river. (to (1(1)))</p> <p>We are quite close <u>to</u> the river. (to (2(1a)))</p> <p>The river is <u>to</u> the north. (to (2(1a)))</p> <p>Locus~>Source</p> <p>I saw him <u>from</u> the roof. (from (8(5)))</p> <p>Protesters were kept <u>from</u> the area. (from (11(8)))</p> <p>We live <u>across from</u> you. (Not in PDEP.)</p> <p>We are quite far <u>from</u> the river. (from (2(1a)))</p> <p>The river is north <u>of</u> Paris. (of (8(4)))</p>
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Spatial, SimplePosition): 40; (Spatial, Above): 20; (Spatial, SimplePosition:Origin): 16; (Spatial, Beside): 27; (Spatial, Pervasiveness): 24; (MeansMedium, Medium): 14; (Activity, Ongoing): 22; (Scalar, Equivalence): 13; (Topic, Connection): 12; (Spatial, SimplePosition:Destination): 21; (Spatial, SimplePosition:Conveyance): 9; (Spatial, Path): 39; (Spatial, Orientation): 23; (Activity, Avoided): 7

Category 1.2.0.0 - Locus	
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 1.2.1.0 - Source	
Definition	Initial location, condition, or value. May be abstract.
History	None
Instances	<p>The cat jumped <u>from</u> the box. (from (1(1)))</p> <p>The cat jumped <u>out of</u> the box. (out of (6(5)))</p> <p>The cat jumped <u>from</u> the ledge. (from (1(1)))</p> <p>The cat jumped <u>off</u> the ledge. (off (1(1)))</p> <p>I got it <u>from</u> the internet. (from (13(10)))</p> <p>I got it <u>off</u> the internet. (off (8(n)))</p> <p>people <u>from</u> France (from (4(3)))</p> <p>The temperature is rising <u>from</u> a low of 30 degrees. (from (6(4)))</p> <p>I have arrived <u>from</u> work. (from (1(1)))</p> <p>We discovered he was French <u>from</u> his attire. (from (13(10)))</p> <p>I made it <u>out of</u> clay. (out of (1(1)))</p> <p>She awoke <u>from</u> a coma. (from (10(7)-1))</p> <p>She came <u>out of</u> a coma. (out of (9(n)))</p> <p>At the sound of the gun, the sprinters ran <u>from</u> the starting line. (from (1(1)))</p> <p>I received great care <u>from</u> this doctor. (from (12(9)-1))</p> <p>I got a second chance <u>from</u> her. (from (12(9)-1))</p> <p>I need a favor <u>from</u> you. (from (12(9)-1))</p>
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Spatial, SimplePosition:Origin): 16; (Spatial, Path): 39; (Cause, Source): 9; (Scalar, Scale): 35; (Backdrop, Contrasting:Negative): 13; (Agent, Direct): 17
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 1.2.2.0 - Goal	
Definition	Final location (destination), condition, or value. May be abstract.
History	None

Category 1.2.2.0 - Goal	
<u>Instances</u>	<p>I ran <u>to</u> the store. (to (1(1))) (+3, 126, 130a, 131')</p> <p>The cat jumped <u>onto</u> the ledge. (onto (1(1)))</p> <p>I touched my ear <u>to</u> the floor. (to (13(5)))</p> <p>She sank <u>to</u> her knees. (to (6(2a))) (+2, 123-4)</p> <p>The temperature is rising <u>to</u> a high of 40 degrees. (to (3(1b)))</p> <p>She slipped <u>into</u> a coma. (into (6(6)))</p> <p>I go <u>to</u> Dr. Smith for my allergies. (to (8(3)))</p> <p>the paint that was applied <u>to</u> the wall (to (13(5)))</p> <p>the paint that was sprayed <u>onto</u> the wall (onto (8(n)))</p> <p><u>Goal</u>~><u>Locus</u></p> <p>The drugs put her <u>in</u> a coma. (in (5(4)))</p> <p>I put the lamp <u>next to</u> the chair. (next to (1(1)))</p> <p>I'll just hop <u>in</u> the shower. (in (2(1a)))</p> <p>I put my CV <u>on</u> the internet. (on 12(6)))</p> <p>The cat jumped <u>on</u> my face. (on 5(1d)))</p> <p>The box fell <u>on</u> its side. (on 5(1d)))</p> <p>We arrived <u>at</u> the airport. (at (1(1)))</p> <p>the paint that was sprayed <u>on</u> the wall (on (5(1d)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Spatial, SimplePosition:Destination): 21; (Spatial, SimplePosition): 40; Tandem-Fulfillment-EndState: 15; Scalar-Scale: 35; Cause-Recipient: 4; Cause-Target: 26; Backdrop-Supplementing: 28; Spatial-Beside: 27; MeansMedium-Medium: 14
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 1.3.0.0 - Path	
<u>Definition</u>	The ground that must be covered in order for the motion to be complete.
<u>History</u>	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 <u>Path</u> for v2.
<u>Instances</u>	<p>The bird flew <u>over</u> the building. (over (11(4)))</p> <p>The sun traveled <u>across</u> the sky. (across (1(1)))</p> <p>Hot water is running <u>through</u> the pipes. (through (5(1d)-1)))</p> <p>We flew to Rome <u>via</u> Paris. (via (1(1)))</p> <p>I go <u>by</u> that coffee shop every morning. (by (19(5a)))</p> <p>The earth has completed another orbit <u>around</u> the sun. (around (4(3)))</p> <p><u>Path</u>~><u>Locus</u></p> <p>They dance <u>in</u> a circle. (in (1(1)))</p> <p>The bird flew <u>in</u> the window. (in (2(1a)))</p> <p><u>Path</u>~><u>Source</u></p> <p>The bird flew <u>out</u> the window. (out of (6(5)))</p> <p><u>Path</u>~><u>Goal</u></p> <p>A cool breeze blew <u>into</u> the window. (into (1(1)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	1DTrajectory:42, Course:12, (Location:120,Theme), (InitialLocation:10,StartState:7,1DTrajectory), Destination:17
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Spatial,Path):39, (Spatial,SimplePosition):40, (Spatial,SimplePosition:Origin):16 (Spatial,SimplePosition:Destination):21

Category 1.3.0.0 - Path	
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	28 instances, 21 Path , 6 \psst{Locus}, 1 \psst{Goal}
<u>Comment</u>	The ground covered is often a linear extent with or without specific starting and ending points. It can also be a waypoint/something that must be passed or encircled. If this is a portal in the boundary of a container, it is often construed as \psst{Source}, \psst{Goal}, or \psst{Locus}. However, if the entirety of the motion event is simply located, \psst{Locus} applies. 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.

Category 1.3.1.0 - Direction	
<u>Definition</u>	How motion or an object is aimed/oriented.
<u>History</u>	No history. Used in v1
<u>Instances</u>	The camera is aimed <u>at</u> the subject. (at (9(5))) The toddler kicked <u>at</u> the wall. (at (9(5)))
<u>Direct Tags</u>	at (9(5)) (expressing the object of a look, thought, action, or plan)
<u>Same SST</u>	(Goal,Recipient) after (6(2a)) ((with reference to looking or speaking) in the direction of someone who is moving further away) at (10(5a)) (expressing an incomplete or attempted action, typically involving repeated movements) into (4(4)) (in the direction of) off (4(3)) (so as to be removed or separated from) toward (1(1)) (in the direction of) towards (1(1)) (in the direction of)
<u>Substitutables</u>	toward, about, into, up to
<u>PDEP Hierarchy</u>	(Cause,Target):26
<u>V1 SST</u>	
<u>Definition Analysis</u>	along (1(1)): o', of (8(4)): off (2(2)): onto (7(n)): per (3(3)): to (1(1)): unto (3(n)) with (15(9)):
<u>Functions</u>	137 instances: Direction (136), Goal (1)
<u>Comment</u>	A Direction expresses the orientation of a stationary figure or of a figure's motion. Most instances used "prototypical markers" known as <i>adverbs</i> , <i>particles</i> , and <i>intransitive prepositions</i> .

Category 1.3.2.0 - Extent	
<u>Definition</u>	The size of a path, amount of change, or degree.
<u>History</u>	None
<u>Instances</u>	We ran <u>for</u> miles. (for (13(11))) The price shot up <u>by</u> 10%. (by (12(3))) Extent ~> Identity an increase <u>of</u> 10% (of (4(2)))
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Scalar, Equivalence): 13; (Scalar, Greater): 36
<u>V1 SST</u>	

Category 1.3.2.0 - Extent	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	This can be the physical distance traversed or the amount of change on a scale. For static distance measurements, see Direction .

Category 1.4.0.0 - Means	
<u>Definition</u>	Secondary action or event presented as playing an intermediate causal role in facilitating (but not instigating) the main event.
<u>History</u>	In v1, Means was a subtype of \psst{Instrument}, but with the removal of multiple inheritance for v2, the former was moved directly under \psst{Circumstance} and the latter directly under Participant .
<u>Instances</u>	Open the door by turning the knob. (by (5(2))) They retaliated by shooting. (by (5(2))) They retaliated with shootings}. (with (4(3))) The owners destroyed the company by growing it too fast. (by (5(2))) Chlorophyll absorbs the light by transfer of electrons. (by (5(2)))
<u>Direct Tags</u>	by (5(2)) (indicating the means of achieving something) with (4(3)) (indicating the instrument used to perform an action)
<u>Same SST</u>	thro' (12(5)) (by means of (a process or intermediate stage)) (also Course, Via) through (12(5)) (by means of (a process or intermediate stage)) (also Course, Via) thru (12(5)) (by means of (a process or intermediate stage)) (also Course, Via) via (2(1a)) (by way of; through) (also Via)
<u>Substitutables</u>	through, thru, thro' (12(5)): by way of, via via (2(1a)): by means of, through
<u>PDEP Hierarchy</u>	MeansMedium~>Means: 13 "at", "11(6)", "expressing the means by which something is done" "by", "5(2)", "indicating the means of achieving something" "by", "8(2c)", "indicating the means of transport selected for a journey" "by dint of", "1(1)", "by means of" "by force of", "1(1)", "by means of" "by means of", "1(1)", "with the help of; by using" "by way of", "3(3)", "by means of" "per", "2(2)", "by means of" "thro'", "12(5)", "by means of (a process or intermediate stage)" "through", "12(5)", "by means of (a process or intermediate stage)" "thru", "12(5)", "by means of (a process or intermediate stage)" "via", "2(1a)", "by way of; through" "with", "4(3)-1", "identifying the content of a communication" (Questionable) MeansMedium~>Instrument: 1 "with", "4(3)", "indicating the instrument used to perform an action" <u>Analysis (Questionable)</u> over, o'er (15(6)): "expressing the medium by which something is done; by means of" over, o'er (15(6)-1): "by means of the resistant surface constituted by (an object)" per (2(2)): "by means of"
<u>Functions</u>	
<u>Comment</u>	

Category 1.5.0.0 - Manner	
<u>Definition</u>	Qualitative description of a situation, adding color to the main scene.
<u>History</u>	In v1, Manner was positioned as an ancestor of all categories that license a <i>How?</i> question, including Instrument , Means , and CONTOUR. This criterion was deemed too broad, so Manner has no subtypes in v2.

Category 1.5.0.0 - Manner	
<u>Instances</u>	<p>He reacted <u>with</u> anger. (with (7(5)))</p> <p>He reacted <u>in</u> anger. (in (6(4a)-1))</p> <p>He reacted <u>with</u> nervous laughter. (with (7(5)))</p> <p>I wrote the book <u>in</u> French. (in (9(7)))</p> <p>I made the decision <u>by</u> myself (by (3(1b)))</p> <p>I made the decision <u>without</u> anyone else (without (1(1)))</p> <p>We talked <u>in</u> person. (in (5(4)))</p> <p>You eat <u>like</u> a pig (eats). (like (2(1a)))</p> <p>You smell <u>like</u> a pig. (like (2(1a)))</p> <p>The legislation was passed <u>on</u> a bipartisan basis. (on (9(3a)))</p> <p><u>Manner</u>~><u>Locus</u></p> <p>She loves teaching, and it shows <u>in</u> her smile. (in (6(4a)))</p> <p><u>Manner</u>~><u>Stuff</u></p> <p>Your father smells <u>of</u> elderberries. (of (16(7b)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(MeansMedium, Manner): 35; (MeansMedium, Medium): 14; (Agent, Indirect): 14; (Backdrop, Contrasting:Negative): 13; (Backdrop, Supplementing): 28;; (Topic, Connection): 12; (Cause, Cause): 16
<u>VI SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 1.6.0.0 - Explanation	
<u>Definition</u>	Assertion of why something happens or is the case.
<u>History</u>	None
<u>Instances</u>	<p>I went outside <u>because of</u> the smell. (because of (1(1)))</p> <p>The rain is <u>due to</u> a cold front. (due to (3(3)))</p> <p>He thanked her <u>for</u> the cookies. (for (6(5)))</p> <p>Thank you <u>for</u> being so helpful. (for (6(5)))</p> <p><u>Explanation</u>~><u>Source</u></p> <p>He reacted <u>out of</u> anger. (out of (2(1a)))</p> <p><u>Explanation</u>~><u>Time</u></p> <p>I joined a protest <u>after</u> the shameful vote in Congress. (after (1(1)-1))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Cause, Cause): 16; (Cause, Reason): 12
<u>VI SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	This marks a secondary event that is asserted as the reason for the main event or state.

Category 1.6.1.0 - Purpose	
<u>Definition</u>	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).

Category 1.6.1.0 - Purpose	
History	In v1, the usages illustrated in were assigned a separate label, FUNCTION, which inherited from both ATTRIBUTE and Purpose . With the introduction of construal, v2.0 – v2.3 labeled these \rf{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 }. .
Instances	He rose <u>for</u> a grand speech. (for (5(4))) (+10, 187a-d, 189, 196) I went to the store <u>for</u> eggs. (for (5(4))) surgery <u>for</u> a leg injury (for (6(5))) Do you have a couch <u>for</u> sleeping on? (for (5(4))) This place is great <u>for</u> ping-pong. (for (5(4)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Cause, Purpose): 1; (Cause, Reason):12
VI SST	
Definition Analysis	
Functions	
Comment	

Category 2.0.0.0 - Participant	
Definition	Thing, usually an entity, that plays a causal role in an event.
History	No history and not present in v1.
Functions	N/A
Comment	Not used directly - see its subtypes

Category 2.1.0.0 - Causer	
Definition	Instigator of, and a core participant in, an event.
History	None - Used in v1
Instances	the devastation of the town wreaked <u>by</u> the fire (by (2(1a))) Causer ~> Gestalt the devastation <u>of</u> the fire on the town (of (16(7b))) Causer ~> Source the devastation <u>from</u> the fire (from (12(9))) fatalities <u>from</u> cancer (from (12(9))) FDR suffered <u>from</u> polio. (from (12(9)))
Direct Tags	by (2(1a)) ((after a passive verb) through the agency or action of) of (16(7b)) (because of) from (12(9)) (indicating a cause)
Same SST	with (12(7c)): “because of (something) and as it happens”
Substitutables	by: with of: from, because of from: because of, on account of, for with: because of, along with
PDEP Hierarchy	(Agent, Direct): 17; (Cause, Cause): 16

Category 2.1.0.0 - Causer	
Definitions	<p>(from <i>because</i>)</p> <p>"by reason of", "1(1)", "because of"</p> <p>"by virtue of", "1(1)", "because of; as a result of"</p> <p>"due to", "3(3)", "because of; owing to"</p> <p>"in bed with", "3(n)", "(for maladies, diseases and afflictions) because of"</p> <p>"in view of", "1(1)", "because of; as a result of"</p> <p>"in virtue of", "1(1)", "because of; as a result of"</p> <p>"o", "16(7b)", "(for maladies, diseases and afflictions) because of"</p> <p>"on account of", "1(1)", "because of"</p> <p>"on the score of", "1(1)", "because of"</p> <p>"owing to", "1(1)", "because of or on account of"</p> <p>(from <i>result</i>)</p> <p>"pon", "3(1b)", "as a result of accidental physical contact with"</p> <p>"after", "1(1)-1", "following in time and resulting from (an event or activity)"</p> <p>"by courtesy of", "2(1a)", "as a result of; thanks to"</p> <p>"by virtue of", "1(1)", "because of; as a result of"</p> <p>"courtesy of", "2(1a)", "as a result of; thanks to"</p> <p>"following", "1(1)", "coming after or as a result of"</p> <p>"on", "3(1b)", "as a result of accidental physical contact with"</p> <p>"thanks to", "1(1)", "as a result of; due to"</p> <p>"upon", "3(1b)", "as a result of accidental physical contact with"</p>
Functions	
Comment	

Category 2.1.1.0 - Agent	
Definition	Animate (and typically volitional) participant instigating an action or acting in a complementary way to the instigator.
History	In v1 and v2.0 – 2.4, Agent had a subtype CO-AGENT for (core) secondary agents. The two were merged in v2.5; the difference between primary and secondary agents is expressed via construal.
Instances	<p>the decisive vote <u>by</u> the City Council (by (3(1b)))</p> <p>Agent~>Gestalt</p> <p>the decisive vote <u>of</u> the City Council (of (11(6)))</p> <p>It was the fault <u>of</u> the chairman}. (of (11(6)))</p> <p>Agent~>Whole</p> <p>There was a war <u>between</u> France and Spain. (between (5(4a)))</p> <p>a discussion <u>among</u> the board members (among (3(3)))</p> <p>Agent~>Beneficiary</p> <p>I fought in a war <u>against</u> the Germans. (against (1(1)))</p> <p>Agent~>Ancillary</p> <p>I argued <u>with</u> my roommate about cleaning duties. (with (6(4)))</p> <p>I talked <u>with</u> my roommate about cleaning duties. (with (9(7)))</p>
Direct Tags	<p>by (3(1b)) ((after a noun denoting an action) through the agency or action of)</p> <p>of , o' (11(6)) (expressing the relationship between an abstract concept having a verb-like meaning and a noun denoting the subject of the underlying verb)</p> <p>between, betwixt (5(4a)) (with reference to a collision or conflict)</p> <p>among (3(3)) (occurring in or shared by (some members of a group or community))</p>
Same SST	<p>by (1(1)): "through the agency or action of"</p> <p>by (2(1a)): "(after a passive verb) through the agency or action of" (also Causer, \psst{Stimulus})</p>

Category 2.1.1.0 - Agent	
Substitutables	by (1(1), 2(1a)): with by (3(1b)): of, on the part of between (5(4a)): (involving) among (3(3)): in
PDEP Hierarchy	(Agent, Indirect): 14; (Agent, Involved:Possessor): 8; (Tandem, Opponent): 22; (Tandem, CoParticipants): 22; (Topic, Attention): 32
Functions	
Comment	Compare: Co-Agent ; see also: \psst{OrgRole}, \psst{Originator}, \psst{Source}, \psst{Stimulus}

Category 2.1.1.1 - Co-Agent	
Definition	Second semantically core participant that would otherwise be labeled Agent , but which is adpositionally marked in contrast with an Agent occupying a non-oblique syntactic position (subject or object). Typically, the Agent and Co-Agent engage in the event in a reciprocal fashion.
History	None - Used in v1
Instances	I fought in a war <u>against</u> the Germans. (against (1(1))) I talked/argued <u>with</u> my roommate about cleaning duties. (with (1(1), (6(4))))
Direct Tags	against (1(1)) (in opposition to) with (1(1)) (accompanied by (another person or thing)) with (6(4)) (in opposition to)
Substitutables	against (1(1), 3(1b)): with, versus between, betwixt (4(4), 5(4a)): (involving) by (9(2d)): of with (1(1)): next to, beside with (6(4)): against
Same SST	against, 'gainst, agin (1(1)) (in opposition with) against, 'gainst, agin (3(1b)) (in competition with) between, betwixt (4(4)) (indicating a connection or relationship involving two or more parties (also Co-Theme) between, betwixt (5(4a)) (with reference to a collision or conflict) (also Co-Theme, Co-Patient) by (9(2d)) (indicating the other parent of someone's child or children)
Definitions	anti (1(1)): "opposed to; against" athwart (2(2)): "in opposition to; counter to" in the teeth of (2(1a)): "in spite of (opposition or difficulty)" thwart (2(2)): "in opposition to; counter to" upside (1(1)): "against, on" versus (1(1)): "against (especially in sporting and legal use)"
Functions	
Comment	See also: \psst{Accompanier}, \psst{SocialRel}

Category 2.2.0.0 - Theme	
Definition	Undergoer that is a semantically core participant in an event or state, and that does not meet the criteria for any other label.
History	In v1, following many thematic role inventories, PATIENT was a distinct label for undergoers that were affected (undergoing an internal change of state). It was merged into Theme for v2 because the affectedness criterion can be subtle and difficult to apply. In v1 and v2.0--2.4, Theme had a subtype CO-THEME for core secondary themes. In v1, CO-PATIENT was distinguished, in parallel with the Theme vs. PATIENT distinction. CO-PATIENT was merged with CO-THEME in v2.0, and CO-THEME was merged with Theme in v2.5.

Category 2.2.0.0 - Theme

<u>Instances</u>	<p>Quit <u>with</u> the whining! (with (1(1)-1))</p> <p>She helped me <u>with</u> my taxes. (with (1(1)-1))</p> <p>Don't waste time <u>with</u> an extra trip. (with (1(1)-1))</p> <p>I managed to cope <u>with</u> my fear of heights. (with (1(1)-1))</p> <p>There's nothing wrong <u>with</u> the engine. (with (9(7)))</p> <p>My hovercraft is full <u>of</u> eels. (of (13(6b)))</p> <p>a copy <u>of</u> the key (of (6(3)))</p> <p>Sheldukher looked <u>for</u> his laser pistol. (for (6(5)))</p> <p>Sheldukher asked <u>for</u> his laser pistol. (for (6(5)))</p> <p>There is a significant demand <u>for</u> new housing. (for (6(5)))</p> <p>Let's wait <u>for</u> more information. (for (6(5)))</p> <p>What happened <u>to</u> you? (to (14(6)))</p> <p>This species is native <u>to</u> North America. (to (10(4a)))</p> <p>Balancing of risk and reward is inherent <u>to</u> the game. (to (10(4a)))</p> <p>the approach <u>of</u> the waves (of (12(6a)))</p> <p>the death <u>of</u> a salesman (of (12(6a)))</p> <p>The mechanic worked <u>on</u> the engine. (on (11(5)))</p> <p>We noshed <u>on</u> snacks. (on (11(5)))</p> <p>There was an increase <u>in</u> oil prices. (in (6(4a)))</p> <p>Bad weather may result <u>in</u> a delay. (in (6(4a)-1))</p> <p>They spent \$500 <u>on</u> the repairs. (on (9(3a)-1))</p> <p>They replaced my old tires <u>with</u> new ones. (with (1(1)-1))</p> <p>They substituted new tires <u>for</u> my old ones. (for (9(8)))</p> <p>We are ready/eligible/responsible/due <u>for</u> an upgrade. (for (6(5)))</p> <p><u>Theme</u>-><u>Instrument</u></p> <p>Fill the bowl <u>with</u> water. (with (5(3a)))</p> <p>The food was covered <u>with</u> grease. (with (5(3a)))</p> <p><u>Theme</u>-><u>Locus</u></p> <p>The food was covered <u>in</u> grease. (in (1(1)))</p> <p>I'm covered <u>in</u> bees! (in (1(1)-1))</p> <p>I put a hole <u>in</u> the box. (in (1(1)))</p> <p><u>Theme</u>-><u>Purpose</u></p> <p>They charged \$500 <u>for</u> the repairs. (for (9(8)))</p> <p>\$500 <u>for</u> the repairs was excessive. (for (9(8)))</p> <p><u>Theme</u>-><u>Whole</u></p> <p>There was a collision in mid-air <u>between</u> two light aircraft. (between (5(4a)))</p> <p><u>Theme</u>-><u>Ancillary</u></p> <p>You shouldn't confuse/associate Mozart <u>with</u> Rossini. (with (1(1)))</p> <p>His bicycle collided <u>with</u> hers. (with (1(1)))</p> <p>Combine butter <u>with</u> vanilla. (with (1(1)))</p> <p><u>Theme</u>-><u>Source</u></p> <p>The training saved us <u>from</u> almost certain death. (from (11(8)))</p> <p>They prevented us <u>from</u> boarding the plane. (from (11(8)))</p> <p>The boys were separated from the girls. (from (10(7)))</p> <p>Keep the dogs <u>from</u> the cats. (from (10(7)))</p> <p><u>Theme</u>-><u>Goal</u></p> <p>The mechanic made a repair <u>to</u> the engine. (to (13(5)))</p> <p>Due to my injury, I am limited <u>to</u> working from home. (to (10(4a)))</p> <p>It is important to keep <u>to</u> your convictions. (to (6(2a)))</p> <p>The shin bone is connected <u>to</u> the knee bone. (to (13(5)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	

Category 2.2.0.0 - Theme	
<u>PDEP Hierarchy</u>	(Tandem, Opponent): 22; (Cause, Reason): 12; (Tandem, Fulfillment): 13; (Cause, Source): 9; (Activity, Avoided): 7; (Spatial, SimplePosition): 40; (Agent, Involved:Attribute): 6; (Topic, Connection): 12; (MeansMedium, Manner): 35; (Topic, Attention): 32; (Agent, Involved:Possessor): 8; (Cause, Target): 26; (Scalar, Scale): 35; (Tandem, Fulfillment:EndState): 15; (Tandem, CoParticipants): 22; (Backdrop, Supplementing): 28; (Membership, Species): 21
<u>VI SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 2.2.1.0 - Topic	
<u>Definition</u>	Information content or subject matter in communication or cognition, or the matter something pertains to.
<u>History</u>	

Category 2.2.1.0 - Topic

<u>Instances</u>	<p>I gave a presentation/spoke <u>about</u> politics. (about (1(1))) (+1, 232a)</p> <p>I gave a presentation/spoke <u>on</u> politics. (on (8(3)))</p> <p>They wouldn't stop arguing <u>over</u> the plan. (over 16(7)))</p> <p>I was accused <u>of</u> treason. (of (14(7)))</p> <p>a picture <u>of</u> Whistler's mother (of (9(5)))</p> <p>three copies/versions <u>of</u> the test (of (6(3)))</p> <p>The ratings <u>for</u> this film are atrocious. (for (2(2)))</p> <p>I did not hazard a guess <u>as to</u> the cause. (as to (1(1))) (+1, 232f)</p> <p>We took a minute to think/ponder <u>over</u> the situation. (over (16(7)))</p> <p>I plan <u>on</u> going again. (on (8(3))) (12)</p> <p>I am focused <u>on</u> the task at hand. (on (8(3)))</p> <p>There is not enough research <u>on</u> the effects of global warming. (on (8(3)))</p> <p>Think <u>of</u> all the possibilities! (of (15(7a)))</p> <p>I have no memory <u>of</u> the incident. (of (12(6a)))</p> <p>I am aware <u>of</u> the problem.(of (13(6b)))</p> <p>You can have your choice <u>of</u> chicken or fish. (of (12(6a)))</p> <p>I disagree <u>with</u> that statement. (with (6(4)))</p> <p>I am familiar <u>with</u> this topic. (with (9(7)))</p> <p>Are you interested <u>in</u> politics? (in (6(4a)))</p> <p>I'm confident <u>in</u> your abilities. (in (6(4a)))</p> <p>My daughter excels <u>in</u> sports. (in (11(8)))</p> <p>My daughter excels <u>at</u> sports. (at (8(4a)))</p> <p>I'm good <u>at</u> baking cookies. (at (8(4a))) (25)</p> <p>I wouldn't hesitate <u>in</u> seeing a doctor. (in (6(4a)))</p> <p>Be reasonable <u>with</u> your expectations! (with (9(7)))</p> <p>They are transparent <u>with</u> their fee. (with (9(7)))</p> <p>The discount should apply <u>with</u> other restaurants too. (with (15(9)-1))</p> <p>I approached the manager <u>about</u> the poor service. (about (2(1a))) (+1, 234e)</p> <p>The owner wouldn't budge <u>on</u> the price. (on (11(5)))</p> <p>They came through <u>on</u> all of their promises. (on (11(5)))</p> <p>She did not do the right thing <u>for</u> an item that was marked incorrectly. (for (2(2)))</p> <p>I'm fast <u>at</u> baking cookies. (at (8(4a)))</p> <p>They have almost anything you could want <u>in terms of</u> spy and surveillance equipment. (in terms of (1(1))) (36)</p> <p>Let us agree <u>on</u> the deal. (on (11(5)))</p> <p>I agree <u>with</u> the plan. (with (9(7)))</p> <p>He responded to my accusation <u>with</u> falsehoods. (with (7(5)))</p> <p>There was a problem <u>with</u> mice in the basement. (with (11(7b)))</p> <p>I have limited experience <u>with</u> numerical methods. (with (9(7)))</p> <p>I had a bad experience <u>with</u> a vampire. (with (1(1)))</p> <p><u>Topic~>Identity</u></p> <p>the topic/issue/question <u>of</u> semantics (of (9(5)))</p> <p>the idea <u>of</u> raising money (of (9(5)))</p> <p><u>Topic~>Goal</u></p> <p>Let us agree <u>to</u> the deal. (to (5(2)))</p> <p>the answer <u>to</u> the question (to (7(2b)))</p> <p>my response <u>to</u> your question (to (7(2b)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	

Category 2.2.1.0 - Topic	
PDEP Hierarchy	(Topic, Reference): 10; (Topic, Attention): 32; (Membership, Species): 21; (Agent, Involved:Possessor): 8; (Topic, Connection): 12; (Tandem, Fulfillment): 13; (Tandem, Opponent): 22; (Activity, Ongoing): 22; (Agent, Involved): 13; (Cause, Target): 26; (MeansMedium, Manner): 35; (Cause, Cause): 16; (Tandem, CoParticipants): 22; (Tandem, Fulfillment:EndState): 15
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 2.3.0.0 - Ancillary	
Definition	A surplus participant in relation to an event (or state/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 .
Instances	Could you walk <u>with</u> me to the store? (with (1(1))) Could you walk <u>along with</u> me to the store? (along with (1(1))) Could you walk <u>together with</u> me to the store? (together with (1(1))) Can you go to the store <u>without</u> me? (without (3(2)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Tandem, CoParticipants): 22; MeansMedium (Instrument:Negative): 7
V1 SST	
Definition Analysis	
Functions	
Comment	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. Versus Ensemble . Ancillary describes a relation of an entity to an event/situation, whereas Ensemble is used for a relation directly between entities.

Category 2.4.0.0 - Stimulus	
Definition	That which is perceived or experienced (bodily, perceptually, or emotionally).
History	None - Used in v1

Category 2.4.0.0 - Stimulus	
<u>Instances</u>	<p><u>Stimulus~>Beneficiary</u> My affection <u>for</u> you (for (2(2))) Her disdain <u>for</u> customers was apparent. (for (2(2))) He has/feels compassion <u>for</u> animals. (for (2(2))) He has/feels compassion <u>towards</u> animals. (towards (4(2)-1))</p> <p><u>Stimulus~>Causer</u> Scared <u>by</u> the bear (by (2(1a)))</p> <p><u>Stimulus~>Goal</u> We were listening <u>to</u> the music. (to (14(6))) You should listen <u>to</u> the music. (to (14(6))) You should pay attention <u>to</u> the music. (to (14(6)))</p> <p><u>Stimulus~>Direction</u> We were looking <u>at</u> the photo. (at (9(5))) I was angry <u>at</u> him. (at (11(6)-1)) I startled <u>at</u> the noise. (at (11(6)-1))</p> <p><u>Stimulus~>Topic</u> I care <u>about</u> you. (about (1(1))) That's what I love <u>about</u> the show. (about (1(1))) I took pride <u>in</u> the results. (in (6(4a))) I was proud <u>of</u> the results. (of (13(6b))) I was happy <u>with</u> the results. (with (9(7))) I was angry <u>with</u> him. (with (9(7))) I was in love <u>with</u> him. (with (9(7))) They bored me <u>with</u> their incessant talk about cats. (with (1(1)-1))</p> <p><u>Stimulus~>Explanation</u> I am thankful/grateful <u>for</u> your help. (for (6(5)))</p>
<u>Direct Tags</u>	for (2(2)) (affecting, with regard to, or in respect of) for (6(5)) (having (the thing mentioned) as a reason or cause) by (2(1a)) ((after a passive verb) through the agency or action of) to (14(6)) (concerning or likely to concern (something))
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Topic, Connection): 12; (Cause, Target): 26; (Agent, Direct): 17; (Topic, (Attention): 32; (MeansMedium, Stimulus): 1; (Topic, Reference): 10; (Backdrop, Supplementing): 28; (Cause, Reason): 12
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 2.5.0.0 - Experiencer	
<u>Definition</u>	Animate who is aware of a bodily sensation, perception, emotion, or mental state.
<u>History</u>	None

Category 2.5.0.0 - Experiencer	
<u>Instances</u>	<p><u>Experiencer~>Gestalt</u> The anger <u>of</u> the students (of (11(6)))</p> <p><u>Experiencer~>Goal</u> It feels hot <u>to</u> me (to (8(3)-1)) That was astounding <u>to</u> me (to (8(3)-1)) The answer is known <u>to</u> me (to (8(3)-1))</p> <p><u>Experiencer~>Agent</u> The answer is known <u>by</u> me (by (21(7)))</p> <p><u>Experiencer~>Beneficiary</u> Running is enjoyable <u>for</u> me (for (2(2)-1)) he pizza was (too) salty <u>for</u> me (for (2(2)-1)) <u>For</u> John, the party was not fun at all. (for (2(2)-1)) <u>For</u> John, there was no reason to attend. (for (2(2)-1))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Agent, Involved:Possessor): 8; (Cause, Target): 26; (Agent, Involved): 13
<u>VI SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 2.6.0.0 - Originator	
<u>Definition</u>	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.
<u>History</u>	<u>Originator</u> 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 \psst{Source}. CREATOR was a subtype of <u>Agent</u> . Moving <u>Originator</u> directly under <u>Participant</u> puts it in a neutral position with respect to its possible construals.
<u>Instances</u>	<p><u>Originator~>Agent</u> works <u>by</u> Shakespeare (by (4(1c))) The telephone was invented <u>by</u> Alexander Graham Bell. (by (2(1a))) The story was given/told to her <u>by</u> her editor. (by (2(1a)))</p> <p><u>Originator~>Source</u> works <u>of</u> Shakespeare (of (7(3a))) The story was obtained <u>from</u> an anonymous White House employee. (from (4(3))) I bought it <u>from</u> this company. (from (4(3))) I heard the news <u>from</u> Larry. (from (4(3))) We learned a lot <u>from</u> Miss Zarves. (from (4(3)))</p>
<u>Direct Tags</u>	<p>by (4(1c)) (from the hand, mind, or inventive capacity of)</p> <p>by (2(1a)) ((after a passive verb) through the agency or action of)</p> <p>of (7(3a)) (expressing the relationship between an author, artist, or composer and their works collectively)</p> <p>from (4(3)) (indicating the source or provenance of someone or something)</p>
<u>Same SST</u>	None (not in v1)
<u>Substitutables</u>	<p>by (4(1c)): of</p> <p>by (2(1a)): with</p> <p>of (7(3a)): from, by</p> <p>from (4(3)): of</p>
<u>PDEP Hierarchy</u>	(Agent, Direct): 13; (Spatial, SimplePosition:Origin): 16
<u>VI SST</u>	
<u>Definition Analysis</u>	

Category 2.6.0.0 - Originator	
Functions	
Comment	

Category 2.7.0.0 - Recipient	
Definition	The party (usually animate) that is the endpoint of (actual or intended) transfer of a thing or message, becoming the final \psst{Possessor} or \psst{Gestalt}. Excludes events where transfer/communication is not framed as unidirectional.
History	In v1, Recipient was the counterpart to DONOR/SPEAKER: Recipient was a subtype of DESTINATION, which inherited from LOCATION and \psst{Goal}. Moving Recipient directly under Participant puts it in a neutral position with respect to its possible construals.
Instances	Recipient -> Goal She gave the story or spoke <u>to</u> her editor. (to (8(3))) What title did you give <u>to</u> your essay? (to (8(3))) Recipient -> Direction news <u>for</u> our readers (for (3(3))) He is yelling <u>at</u> me to get ready! (at (9(5))) Recipient -> Agent The news was not well received <u>by</u> the White House. (by (2(1a))) Recipient -> Co-Agent I'll have to check <u>with</u> my supervisor. (with (8(6)))
Direct Tags	at (9(5)) (expressing the object of a look, thought, action, or plan) by (2(1a)) ((after a passive verb) through the agency or action of) for (3(3)) (on behalf of or to the benefit of) to (8(3)) (identifying the person or thing affected by or receiving something) with (8(6)) (indicating responsibility)
Same SST	for (2(2)) (affecting, with regard to, or in respect of) (also Stimulus, Theme) with (9(7)) (in relation to) (also Activity, Co-Theme, Beneficiary, Theme, Topic)
Substitutables	at (9(5)): toward (possibly 4(2), 4(2)-1), about by (2(1a)): with for (2(2)): with, of for (3(3)): on behalf of (maybe \psst{Beneficiary}) with (9(7)): by, through
PDEP Hierarchy	(Cause, Recipient): 4; (Cause, Beneficiary): 17; Cause, Target): 26; (Agent, Direct): 17; (Agent, Involved): 13
V1 SST	DESTINATION instances don't seem to be Recipient .
Definitions	None
Functions	
Comment	There are 150 instances of Destination in v1 tags; the first 38 are to \psst{Goal}.

Category 2.8.0.0 - Cost	
Definition	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.
History	This category was not present in v1, which had the broader category VALUE. VerbNet 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 <i>possess</i> or <i>transfer</i> , for instance).
Instances	I bought/sold the book <u>for</u> \$10. (for (10(8a))) I got a refund <u>of</u> \$10. (of (4(2))) The book is priced/valued <u>at</u> \$10. (at (5(3))) I bought it <u>at</u> a great price/rate. (at (5(3))) You can ride the bus <u>for</u> free/\$1. (for (10(8a)))

Category 2.8.0.0 - Cost	
<u>Direct Tags</u>	for (10(8a)) (charged as (a price)) of (4(2)) (expressing the relationship between a scale or measure and a value) at (5(3)) (denoting a particular point or level on a scale)
<u>Same SST</u>	None (not in v1)
<u>Substitutables</u>	for 10(8a): at at (5(3)): around (?), in (?)
<u>PDEP Hierarchy</u>	(Scalar, Equivalence): 13
<u>V1 SST</u>	above 9(3) Scalar/Rank,ValueComparison (higher than (a specified amount, rate, or norm)) at 5(3) Frequency,Value (as above) below 3(1b) Scalar/Rank,ValueComparison (lower than (a specified amount or standard)) by 13(3a) Value (indicating a quantity or amount) X by 16(3d) Value (expressing multiplication, especially in dimensions) X for 10(8a) Value (as above) in 12(9) Superset,Value (expressing a value as a proportion of (a whole) X into 8(8) Value (expressing division) X near 4(3a) ValueComparison (a small amount below (another amount)) o' 4(2) Extent,Value (as above) of 4(2) Extent,Value (as above) per 1(1) Value (for each (used with units to express a rate)) X to 11(4b) Value (indicating a rate of return on something, for example the distance travelled in exchange for fuel used) X to 12(4c) Value (indicating the power (exponent) to which a number is raised) X up to 3(2) ValueComparison (indicating a maximum amount)
<u>Definitions</u>	against, 'gainst, agin (7(2c)): "in relation to (an amount of money owed, due, or lent) so as to reduce, cancel, or secure it" beyond (6(3a)): "above or greater than (a specified amount)" give or take (1(1)): "to within (a specified amount)" in proportion to (1(1)): "according to (a particular relationship in size, amount, or degree)" near to, nigh (4(3a)): "a small amount below (another amount)" to the tune of (1): "amounting to or involving (a specified considerable sum)" under (7(3)): "lower than (a specified amount, rate, or norm)" underneath (5(n)): "lower than (a specified amount or standard)"
<u>Functions</u>	
<u>Comment</u>	This is specifically about payment requested. If an amount is treated as property, then \psst{Possession} is appropriate. (In v1 SST, some PDEP instances meeting Cost criteria.)

Category 2.9.0.0 - Beneficiary	
<u>Definition</u>	Animate or personified undergoer that is (potentially) advantaged or disadvantaged by the event or state.
<u>History</u>	None

Category 2.9.0.0 - Beneficiary	
<u>Instances</u>	<p>Vote <u>for</u> Pedro! (for (1(1)))</p> <p>Vote <u>against</u> Pedro! (against (1(1)))</p> <p>Junk food is bad <u>for</u> your health. (for (2(2)))</p> <p>My parrot died <u>on</u> me. (on (11(5)))</p> <p>These are clothes <u>for</u> children. (for (3(3)))</p> <p>Fortunately <u>for</u> the turkey('s future), he received a presidential pardon. (for (3(3)))</p> <p>The strategy is risky <u>for</u> investors. (for (3(3)))</p> <p>John baked a cake <u>for</u> Mary. (for (3(3)))</p> <p><u>Beneficiary</u>~><u>Direction</u></p> <p>She exhibits rudeness <u>towards</u> customers. (towards (4(2)-1))</p> <p><u>Beneficiary</u>~><u>Goal</u></p> <p>He is rude <u>to</u> women. (to (8(3)-1))</p> <p>The strategy poses a risk <u>to</u> investors. (to (8(3)-1))</p> <p>We have a solemn responsibility <u>to</u> our armed forces. (to (8(3)-1))</p> <p><u>Beneficiary</u>~><u>Theme</u></p> <p>He is gentle and compassionate <u>with</u> animals. (with (9(7)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Cause, Beneficiary): 17; (Tandem, Opponent): 22; (Topic, Connection): 12; (Cause, Target): 26; (Topic, Attention): 32
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 2.10.0.0 - Instrument	
<u>Definition</u>	An entity that facilitates an action by applying intermediate causal force.
<u>History</u>	None - Used in v1
<u>Instances</u>	<p>I broke the window <u>with</u> a hammer. (with (4(3))) (+1, 303)</p> <p>I destroyed the argument <u>with</u> my words. (with (4(3)-1))</p> <p>Communicate <u>by</u> phone. (by (5(2)))</p> <p>Travel <u>by</u> train. (by (8(2c)))</p> <p>Escape <u>with</u> a getaway car. (with (4(3)))</p> <p><u>Instrument</u>~><u>Causer</u></p> <p>The window was broken <u>by</u> the hammer. (by (2(1a)))</p> <p>My headache was alleviated <u>by</u> aspirin. (by (2(1a)))</p> <p><u>Instrument</u>~><u>Locus</u></p> <p>Talk <u>on</u> the phone. (on 12(6))</p> <p>Escape <u>in</u> the getaway car. (in (1(1)))</p> <p>ride <u>on</u> horseback (on (15(7a)))</p> <p>hold <u>at</u> knifepoint (at (11(6)))</p> <p><u>Instrument</u>~><u>Path</u></p> <p>Send it <u>over</u> email. (over 15(6))</p> <p>Send it <u>via</u> email. (via (3(1b)))</p> <p>We flew to London <u>via</u> Paris. (via (1(1)))</p> <p>I found out the news <u>via</u> Sharon. (via (2(1a)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(MeansMedium, Instrument): 1; (MeansMedium, Means): 13; (Agent, Direct): 17; (MeansMedium, Medium): 14; (Spatial, SimplePosition): 40; (Spatial, Path): 39; (Spatial, SimplePosition:Conveyance): 9
<u>V1 SST</u>	

Category 2.10.0.0 - Instrument	
Definition Analysis	
Functions	
Comment	Prototypically, an Agent intentionally applies the Instrument with the purpose of achieving a result. Less prototypically, the action could be unintentional.

Category 3.0.0.0 - Configuration	
Definition	Thing, usually an entity or property, that is involved in a static relationship to some other entity.
History	None. Not in v1.
V1 SST	N/A
Definition Analysis	N/A
Functions	N/A
Comment	Not used directly - see its subtypes

Category 3.1.0.0 - Identity	
Definition	A category being ascribed to something, or something belonging to the category denoted by the governor.
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.
Instances	<p>the state <u>of</u> Washington [as opposed to the city] (of (9(5)))</p> <p>The liberal state <u>of</u> Washington has not been receptive to Trump's message. (of (9(5)))</p> <p><u>As</u> a liberal state, Washington has not been receptive to Trump's message. (as (1(1)))</p> <p>I like Bob <u>as</u> a colleague. [but not as a friend] (as (1(1)))</p> <p>What a gem <u>of</u> a restaurant! [exclamative idiom: both NPs are indefinite] (of (9(5)))</p> <p>the problem/task/hassle <u>of</u> raising money (of (9(5)))</p> <p>the age <u>of</u> eight (of (5(2a)))</p> <p>They did a great job <u>of</u> cleaning my windows. (of (9(5)))</p> <p>She appears <u>as</u> Ophelia in Hamlet. (as (1(1)))</p> <p>He is usually a bartender, but today he is working <u>as</u> a waiter. (as (1(1)))</p>
Direct Tags	<p>of (5(2a)) (used to indicate a person's age in months or years)</p> <p>of (9(5)) (expressing the relationship between a general category or type and the thing being specified which belongs to such a category)</p> <p>as (1(1)) (used to refer to the function or character that someone or something has)</p>
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Species): 21; (Scalar, Age): 5; (Membership, Group): 28
V1 SST	
Definition Analysis	
Functions	56 instances: Identity (51), \psst{ ComparisonRef } (5)
Comment	Several instances describe Identity as the function, for \psst{ Topic } and \psst{ Characteristic }

Category 3.2.0.0 - Species	
Definition	A category qualified by sort, type, kind, species, breed, etc. Includes variety, selection, range, assortment, etc. meaning `many different kinds'.
History	No history. Used in v1.

Category 3.2.0.0 - Species	
Instances	that sort <u>of</u> business (of (10(5a)), o' (10(5a))) A good type <u>of</u> ant to keep is the red ant. (of (10(5a)), o' (10(5a))) certain strains <u>of</u> <i>Escherichia coli</i> (of (10(5a)), o' (10(5a))) Modern breeds <u>of</u> these homing pigeons return reliably. (of (10(5a)), o' (10(5a))) Some poor sap applied the wrong brand <u>of</u> paint. (of (10(5a)), o' (10(5a))) This store offers a wide selection <u>of</u> footstools. (of (10(5a)), o' (10(5a)))
Direct Tags	of (10(5a)) (denoting the genus to which a given thing or quality belongs)
Same SST	None
Substitutables	None
PDEP Hierarchy	(Membership, Group): 28
V1 SST	
Definition Analysis	None
Functions	40 instances: Species (40)
Comment	This is close to <i>of</i> (9(5)). See Identity

Category 3.3.0.0 - Gestalt	
Definition	Generalized notion of “whole” understood with reference to a component part, possession, set member, or characteristic. See \psst{Characteristic}.
History	None
Instances	the blueness <u>of</u> the sky (of (9(5))) the size <u>of</u> the crowd (of (3(1b))) the price <u>of</u> the tea (of (9(5))) the start time <u>of</u> the party (of (3(1b))) the power <u>of</u> the president (of (6(3))) a new way <u>of</u> thinking (of (9(5))) the amount <u>of</u> time allowed (of (3(1b))) Gestalt ~> Locus the food/service <u>at</u> this restaurant (at (11(6)-1))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Species): 21; (Membership, Group): 28; (Agent, Involved:Possessor): 8; (MeansMedium, Stimulus): 1
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 3.3.1.0 - Possessor	
Definition	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 <i>alienable</i> , i.e., not a part or attribute of the Possessor .
History	None
Instances	the house <u>of</u> the Smith family (of (6(3))) the corgis <u>of</u> Queen Elizabeth (of (6(3))) the cloak <u>of</u> He-Who-Must-Not-Be-Named (of (6(3))) Possessor ~>\psst{Locus} the cloak <u>on</u> He-Who-Must-Not-Be-Named (on (6(1e)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Agent, Involved:Possessor): 8
V1 SST	
Definition Analysis	

Category 3.3.1.0 - Possessor	
Functions	
Comment	

Category 3.3.2.0 - Whole	
Definition	Something described with respect to its part, portion, subevent, subset, or set element. See PartPortion .
History	In v1, SUPERSET was distinguished as a subtype of Whole for examples such as sets, but the distinction was dropped for v2 (as was ELEMENTS: see PartPortion).
Instances	<p>the new engine <u>of</u> the car (of (2(1a))) (+9, 359b-j)</p> <p>the south <u>of</u> France (of (2(1a)))</p> <p>The remainder/rest <u>of</u> the cake (of (2(1a)))</p> <p>This is one <u>of</u> the worst/better restaurants in town. (of (3(1b)))</p> <p><u>Among</u> the 10 children in the class, only Mary is a redhead. (among (2(2)))</p> <p>Whole~>Locus</p> <p>the 14 episodes <u>in</u> a TV series (in (7(5)))</p> <p>the new engine <u>in</u> the car (in (7(5)))</p> <p>the escape key <u>on</u> the keyboard (on (7(2)))</p> <p>the flaxen hair <u>on</u> the girl (on (7(2)))</p> <p>the clothes <u>in</u> that pile are dirty (in (7(5)))</p> <p>2 <u>in</u> 10 American children are redheads. (in (12(9)))</p> <p>Whole~>Source</p> <p>2 <u>out of</u> 10 American children are redheads. (out of (4(3)))</p> <p><u>Out of</u> the 10 children in the class, only Mary is a redhead. (out of (4(3)))</p>
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Group): 28; (Spatial, SimplePosition): 40; (Scalar, Scale): 35
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 3.3.3.0 - Org	
Definition	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.
History	In v1, PROFESSIONALASPECT marked relations between an employee and an employer, supervisor, or coworker. In v2.0, this was revised to ORGROLE, for relations between an individual and an organization, and a supertype \psst{SocialRel} covering all established social relationships. This was further refined in v2.5, when ORGROLE was split into two supersenses, Org and OrgMember , so the directionality of the (asymmetric) relation would be specified. Instead of being under \psst{SocialRel}, these are under \psst{Gestalt} and \psst{Characteristic}, respectively.

Category 3.3.3.0 - Org	
<u>Instances</u>	<p><u>Org~>Gestalt</u> employees <u>of</u> the company (of (6(3))) (+3, 373a-c)</p> <p><u>Org~>Beneficiary</u> I work <u>for</u> the United Nations (for (4(3a))) (+1, 374a)</p> <p><u>Org~>Locus</u> actors <u>in</u> the troupe (in (7(5))) I serve <u>on</u> the committee. (on (10(4))) people <u>in</u> my family (in (7(5))) Mr. Dursley works <u>at</u> Grunnings. (at (12(n)))</p> <p><u>Org~>Agent</u> I was hired <u>by</u> Microsoft. (by (2(1a))) (+1, 374c)</p> <p><u>Org~>Source</u> Mr. Dursley is <u>from</u> Grunnings. (from 12(9)-1))</p> <p><u>Org~>Ancillary</u> Mr. Dursley is <u>with</u> Grunnings. (with (13(8))) I always do business <u>with</u> this company. (with (14(8a))) (+2, 375b-c)</p> <p><u>Org~>Instrument</u> For my Honda I always got parts <u>through</u> the dealership. (through (13(5a)))</p> <p><u>Org~>Whole</u> I am the baby <u>of</u> the family. (of (6(3)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Agent, Involved:Possessor): 8; (Cause, Beneficiary:Employer): 4; (Membership, Group): 28; (Agent, Direct): 17; (Agent, Indirect): 14; (MeansMedium, Agentive): 3
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 3.3.4.0 - QuantityItem	
<u>Definition</u>	Something measured by a quantity denoted by the governor (the \psst{QuantityValue}).
<u>History</u>	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.
<u>Instances</u>	<p>Pour me a bottle('s worth) <u>of</u> beer. (of (3(1b)-1)))</p> <p>23 more examples with the sense, with other functions:</p> <p><u>QuantityItem~>Gestalt</u>;</p> <p><u>QuantityItem~>Stuff</u></p> <p><u>QuantityItem~>Whole</u></p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Membership, Species): 21
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	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)?”

Category 3.4.0.0 - Characteristic	
<u>Definition</u>	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).
<u>History</u>	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 .
<u>Instances</u>	<p>the restaurant <u>with</u> a convenient location (with (2(2))) (+3, 394a-b, 395)</p> <p>He examined the vase <u>for</u> damage. (for (2(2)))</p> <p>He searched the room <u>for</u> his laser pistol. (for (5(4)))</p> <p>He was tested <u>for</u> low blood sugar. (for (6(5)))</p> <p>The children are sorted/screened <u>by</u> height (by (15(3c)))</p> <p>She exceeds him <u>in</u> height (in (6(4a)))</p> <p>There is no difference <u>in</u> height (in (6(4a)))</p> <p>She entered the room <u>in</u> a stupor (in (5(4))) (11)</p> <p>Characteristic~>Stuff</p> <p>a shelf <u>of</u> rare books (of (3(1b)))</p> <p>a cardboard box <u>of</u> snacks (of (3(1b)-1))</p> <p>Characteristic~>Locus</p> <p>The ribbon is (tied) <u>in</u> a bow. (in (6(4a)))</p> <p>The sand is <u>in</u> a pyramid shape. (in (6(4a)))</p> <p>I skipped lunch for three days <u>in</u> a row. (in (3(2)))</p> <p>The book is <u>in</u> French. (in (9(7)))</p> <p>music <u>in</u> C major (in (10(7a)))</p> <p>the desk's height (measured) <u>in</u> inches (in (6(4a)))</p> <p>The chairs are <u>in</u> excellent shape. (in (5(4)))</p> <p>I'm <u>in</u> no condition to go outside. (in (5(4))) (21)</p> <p>John is <u>on</u> his back. (on (4(1c)))</p> <p>John is <u>on</u> antibiotics. (on (20(10)))</p> <p>John is <u>on</u> the ventilator. (on (1(1)))</p> <p>John is <u>in</u> pain. (in (5(4)))</p> <p>John is <u>in</u> a coma. (in (5(4)))</p> <p>Characteristic~>Beneficiary</p> <p>John is <u>for</u> the war. (for (1(1)))</p> <p>Characteristic~>Goal</p> <p>John is <u>against</u> the war. (against (1(1)))</p> <p>Characteristic~>Identity</p> <p>a car <u>of</u> high quality (of (6(3)-1)) (+2, 392b-c)</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Membership, Species): 21; (Topic, Connection): 12; (Cause, Purpose): 1; (Cause, Reason): 12; (Scalar, Scale): 35; (Backdrop, Supplementing): 28; (Membership, Group): 28; (Temporal, Period): 32; (MeansMedium, Medium): 14; (Spatial, SimplePosition): 40; (Cause, Beneficiary): 17; (Tandem, Opponent): 22; (Agent, Involved:Attribute): 6
<u>VI SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Category 3.4.1.0 - Possession	
Definition	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 <i>alienable</i> , i.e., not a part or attribute of the \psst{ Possessor }.
History	None
Instances	People <u>with</u> money (with (2(2))) People <u>without</u> money (without (3(2))) We are <u>out of</u> toilet paper. (out of (5(4))) the kid <u>with</u> a vest (with (3(2a))) I bestowed the winner <u>with</u> a bicycle. (with (16(10))) <u>Possession</u> ~> <u>Locus</u> the kid <u>in</u> a vest (in (1(1)-1)) <u>Possession</u> ~> <u>Ancillary</u> Hagrid exited the shop <u>with</u> (= carrying) a snowy owl. (with (2(2))) <u>Possession</u> ~> <u>Theme</u> They robbed her <u>of</u> her life savings. (of (6(3))) They spent \$500 <u>on</u> the bicycle. (on (11(5))) They charged/asked/paid/owed \$500 <u>for</u> the bicycle. (for (9(8))) \$500 <u>for</u> the bicycle was excessive. (for (9(8)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Species): 21; (MeansMedium, Instrument:Negative): 7; (Agent, Involved:Attribute): 6; (Cause, Source): 9; (Agent, Involved:Possessor): 8; Cause, Target): 26; (Tandem, Fulfillment): 13
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 3.4.2.0 - PartPortion	
Definition	A part, portion, subevent, subset, or set element (e.g., an example or exception) of some Whole .
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 \psst{Gestalt}). (SUPERSET was removed along with ELEMENTS: see Whole .)
Instances	a car <u>with</u> a new engine (with (2(2))) (and 10 more) Bread <u>without</u> gluten (without (3(2))) Everyone <u>except</u> Bob plays trombone. (except (1(1))) Everyone <u>but</u> Bob plays trombone. (but (1(1))) strategies <u>like</u> divide-and-conquer (like (7(3))) A piano quintet is a chamber group <u>with</u> a piano (in it) (with (2(2))) Everyone <u>from</u> the peasants to the lord and lady gathered for the feast. (from (7(4a))) Everyone <u>from</u> the peasants <u>to</u> the lord and lady gathered for the feast. (to (3(1b))) My teacher started the lesson <u>with</u> a quiz. (with (2(2))) The lesson started <u>with</u> a quiz. (with (2(2))) The meal started <u>with</u> an appetizer. (with (2(2)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Species): 21; (Exception, Exception): 27; (MeansMedium Instrument:Negative): 7; (Scalar, Scale): 35
V1 SST	

Category 3.4.2.0 - PartPortion	
Definition Analysis	
Functions	
Comment	

Category 3.4.2.1 - Stuff	
Definition	The members comprising a group/ensemble, or the material comprising some unit of substance. Stuff is distinguished from other instances of PartPortion in fully covering (or “summarizing”) the aggregate whole.
History	None
Instances	A clump <u>of</u> sand (of (3(1b))) (+4, 434b-d, 435) A salad <u>with</u> mixed greens (with (5(3a)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Group): 28; (Membership, Species): 21
V1 SST	
Definition Analysis	
Functions	
Comment	Paraphrase test: Whole CONSISTS OF Stuff

Category 3.4.3.0 - OrgMember	
Definition	Individual(s) who are members of an organization, when mentioned in relation to the organization (<code>\psst{Org}</code>).
History	See history note at <code>\psst{Org}</code> .
Instances	the family <u>of</u> Miss Zarves (of (3(1b))) OrgMember ~> PartPortion A piano quintet is a chamber group <u>with</u> a piano (in it) (with (2(2))) OrgMember ~> Stuff An order <u>of</u> nuns (of (3(1b))) A chamber group <u>of</u> 5 players (of (3(1b))) A chamber group <u>with</u> 5 players (with (2(2)))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Membership, Group): 28; (Membership, Species): 21
V1 SST	
Definition Analysis	
Functions	
Comment	

Category 3.4.4.0 - QuantityValue	
Definition	The amount marked as the quantity of something (the QuantityItem).
History	Added in v2.5.
Instances	QuantityValue ~> Locus The deaths numbered <u>in</u> the thousands. (in (6(4a)-1))
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(MeansMedium, Manner): 35
V1 SST	
Definition Analysis	
Functions	

Category 3.4.4.0 - QuantityValue	
<u>Comment</u>	Except for its subtype \psst{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 <u>QuantityItem</u> .

Category 3.4.4.1 - Approximator	
<u>Definition</u>	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.
<u>History</u>	Prior to v2.5, this was under QUANTITY, which in v2.5 was replaced with the dichotomy of <u>QuantityValue</u> and <u>QuantityItem</u> . <u>Approximator</u> was moved under <u>QuantityValue</u> as it applies to prepositions that modify point values to produce approximate or range values.
<u>Instances</u>	We have <u>about</u> 3 eggs left. (adverb) We have <u>in the vicinity of</u> 3 eggs left. (not in PDEP) We have <u>over</u> 3 eggs left. (over (10(3))) We have <u>between</u> 3 and 6 eggs left. (between (3(3))) The lake is <u>around</u> a mile wide. (adverb)
<u>Direct Tags</u>	between (3(3)) (in the interval separating (two points on a scale)) over (10(3)) (higher or more than (a specified number or quantity))
<u>Same SST</u>	betwixt (3(3)) (same as between (3(3))) circa (1(1)) (approximately at, in, or of (a year or other expression of time)) minus (3(2)) ((of temperature) below zero by) o'er (10(3)) (same as over (10(3))) plus (3(2)) ((of temperature) above zero) under (7(3)) (lower than (a specified amount, rate, or norm))
<u>Substitutables</u>	circa (1(1)) (about, around) over (10(3)) ((more than), in excess of) minus (3(2)) ((below)) under (7(3)) (below, underneath)
<u>PDEP Hierarchy</u>	(Scalar, Greater): 36; Scalar (Equivalence): 13
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	Similarly for <i>around</i> , <i>under</i> , <i>more than</i> , <i>less than</i> , <i>greater than</i> , <i>fewer than</i> , <i>at least</i> , and <i>at most</i> . These 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.

Category 3.5.0.0 - Ensemble	
<u>Definition</u>	Entity that another entity is grouped with.
<u>History</u>	Prior to v2.5, a single label, ACCOMPANIER (under <u>Configuration</u>), covered both entity--entity and event--entity relations. In v2.5, ACCOMPANIER was split into <u>Ancillary</u> and <u>Ensemble</u> .
<u>Instances</u>	<u>Ensemble</u> ~> <u>Ancillary</u> rice <u>with</u> beans (with (1(1))) rice <u>without</u> beans (without (1(1))) A smile <u>with</u> a nod was his answer. (with (1(1)))
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Tandem:CoParticipants):22; (Backdrop, Contrasting:Negative): 13

Category 3.5.0.0 - Ensemble	
VI SST	
Definition Analysis	
Functions	
Comment	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 <i>and</i> , but may also be construed via Ancillary adpositions. Ensemble is used for a relation directly between entities, whereas \psst{ Ancillary } describes a relation of an entity to an event/situation.

Category 3.6.0.0 - ComparisonRef	
Definition	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.
History	A separate category INSTEADOF 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 .
Instances	<p>She is taller <u>than</u> me. (than (1(1)))</p> <p>Your face is as red <u>as</u> a rose. (Adverb)</p> <p>Your surname is <u>the same as</u> mine. (An idiom)</p> <p>Harry had never met anyone quite <u>like</u> Luna. (like (2(1a)))</p> <p>I ordered soup <u>instead of</u> salad. (instead of (1(1))) (+2, 471-2)</p> <p>He is short <u>for</u> a basketball player. (for (11(9)))</p> <p>Colbert frequently promotes comedians <u>like</u> himself. (like (1(1)))</p> <p>I don't know anyone else <u>like</u> her. (like (2(1a)))</p> <p>ComparisonRef->Locus</p> <p>Your heart rate is <u>above</u> 100 bpm/normal/mine. (above (9(3)))</p> <p>The price is <u>within</u> my budget. (within (3(1b)))</p> <p>My team is <u>ahead of</u> your team in the tournament. (ahead of (4(n)))</p> <p>I prefer this restaurant <u>over</u> that one. (over (7(2c))) (+1, 473)</p> <p>ComparisonRef->Goal</p> <p>Shall I compare thee <u>to</u> a summer's day? (to (15(7)))</p> <p>Her height is close <u>to</u> mine. (to (15(7)))</p> <p>ComparisonRef->Source}</p> <p>We need to distinguish what is achievable <u>from</u> what is desirable. (from (14(11)))</p> <p>Her height is different <u>from</u> mine. (from (14(11)))</p> <p>ComparisonRef->Ancillary</p> <p>Don't compare me <u>with</u> my sister! (with (9(7)))</p> <p>ComparisonRef->Purpose</p> <p>He is too short <u>for</u> basketball. (+1, 461b) (for (11(9)))</p>
Direct Tags	
Same SST	
Substitutables	
PDEP Hierarchy	(Scalar, Scale): 35; (MeansMedium, Manner): 35; MeansMedium (Instrument:Negative): 16; (Scalar, Greater): 36; (Backdrop, Supplementing): 28; (MeansMedium, Manner:Negative): 16; (Topic, Attention): 32
VI SST	
Definition Analysis	
Functions	
Comment	The marker of the “something else” (the ground in the figure–ground relationship) is given the label ComparisonRef .

Category 3.6.0.0 - InsteadOf (No longer used)	
Definition	A default or already established thing for which something else stands in or is chosen as an alternative.
History	No history and not present in v1.
Instances	I ordered soup <u>instead of</u> salad. (instead of (1(1)) I ordered soup <u>rather than</u> salad. (than (2(2)) <u>Instead of</u> ordering salad, I ordered soup. (instead of (1(1)) The new shirts were <u>gray instead of</u> black. (instead of (1(1))
Direct Tags	instead of (1(1)) (as a substitute or alternative to; in place of) than (2(2)) (used in expressions introducing an exception or contrast) (applies only to “rather than” when it is clearly a preposition, with a noun or gerund complement)
Substitutables	instead of (1(1)): in place of, in lieu of than (2(2)): except for, apart from (not the “rather than” sense)
Same SST	None
V1 SST	Used Comparison/Contrast (had 24 senses, but only “instead of” (1(1)) used this sense, and perhaps “to” (15(7)), “unlike” (2(1a)), and “versus” (2(1a))
Definitions	in place of (1(1)), (2(n)): “instead of” in lieu of (1(1)): “instead of” to (15(7)): “used to introduce the second element in a comparison” unlike (2(1a)): “in contrast to; differently from” versus (2(1a)): “as opposed to; in contrast to”
Functions	
Comment	But when over is used for a scene of liking or preference, see \psst{ComparisonRef}. See also: \psst{Accompanier}, \psst{ComparisonRef}, \psst{Co-Theme}

Category 3.7.0.0 - RateUnit	
Definition	Unit of measure in a rate expression.
History	In v1, this fell under \sst{Value}
Instances	The cost is \$10 <u>per</u> item. (per (1(1))) A fuel efficiency of 40 miles <u>per</u> gallon (of gas), (per (1(1)) Pizza is sold <u>by</u> the slice. (by (13(3a))) They charge <u>by</u> the hour. (by (13(3a)))
Direct Tags	per (1(1)) (for each (used with units to express a rate)) by (13(3a)) (indicating a quantity or amount)
Substitutables	by (13(3a)): in (?)
PDEP Hierarchy	(Scalar, Scale): 35
Same SST	None
V1 SST	Used in VALUE, all instances in STREUSLE were such tagged
Functions	
Comment	

Category 3.8.0.0 - SocialRel	
Definition	Party (individual, group of persons, or institution) with which another party has a stable affiliation.
History	Renamed from v1 label PROFESSIONALASPECT. 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 .

Category 3.8.0.0 - SocialRel	
<u>Instances</u>	<p>SocialRel~>Ancillary I work <u>with</u> Michael. (with (1(1))) Joan has a class <u>with</u> Miss Zarves. (with (14(8a)))</p> <p>SocialRel~>Characteristic } people <u>with</u> children (with (2(2)))</p> <p>SocialRel~>Gestalt Joan is the sister <u>of</u> John. (of (6(3))) Joan is a student <u>of</u> Miss Zarves. (of (6(3))) the rivalry <u>of</u> the teams (of (6(3)))</p> <p>SocialRel~>Whole the rivalry <u>between</u> the teams (between (4(4)))</p> <p>SocialRel~>Locus Joan is studying <u>under</u> Prof. Smith. (under (8(4)))</p> <p>SocialRel~>Goal Joan is married <u>to</u> John. (to (9(4)))</p> <p>SocialRel~>Source Joan is divorced <u>from</u> John. (from (10(7)))</p> <p>SocialRel~>Instrument Joan bought her house <u>through</u> a real estate agent. (through (13(5a)))</p>
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	(Tandem, CoParticipants): 22; (Agent, Indirect): 14; (Membership, Species): 21; (Agent, Involved:Possessor): 8; (Cause, Source): 9; (MeansMedium, Agentive): 3
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	

Template

Category 1.4.0.0 - Means	
<u>Definition</u>	
<u>History</u>	
<u>Instances</u>	
<u>Direct Tags</u>	
<u>Same SST</u>	
<u>Substitutables</u>	
<u>PDEP Hierarchy</u>	
<u>V1 SST</u>	
<u>Definition Analysis</u>	
<u>Functions</u>	
<u>Comment</u>	