

On Grammaticalization of Adpositions: Contrastive and Typological Perspectives*

1. Introduction

- All languages have grammatical devices to encode the relationship among nominal constituents in a sentence, be they structural (such as word order) or morphological (such as inflection) or lexical (such as adpositions).
- This paper explores the manifestations and emergence of adpositions from three different language types, i.e., inflectional, agglutinating and isolating languages, as represented by English, Korean and Thai, respectively.
- Since the focus is on the incipient stage of the development, the data for comparison are taken from complex adpositions, which are largely thought to have grammaticalized to a lesser extent as compared with the simple adpositions.

2. Case and Adpositions

- Case is “a system of marking dependent nouns for the type of relationship they bear to their heads” (Blake 2004: 1).
- Case may be realized by means of inflection, morphological case markers, word order, adpositions, among others.
- Case is among the primitive notions in linguistics.
- The system of case-marking shows considerable variation across languages.
 - No morphological marking for grammatical case: Thai, Chinese
 - Extensive case systems: Sanskrit, Ancient Greek, Latin, Russian
- Even within a specific language, the system exhibits multiple layers of conceptual domains. e.g. even in languages where grammatical cases are not morphologically marked, there are diverse case-related adpositional markers with various semantic specifications.

- (1) 3 domains in case and case-related systems (cf. Lehmann 2004: 1845-1851; Blake 2004, Chs 2 & 3)
- a. Grammatical case (= core case; nuclear case; non-local case): nominative, accusative, dative, genitive, absolutive, ergative
 - b. Local case: ablative (*from*), adessive (*on*), adelative (*from*), allative (*to*), delative (*off*), destinative (*to*), illative (*into*), inessive (*inside*), locative (*at, in*), mediative (*between*), perlativative (*through*), postessive (*behind*), prolativative (*along*), subessive (*under*), superessive (*above*), terminative (*up to*)
 - c. (Non-local) Case: benefactive (*for*), comitative (*with*), directional (*to*), equative (*like*), instrumental (*with*), motivative (*by*), partitive (*of*), referentive (*about*), vocative

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- Grammatical case typically indicates the role of a syntactic argument in the sentence (Sylak-Glassman et al. 2015: 83).
- Local case designates the relationship of two entities in terms of relative positions, such as the English prepositions *from*, *between*, *through*, *behind*, etc. do.
- Case, on the other hand, marks the general relationship of the argument with respect to the referenced event.

3. Simple vs. Complex Adpositions

- Simple adpositions may refer to the adpositions whose composition is formally simple, i.e., those that involve monolexemic or monomorphemic forms.
- Complex adpositions, on the other hand, are those that involve multi-lexemic or multi-morphemic forms.

(2) English

- a. Simple (=primary) preposition: *of*, *in*, *to*, *for*, *at*, *on*, *by*, *by...*
- b. Complex (=secondary) preposition: *according to*, *ahead of*, *as for*, *away from*, *as far as*, *as part of*, *at odds with*, *by means of*, *by virtue of*, *by way of*, *for want of*, *in accordance with*, *in common with*, *in favor of*, *in relation to*, *in view of*, *on behalf of*, *with regard to...*

(3) Korean (Narrog & Rhee 2013)

- a. Simple postposition: *-ey/lo/kkaci* (allative), *-wa/kwa/hako* (comitative), *-pwuthe/eyse* (ablative), *-lo* (instrumental), *-ey/lo* (causative), *-wa/kwa/ey/hako/hamye* (enumerative), *-pota* (comparative), *-mankhum/chelem/kathi* (similiative)...
- b. Complex (=secondary) postposition: *-ul hyanghay* (aditive), *-ey aphse* (antessive), *-ul kalocille* (perlative), *-ul twuko/-ul nohko* (topic)...

- Complex adpositions tend to encode more fine-grained configurational notions as compared to simple adpositions (perhaps of universal validity; cf. Blake 2004: 10).

4. Grammatical Categories in Cognition

- Even though adpositions border on, and often blend into, case markers, thus creating fuzzy functional boundaries, it is observed that languages seem to have a limited set of concepts that they choose to encode with adpositions.
- This suggests that the types of inter-nominal relations are tied to the commonality in human cognition and conceptualization.
- Grammatical cases, such as nominative, accusative, genitive, etc., tend to be unmarked (e.g. English nominative, accusative; Thai nominative, accusative, etc.) or minimally marked (e.g. English dative, Korean nominative, genitive, accusative, dative, etc.).
- Since these notions seem to be fundamental in human conceptualization of events or states of affairs denoted by a clause as they are closely related to the participants of an event, they seem to be grammatical primitives, regardless of their linguistic realization patterns on the level of surface structure.
- If grammatical case is more closely tied to the grammatical structure than adposition, the event-related notions are expected to surface as case rather than adposition.

- Case or non-local case, as opposed to local case, tends to mark diverse relationship in general rather than local relations.
- The members in this category seem to make reference to such binary distinctions as presence/absence, proximity/distance, association/dissociation, similarity/dissimilarity, or to such relationship as accompaniment, cause, benefit, etc. These seem to form primary cognitive categories as well.
- Local case marks the local/positional relationship between two or more referenced entities.
- Local relationship makes reference to axial relationship such as front-back, top-down, left-right, in-out, etc. or to direction, source, path, destination, etc. (These seem to be common notions in conceptualization of positionality of entities occupying space.)
- However, it is noteworthy that there are a large number of complex adpositions whose meaning still bears the lexical meanings of the participating formants. e.g., there are large inventories of complex adpositions across languages.

(4) Simple vs. Complex adpositions

- a total of 215 simple and complex adpositions (1-3 words)
- Total tokens in BNC 13,145,598
- Average frequency 121,158
- *of*: 3,040,523 *to*: 2,593,462 *in*: 1,877,662 *for*: 865,253 *with*: 658,550
- *in gratitude to*: 2 *in testimony of*: 1 *without respect to*: 1
- top 19 prepositions are simple prepositions
- the most frequent 3-word CP ranks 37th (*as well as*)
- the most frequent 3-word PNP CP ranks 53rd (*in terms of*)

(5) English Prepositions by BNC Frequency Ranking

Freq. Rank	Prep	Token	Freq. Rank	Prep	Token
1	of	3,040,523	31	among	22,379
2	to	2,593,462	32	rather than	21,308
3	in	1,877,662	33	across	20,635
4	for	865,253	34	off	20,563
5	with	658,550	35	back to	20,467
6	on	642,673	36	behind	19,056
7	at	521,623	37	as well as	18,245
8	by	508,658	38	because of	17,646
9	from	424,951	39	since	17,475
10	as	220,477	40	until	16,445
11	into	157,563	41	on to	16,107
12	about	146,934	42	according to	15,548
13	like	101,666	43	despite	14,340
14	between	90,191	44	near	13,471
15	after	90,000	45	above	13,165
16	over	73,796	46	outside	11,921
17	through	71,704	47	along	11,796
18	against	55,142	48	as to	11,580

19	under	55,022	49	throughout	11,440
20	out of	47,497	50	away from	11,433
21	within	44,268	51	due to	10,517
22	without	44,189	52	beyond	10,119
23	during	43,450	53	in terms of	10,044
24	before	42,148	54	down	9,253
25	such as	31,822	55	up	7,909
26	up to	28,804	56	instead of	7,042
27	towards	27,235	57	inside	7,030
28	including	22,877	58	close to	6,543
29	upon	22,766	59	apart from	6,404
30	around	22,594	60	past	6,262

(6) English Simple Prepositions (by BNC ranking)

- a total of 64 prepositions
- total tokens: 12,744,558
- average token frequency 199,134
- highest: *of*: 3,040,523 *to*: 2,593,462 *in*: 1,877,662
- lowest: *vis-a-vis*: 218 *atop*: 136 *excepting*: 31

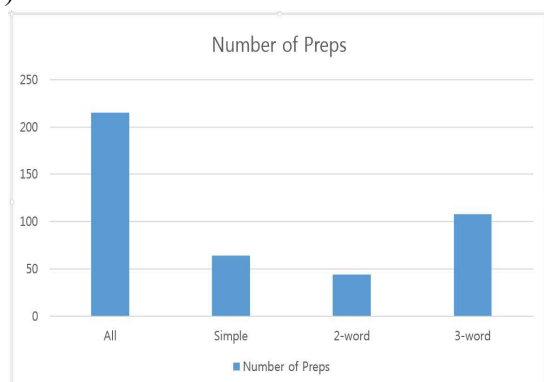
(7) English 2-word Complex Prepositions (by BNC ranking)

- a total of 44 prepositions
- total tokens: 300,645
- average token frequency: 13,362
- highest: *out of*: 47,497 *such as*: 31,822 *up to*: 28,804
- lowest: *save for*: 242 *opposite to*: 180 *subsequent to*: 106

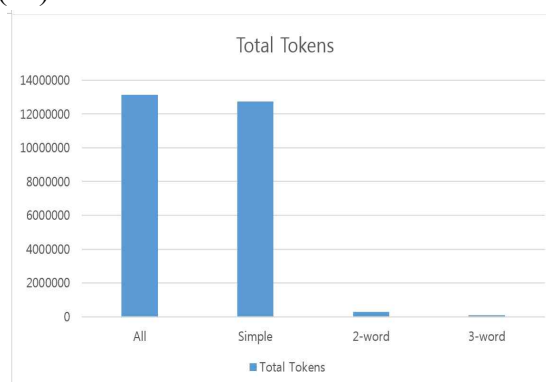
(8) English 3-word Complex Prepositions (by BNC ranking)

- a total of 108 prepositions
- total tokens: 100,395
- average token frequency: 1,842
- highest: *as well as*: 18,245 *in terms of*: 10,044 *in front of*: 6,114
- lowest: *in gratitude to*: 2 *in testimony of*: 1 *without respect to*: 1
- (Klégr's (1997) CP *in precedence to* records 0 hit)

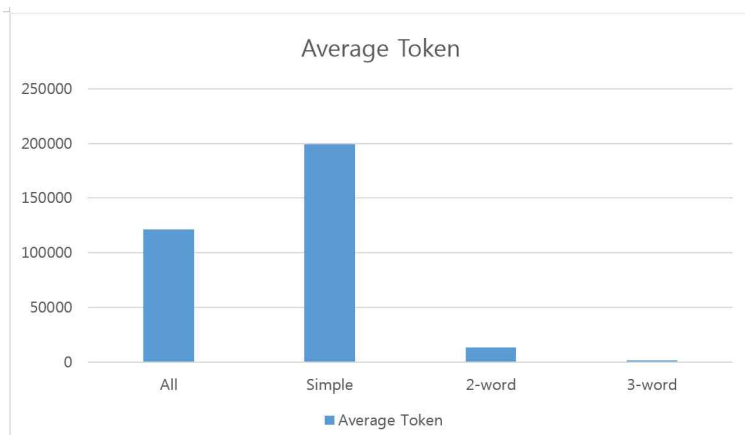
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(10)



(11)



- High frequency principle (Heine 1994)
- Paradigmaticization (Lehmann 1995[1982])
- Parallel Reduction Hypothesis (Bybee et al. 1994)
- Erosion (Heine et al. 1991, Heine & Kuteva 2002) Attrition (Lehmann 1995[1982])

(12) Adversative complex adpositions

- English: *in spite of, contrary to, in face of, up against...*
- Korean: *-eyto pwulkwuhako, -ey panhay...*
- Thai: *máe, máe jà mee, ...*

(13) Substitutive complex adpositions

- English: *instead of, on behalf of, in lieu of...*
- Korean: *(-uy) taysin(ey)*
- Thai: *taen tē, nai naam kǒng, dtàang*

(14) Klégr (1997): 25 Semantic categories for CPs (473 items in English)

Addition/Exclusion, Agreement, Benefit, Cause-Reason, Concession, Condition, Connection, Degree, Detriment, Disagreement-Contrast, Guidance, Identification, Manner, Means-Agency, Originator, Participation-Cooperation, Place, Possession, Purpose-Goal, Range, Replacement, Respect/Disregard, Subject Matter, Support, Time

(15) Klégr (1997): Semantic category ranking (by number of CPs)

- | | | |
|------------------------|--------------------------------|------------------------|
| place (76) | means-agency (19) | concession (8) |
| cause-reason (50) | participation-cooperation (19) | subject matter (7) |
| range (43) | disagreement-contrast (18) | support (7) |
| time (42) | replacement (17) | condition (6) |
| purpose-goal (36) | identification (14) | addition/exclusion (5) |
| respect/disregard (26) | guidance (12) | benefit (5) |
| agreement (23) | | degree (5) |
| manner (21) | | detriment (5) |
| | | connection (4) |
| | | originator (3) |
| | | possession (2) |

(16) Top-30 Frequency PNPs in BNC (Hoffmann 2005) & Klégr's (1997) classification (by ranking)

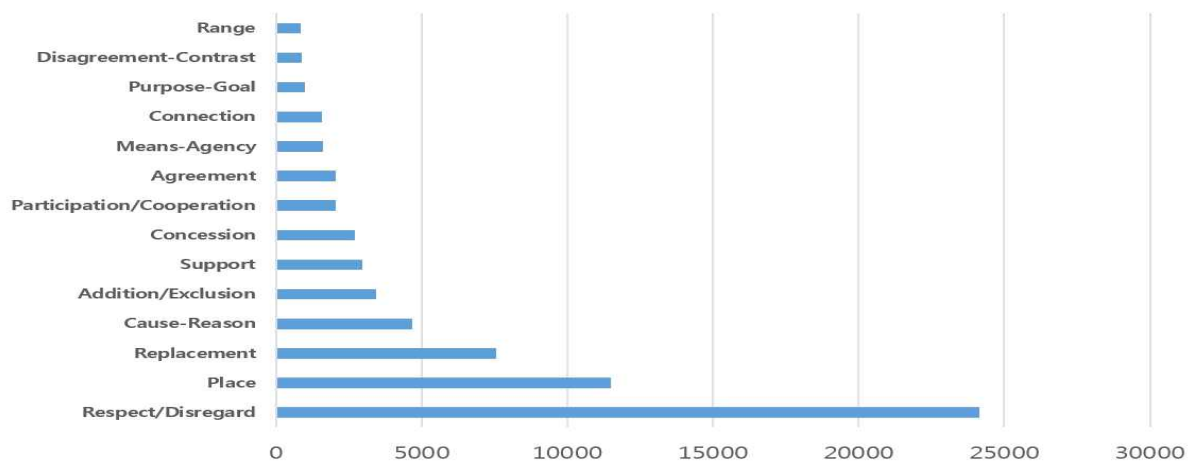
CP	Rank (H)	Freq (BNC)	Classif (K)
in terms of	1	10,060	respect/disregard
in front of	2	6,118	place
in relation to	3	4,668	respect/disregard
in favor of	4	3,528	support
in addition to	5	3,426	addition/exclusion
in respect of	6	2,932	respect/disregard
on behalf of	7	2,713	replacement
in spite of	8	2,703	concession
on top of	9	2,516	place
in accordance with	10	2,032	agreement
in response to	11	2,004	(cause-reason)
with regard to	12	1,656	respect/disregard
in charge of	13	1,630	place
by means of	14	1,617	means-agency
in connection with	15	1,577	connection
in view of	16	1,507	respect/disregard
by way of	17	1,419	replacement
with respect to	18	1,330	respect/disregard
in conjunction with	19	1,267	participation-cooperation
in line with	20	1,241	place
in support of	21	1,083	support
in search of	22	980	purpose-goal
by virtue of	23	953	cause-reason
in return for	24	937	cause-reason
in contrast to	25	877	(disagreement-contrast)
in excess of	26	835	range
in place of	27	775	replacement
in need of	28	774	(cause-reason)
in common with	29	773	participation-cooperation
by reference to	30	660	respect/disregard
Total		64,591	

(17) Top-30 Frequency PNPs in BNC (Hoffmann 2005) & Klégr's (1997) classification (by category)

CP	Rank (H)	Freq (BNC)	Classif (K)
in terms of	1	10,060	respect/disregard
in relation to	3	4,668	respect/disregard
in respect of	6	2,932	respect/disregard
in view of	16	1,507	respect/disregard
with respect to	18	1,330	respect/disregard
with regard to	12	1,656	respect/disregard
with respect to	18	1,330	respect/disregard
by reference to	30	660	respect/disregard
		24,143	
in front of	2	6,118	place
on top of	9	2,516	place
in charge of	13	1,630	place

in line with	20	1,241	place
		11,505	
on behalf of	7	2,713	replacement
by way of	17	1,419	replacement
in place of	27	775	replacement
		7,568	
in response to	11	2,004	(cause-reason)
by virtue of	23	953	cause-reason
in return for	24	937	cause-reason
in need of	28	774	(cause-reason)
		4,668	
in addition to	5	3,426	addition/exclusion
		3,426	
in favor of	4	3,528	support
in support of	21	1,083	support
		2,957	
in spite of	8	2,703	concession
		2,703	
in conjunction with	19	1,267	participation-cooperation
in common with	29	773	participation-cooperation
		2,040	
in accordance with	10	2,032	agreement
		2,032	
by means of	14	1,617	means-agency
		1,617	
in connection with	15	1,577	connection
		1,577	
in search of	22	980	purpose-goal
		980	
in contrast to	25	877	(disagreement-contrast)
		877	
in excess of	26	835	range
		835	
Total		64,591	

(18) Top-30 Frequency PNPs in BNC (Hoffmann 2005) & Klégr's (1997) classification (by category)



(19) Relative Primacy (by frequency) between Oppositional Concepts among CPs

Addition vs. Exclusion	Addition (3)	in addition to, on top of, with the addition of 6,122
	Exclusion (3)	with the exception of, with the exclusion of 775
Agreement vs. Disagreement-Contrast	Agreement (21)	in accord with, in accordance with, in agreement with, in compliance with, in concordance with, in conformity with, in correspondence with, in dependence on, in harmony with, in keeping with, in line with, in obedience to, on a par with, all of a piece with, in proportion to, in step with, in sync with, in tune with, in unison with, in unity with, within a mile of 4,923
	Disagreement-Contrast (23)	out of line with, out of lockstep with, out of alignment with, against the background of, by comparison with, in comparison with, in conflict with, in contradiction to, in contradistinction to, in contrast with, in contravention of, in disagreement with, out of keeping with, at odds with, at odds over, in opposition to, out of proportion to, out of all proportion to, at cross purposes with, out of step with, out of sync with, out of tune with, at variance with 2,155
Respect vs. Disregard	Respect (25)	on the character of, in consideration of, in contemplation of, in the eyes of, in freedom of, in light of, in the light of, in the matter of, from the point of view of, in point of, in the question of, in questions of, with reference to, without reference to, in regard to, with regard to, in relation to, in relation with, in respect of, in respect to, with respect to, in the sight of, from the standpoint of, in terms of, in view of, from the viewpoint of
	Disregard (4)	in contempt of, in disregard of, without regard to, without respect to
Cause-Reason vs. Concession	Cause-Reason (60)	on account of, in acknowledgement of, in anticipation of, at the behest of, by benefit of, with benefit of, at the command of, as a consequence of, in consequence of, in consideration of, out of consideration for, by courtesy of, out of courtesy to, in default of, in deference to, out of deference to, by dint of, for dint of, in expectation of, in gratitude for, in gratitude to, on the ground of, on the grounds of, on grounds of, at the instance of, for lack of, in light of, in the light of, on the pretext of, under the pretext of, in protest against, in punishment of, as a reason for, by reason of, in reaction to, in recognition of, in recompense for, in recompense of, at the request of, out of respect for, out of respect to, as a result of, in retaliation for, in retribution for, in return for, at the reverence of, as a reward for, by right of, on the score of, out of a sense of, at the suggestion of, out of sympathy for, under threat of, under the threat of, in token of, by virtue of, in virtue of, for want of, from want of, at the whim of, at the wish of
	Concession (9)	at the cost of, in defiance of, in despite of, in face of, in the face of, on peril of, at the risk of, in spite of, in the teeth of
Benefit-Support vs. Detriment	Benefit-Support (14)	for the advantage of, for the benefit of, without detriment to, in the interests of, in the service of, in aid of, on behalf of, in behalf of, for behalf of, in favour of, in the name of, on the side of, in support of, in sympathy with
	Detriment (5)	at the cost of, to the detriment of, to the exclusion of, at the expense of, at the sacrifice of

5. Typological Issues

- Despite commonalities across languages, there exist clear differences depending on their typological characteristics.
- Clearly, languages exhibit preference of one over the other in terms of prepositional vs. postpositional systems.
- Furthermore, isolating languages, such as Thai and Chinese, make it very difficult to delineate the prepositions from their lexical uses, since they tend to retain syntactic and semantic characteristics throughout their development.
- In Thai, for example, a number of prepositions originated from the primary word classes such as verbs and nouns, and they still function in their source categories:

- (20) a. *aw* ‘take’ > with, take
b. *càak* ‘leave’ > from, leave
c. *hây* ‘give’ > for, give
d. *taam* ‘follow’ > along, follow
- (21) a. *khâaŋ* ‘side’ > by, side
b. *klaaŋ* ‘middle’ > in the middle of, middle
c. *lǎŋ* ‘back of body’ > behind, back of body
d. *nâa* ‘face’ > in front of, face
e. *nay* ‘inside’ > in, inside
f. *thaŋ* ‘passage’ > by way of, passage
g. *thîi* ‘place’ > at, place
h. *thěw* ‘line’ > around, line
i. *dtâang* ‘shoulder-pole’ > instead of, shoulder-pole

6. Summary & Conclusion

- Drawing upon the data from three different languages, this paper analyzes the case and adpositional systems.
- It is argued that there are commonalities in terms of the type of the notions signaled by case and adpositions, largely due to the commonalities of human cognition.
- It also argues that there are differences in their developmental processes and in their surface manifestations, especially due to their typological differences.
- For a better understanding of the emergence of adpositions, a more detailed investigation of the diachronic trajectories of the complex adpositions is called for.

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Appendices

A. List of English Prepositions (cf. Klegr 1997 for CP-PNP/PDNP list)

English Simple Prepositions: (67)

aboard, about, above, abreast, abroad, across, after, against, along, alongside, amid, amidst, among, amongst, around, as, at, atop, before, behind, below, beneath, beside, besides, between, beyond, but, by, despite, down, during, except, excepting, for, from, in, including, inside, into, like, near, notwithstanding, of, off, on, onto, outside, over, past, since, than, through, throughout, till, to, toward, towards, under, underneath, unlike, until, up, upon, vis-à-vis, with, within, without

English 2-word Complex Prepositions: (44)

according to, adjacent to, ahead of, along with, apart from, as for, as of, as to, aside from, away from, back to, because of, close to, contrary to, depending on, due to, except for, far from, in between, inside of, instead of, left of, near to, next to, on board, on to, opposite of, opposite to, out of, outside of, owing to, prior to, pursuant to, rather than, regardless of, right of, save for, subsequent to, such as, thanks to, together with, up against, up to, up until

English 3-word Complex Prepositions: (2)

as opposed to, as well as

English 3-word Complex Prepositions (PNP): (106 (107))

as part of, at odds with, at variance with, by analogy with, by courtesy of, by dint of, by means of, by reason of, by reference to, by use of, by virtue of, by way of, en route to, for lack of, for want of, in accordance with, in acknowledgment of, in addition to, in advance of, in agreement with, in alliance with, in anticipation of, in association with, in back of, in case of, in charge of, in collaboration with, in combination with, in common with, in company with, in comparison with, in compliance with, in conflict with, in conformity with, in conjunction with, in connection with, in consideration of, in contact with, in contempt of, in contrast to, in contrast with, in cooperation with, in defence of, in deference to, in defiance of, in disagreement with, in disregard of, in excess of, in face of, in favor of, in front of, in gratitude to, in harmony with, in honor of, in lieu of, in light of, in line with, in memory of, in need of, in obedience to, in observance of, in opposition to, in parallel with, in place of, in praise of, in precedence to, in preference to, in preparation for, in process of, in proportion to, in provision for, in pursuit of, in reaction to, in recognition of, in relation to, in relation with, in reference to, in respect of, in respect to, in response to, in retaliation for, in return for, in search of, in spite of, in substitution for, in support of, in sympathy for, in sympathy with, in terms of, in testimony of, in times of, in token of, in tune with, in view of, on account of, on behalf of, on board of, on top of, (out of sight of), with reference to, with regard to, with relation to, with respect to, within reach of, within sight of, without regard to, without respect to

English 4-word Complex Prepositions (PDNP)

along the side of, as a replacement for, as a result of, as a substitute for, as an alternative to, at the back of, at the base of, at the behest of, at the bottom of, at the conclusion of, at the cost of, at the discretion of, at the expense of, at the foot of, at the hands of, at the helm of, at the sacrifice of, at the time of, at the top of, at the turn of, beyond the bounds of, beyond the limits of, beyond the reach of, beyond the scope of, by the side of, during the period of, for a period of, for the advantage of, for the benefit of, for the duration of, for the purpose of, for the sake of, from the standpoint of, from the viewpoint of, in the act of, in the aftermath of, in the age of, in the back of, in the case of, in the company of, in the context of, in the course of, in the era of, in the eyes of, in the event of, in the face of, in the hands of, in the heart of, in the heat of, in the light of, in the middle of, in the midst of, in the name of, in the order of, in the place of, in the presence of, in process of, in the sight of, in the sphere of, in the teeth of, in the vicinity of, in the wake of, on a point of, on a scale of, on the back of, on the basis of, on the brink of, on the edge of, on the ground of, on the issue of, on the occasion of, on the part of, on the point of, on the premises of, on the question of, on the side of, on the subject of, on the theme of, on the topic of, on the verge of, on the way to, throughout the course of, to the detriment of, to the extent of, to the point of, to the verge of, under the auspices of, under the condition of, under the eyes of, under the patronage of, under the supervision of, with a view to, with an eye to, with the aim of, with the exception of, with the exclusion of, with the help of, with the intention of, with the purpose of, within a period of, within a radius of, within the bounds of, within the range of, within the realm of, within the scope of, within the verge of

B. Case & Adposition (cf. Lehmann 2004, Fuchs & Robert 1999, Blake 2004)

abessive: (lack/absence) without

ablative: off

absolutive: (subject/object)

accusative: (object)

addirective: (in the direction of)

adelative: (movement from)

adessive: (present) on, nearby

aditive: to

allative: onto, to

antessive: before

apudessive: next to

associative: next to

benefactive: for

caritive (lack/absence) without

comitative (accompaniment): together with

dative: to

delative: (off a surface) off, from, down from

designative: (object)

destinative: to

directional: towards

distributive: per, each

elative: out of

equative: as, like

ergative: (subject)

genitive: of

illative: into

inelative: out of

inessive: (location) in, at, during

instrumental: with

lative: (motion to) to, into, to from via

locative: (location) in, on, at, by
mediative: between
motivative: (cause) by
nominative: (subject)
oblique: (object)
orientative: (oriented towards)
partitive: (some of x) of
pegative: (agent of giving)
perlative: through, across
postdirective: towards
postrelative: from
postessive: behind
privative: (lack/absence) without
prolative: by way of, along
propriative: (having) with

referentive: about
revertive: (going backwards to another)
subdirective: (cause)
subrelative: from below, from under
subessive: below, under
sublative: to under
superdirective: onto
superrelative: off, from above
superessive: above, on
superlative: to above
terminative: up to
transformative: (becoming) as, into
translative: across
vocative: (calling)