

On the history and speciation of localism

Jean-Michel Fortis
Université Paris Diderot
Research Unit “Histoire des Théories Linguistiques”

Language Culture and Mind – june 28 2012
CECC - Universidade Católica Portuguesa
Lisbon

What is localism?

Localism is “the hypothesis that spatial expressions are more basic, grammatically and semantically, than various kinds of non spatial expressions (...). Spatial expressions are linguistically more basic, according to the localists, in that they serve as structural templates, as it were, for other expressions ; and the reason why this should be so, it is plausibly suggested by psychologists, is that spatial organization is of central importance in human cognition” (Lyons 1977: 718).

- Linguistic aspect (semiogenetic)
- Cognitive aspect
- “more basic”: there is an asymmetry in lexicalization / grammaticalization (doesn't mean all relations are originally spatial)
- In addition, localism may concern semantic analysis: spatial relations are considered to be of central importance in analyzing the meaning of a lexical / grammatical item.

When did localism appear? (1)

Traditional view (Hjelmslev 1935 etc.): localism can be traced back to Byzantine grammarians, notably **Maximus Planudes** (c.1260-c.1310).

‘whence ?’ > genitive

‘where ?’ > dative

‘whither ?’ > accusative

When did localism appear? (2)

Problems:

Chanet (1985): Planudes is in fact trying to find a “natural” motivation for the conventional order of cases in Greek grammars.

Planudes has no historical role in the advent of modern localism (he is rediscovered quite late, by (?) Karl Ernst August Schmidt 1847, 1859). Schmidt is the source of Hübschmann (1875).

When did localism appear? (3)

Transitivity has been analyzed in physicalist terms. For ex. ap. Apollonius Dyscoles, 2nd cent. AD:

- Apollonius (III, 395, 12, p.254) :

ἡ ἐνέργεια ὡς πρὸς ὑποκείμενόν τι διαβιβάζεται, ὡς τὸ τέμνει, τύπτει
(‘activity undergoes a transition to an object, like in *he cuts / hits*’)

This “physicalist” view is applied in part. to V of perception.

- Cf. also Byzantine grammarians and modist grammar.

The real emergence of localism

I suggest that localism gains a real foothold in a context where the following conditions are met, i.e. **in the 17th century**:

- 1. Space has a special status in epistemology and culture at large.
- 2. For an analysis of linguistic forms in terms of spatial relations to be pursued at all, this analysis must be considered worthwhile. An important justification is that language provides a window on the mind.
- 3. Since “spatial” markers have other meanings, it must make sense to regard space as more important than other aspects.
- 4 . Markers with a supposedly spatial meaning are studied for their own sake.

Condition 1 : the status of space

- The 17th century witnesses a revival of atomistic philosophy.
- E.g. in Boyle's account substantial forms are redescribed as modifications of size, shape, motion and texture (spatial arrangement) of the corpuscles.
- Descartes describes the essence of bodies as "extension".
- Cf. also controversies on the existence of void, and the Leibniz-Newton dispute on the existence of absolute space.

Condition 2 : language as a window on the mind

Empiricism favors some forms of nominalism.

Extreme form in Hobbes: only words are universal, and truth being about universals, true and false are attributes of speech (this scandalized many).

Context of “misoglossy” (but which reflects a trust in the power of language), gap between real / nominal essence.

Locke’s empiricist views will be turned into a theory on *the **semiotic** genesis of thought* by Condillac (a move of great importance, cf. Aarsleff 1982, 1983).

Condition 2 : language as a window on the mind

Other factors:

The demise of ancient logic, which results from flaws inherent in ancient logic (because it fails to capture some modes of reasoning in natural language and in science), and the consequent interest in reasoning conducted in natural language (esp. during the 18th; Auroux 1995)

A constant interest for linguistic (and ethnological) diversity (“grammatisation” of vernacular languages *and* of languages in the sphere of influence of European imperialism explodes during the 16th, e.g. 4 grammars of Nahuatl published in 80 years betw. 1595 and 1673; Auroux 1992)

Condition 3 : space is an important aspect of meaning

- More generally, the importance devolved to space fits in an empiricist epistemology: “...we should find, in all Languages, the Names which stand for things that fall not under our Senses, to have had their first rise from sensible Ideas...” (Locke, ECHU, II.i.x, §103)
- This requires a way to go from space to other dimensions: metaphors (Clauberg, Lamy, Leibniz; Formigari 1988).

Condition 4 : cases and prep. studied for their own sake

Semantic analyses are favored by the fact that contextual descriptions of relators (e.g. appealing to verb classes, or describing the abl. as a prepositional case) progressively give way (in the 18th) to descriptions singling out prepositions and cases as bearers of meaning in their own right (Colombat 1981).

Wüllner (1827) will analyze *tinós* in *akoúein tinós* ‘hear sth_{GEN}’ not as dependent on a perception V (like Apollonius), but as an instance of one acception of the genitive (‘receptive’).

Consequence: language as evidence for the primacy of sensible ideas, and application to “particles”

Leibniz claims that “languages are the best mirror of the human mind, and that an exact analysis of the signification of words would give insight into the operations of the understanding better than any other means.” (NE III.vii.6)

Hence also the interest in etymology.

Cf. Turgot: etymology as a branch of “*métaphysique expérimentale*”.

Cf. Horne Tooke (a nominalist) in England and his *ΕΠΕΑ ΠΤΕΡΟΕΝΤΑ* or, *the Diversions of Purley* (1786-1805; Aarsleff 1983).

Consequence: language as evidence for the primacy of sensible ideas, and application to “particles”

Leibniz both corrects Locke and vindicates Locke’s empiricism by taking up the challenge of particles (“not truly the names of Ideas”), i.e. he seeks a cognitive justification for them. Instead of conjunctions (like *but*), he turns to prepositions and says:

“Circa praepositiones observandum videtur omnes in nostris linguis usitatis **originarie significare respectum ad situm**, et inde transferri tropo quodam ad notiones quasdam metaphysicas minus imaginationi subjectas.”

Leibniz, *De Lingua Philosophica*, 1687-8

However, Leibniz is not an empiricist!

Consequence: language as evidence for the primacy of sensible ideas, and application to “particles”

In his *De Lingua Philosophica* (c. 1687), Leibniz analyzes prep. by resorting to topological and part / whole relations, rest and motion, presence of one or 2 landmarks (e.g. avec *cis* : B cis C = B inter me et C), fictive motion (for *per*, as in *diametrum transire per circum*, p. 892-3), gravity and conatus (pour *infra / supra*), projection of the human face (*anterior* part of a house, p.893)

Metaphorization explains how non-physical notions can be apprehended in physical terms.

Expansion of localism

Harris, in his *Hermes* (1765, foundations for a universal grammar), draws a parallel between prepositions (including prefixes, as in *foretell*, *overact*, *undervalue* ; p.271) and cases.

The primary meaning of prepositions is spatial :

“But though the original use of Prepositions was to denote *the Relations of Place*, they could not be confined to this Office only. They by degrees extended themselves to Subjects *incorporeal*, and came to denote Relations, as well *intellectual* as *local*. Thus, because in Place he, who is *above*, has commonly the advantage over him, who is *below*, hence we transfer OVER and UNDER to Dominion and Obedience.” (Hermes, p.268)

Expansion of localism

Like Harris, Condillac (1765, vol. II, chap. 13) claims that the primary meaning of prep. is spatial.

➤ Localism is an empiricist view adaptable to all frameworks: UG, like Harris', empiricist, nominalist and “rationalist” theories.

The German context

Empiricism and importance of Kant's ideas, esp. ***Anschauung*** 'intuition' as mediating the understanding of concepts through experience in space and time.

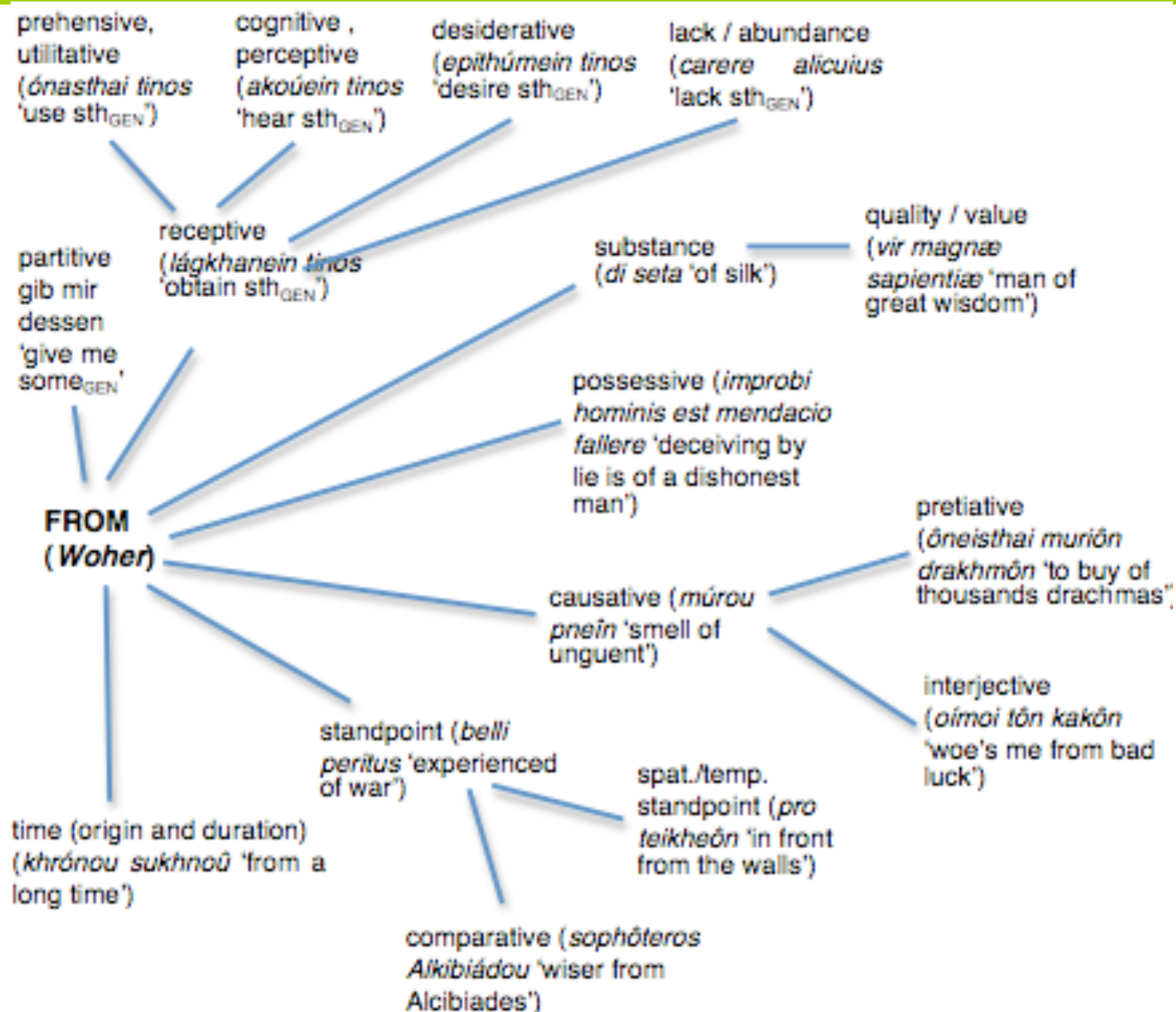
After Kant, an empiricist movement contests (but also situates itself with respect to) Kant's philosophy (Formigari 1994). Emphasis on the role of the body, on "natural" categories, on linguistic cognition etc. Cf. Herder's *Metakritik* and his "phenomenology" of concepts (*Sein, Dasein* > *Raum, Dauer* > *Zeit, Kraft*).

During the 19th, space becomes a *major* concern of the theory of cognition: spatial perception involves physics, physiology and psychology (Hatfield 1990). Cf. the Helmholtz – Hering controversy on nativism.

A localist theory of case: Wüllner (1827)

The basic meanings (*Grundbedeutungen*) of the genitive, accusative and dative cases are spatial intuitions (*Anschauungen*), resp. of a starting point (*woher* 'where from'), of a goal (*wohin* 'where to') and a localization (*wo* 'where').

The acceptations of a case are derived from the basic meaning, just like in a radiating network.



Diachrony and generalized localism: Wüllner (1831)

Wüllner is a student of Bopp.

Bopp had shown that some endings of Sanskrit, Latin and Greek declensions came from demonstratives or prepositions with an “originally” spatial meaning, and that at least some prepositions were closely related to demonstratives (Bopp 1826).

Similarly, in W.'s theory, substantives and adjectives are hypothesized to have pronominal (and ultimately, demonstrative) endings, on the ground that pronouns serve to anchor a referent in space (1831: 272-3; many data from Sanskrit).

Another localist: Hartung

Hartung (1831) *Über die Casus. Ihre Bildung und Bedeutung in der Griechischen und Lateinischen Sprache*. Independent from Wüllner.

Gen.	Acc.	Inst.	Abl.	Dat.
source	goal	location	base	direction

(Hartung's vocabulary is organicist, vitalist; cf. also influence of Naturphilosophie ap. Michelsen, 1843, *Philosophie der Grammatik unter steter Leitung der Geschichte I. Kasuslehre der lateinischen Sprache vom kausal-lokalen Standpunkte aus*)

Problems with localism

Localism faces problems (Rumpel 1845, 1866; Curtius 1864):

- it has nothing to say about the nominative, the case of the subject. Yet, the *subject-predicate* structure is the most important cognitive fact.
- the derived meanings are too specific (confusion between the *materiale Bedeutung* of the context with the meaning of grammatical forms).
- the genitive is strongly associated with nominal determination, and its spatial uses seem to be marginal at best.
- the accusative is generally not replaced by a prep.

Semi-localism

Ahrens (1852) first.

Holzweissig (1877), *Wahrheit und Irrthum der localistischen Casustheorie*

Grammatical cases	Local cases (Sanskrit)
nominative	dative (Wohin)
vocative	ablative (Woher)
accusative	locative (Wo)
genitive	instrumental-sociative (Womit)

In Latin and Greek, cases are redistributed or merged. E.g. dative (or ablative), after having absorbed the locative case, came to be associated with stasis, while the meaning of the accusative was extended to goals (i.e. in an “antilocalist” direction). Discovery of syncretism!

Semi-localism and semi-experientialism

Psychologism revives localism, or better, experientialism, cf. also Delbrück 1901 and Wundt 1912³: in his *Völkerpsychologie*:

Internal determination	External determination
Nom.	Abl.
Voc.	Loc.
Acc.	Instr.-Soc.
Gen.	Prosecutive ('along')
Dat.	Caritive ...

Internal det.: equiv. to position / composition (*Vaterhaus*), last to disappear, limited in number, no semantic gap if missing ≠ external determination.

The posterity of case (semi-)localism

Hjelmslev (1935-7), *La catégorie des cas*, surveys localist theories, backs up Planudes and Wüllner, and endorses a localist approach.

Kuryłowicz (1949, 1964): cases are grammatical *and* concrete (except nom. / voc.), N is grammatical, Ac / Gen are primarily grammatical and I / L / Ab are primarily concrete. *All* obl. cases may have been originally spatial (1964).

The posterity of case localism

Case localism is revived by Anderson (1971).

4 “deep” cases: nominative, ergative, locative, ablative; “deep” case ≠ surface case, e.g. some surface nominatives are analyzed as deep locatives:

In many people know part of the truth, many people is a deep locative.

Close to Fillmore’s case grammar in spirit, and influenced by transformational grammar.

Influence on cognitive linguistics? (Langacker, in a review of Anderson, says he is “basically sympathetic” to localism).

Cassirer's localism

Cassirer (1953, *Philosophie der symbolischen Formen*, neokantism) suggests that linguistic localism is one mode of apprehension of space (beside mythical thought or mathematical conceptions).

Seems to hold an **evolutionary** view: some languages are more “concrete” (those of “primitive people”), all represent a step toward the construction of abstract relations.

Localism before cognitive linguistics: Gruber

Gruber (1965): “deep” roles Source / Theme / Goal

He notes that “positional” notions carry over to “identificational”, “possessional”, “class-membership” or communicational contexts:

the coach turned into a pumpkin (identificational), *John gave a book to Bill* (possessional), *John translated the letter from Russian to English* (class membership), *John reported to Mary that...* (1965: 47s).

This is called *abstract motion*.

Localism and cognitive (?) linguistics: Jackendoff

Jackendoff (1976) borrows Gruber's ideas and develops a basic system of primitives which is partly localist (BE, GO, STAY, CAUSE, LET) and further developed in other writings.

“In any semantic field of [EVENTS] and [STATES], the principal event-, state-, path- and place-functions are a subset of those used for the analysis of spatial location and motion” (*Semantics and Cognition* 1983: 188).

Ex. field: Possession

BE_{POSS} AT_{POSS} = ‘belong to’

GO_{POSS} TO_{POSS} = ‘receive’

CAUSE STAY_{POSS} AT_{POSS} = ‘keep’ etc.

Localism and pre-cognitive linguistics: Talmy

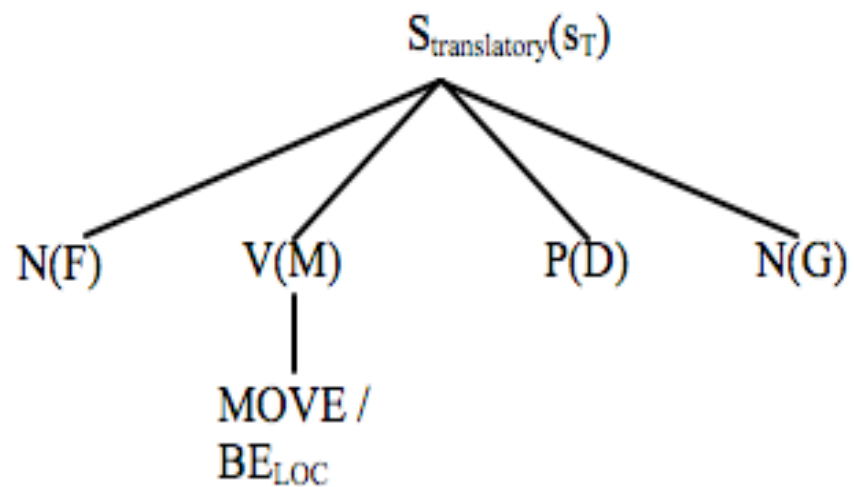
Talmy (1972) compares the structure of English with a polysynthetic language of California, Atsugewi (he is facing the same prob. as Chafe with Onondaga: the TG of *Aspects* is not adapted; Fortis 2011).

Argues that both languages share a common deep structure.

Talmy's deep structure is the representation of a *translatory situation*.

A *translatory situation* (an event in which a Figure moves along a path or is in a spatial relation to a Ground) is analyzed into a fixed structure (*translatory structure*) of 4 components :

Figure, Motive , Directional , Ground.

**COMPONENTS :**

F : Figure

M : Motive

D : Directional

G : Ground

Localism and cognitive linguistics: Talmy

What is distinctly localist in Talmy's framework is that it is applied to non-spatial situations, esp. temporal and causative contexts (surface structures are derived via a process of *conflation* // pred. raising in Generative Semantics, and via adjunctions of "peripheral" semantic components).

"Situations that involve state and change of state seem to be organized by the human mind in such a way that they can be specified by structures homologous with motion structures" (Talmy 1975, p.234).

Localism and cognitive linguistics: Langacker

Langacker's *Space Grammar* (= incipient Cogn. Gram.) reflects a drift from Langacker's own version of generative semantics.

At one point, Langacker's generative trees (akin to what was found in generative semantics) give way to a stratal representation which is regarded as *iconic* (strata, as it were, isomorphic to conceptualization); second, Langacker offers a spatial representation of modal auxiliaries, tenses and modalities (Langacker 1978, 1979; Fortis 2010b).

A different type of localism, where the relation between diagrammatic *notation* and *cognitive* localism is not explicit (or so it seems).

Localism and cognitive linguistics: semantics

Reawakening of lexical semantics in Am. linguistics, favored by the importation of aspects of Rosch's prototype theory into linguistics (first by Lakoff 1973 on hedges; Fortis 2010a).

Among the first studies, two on prepositions / particles: Brugman (1981) on *over* and Lindner (1981) on *up* / *out* (but see Bennett 1975 on Eng. prep. in a stratificational framework and Miller & Johnson-Laird 1976, on the interface lang. / perception).

Why is space so important in cognitive linguistics?

Convergence of localism / metaphorization with diachronic studies / grammaticalization research (e.g. Claudi & Heine 1986, Heine 1997, Fagard 2010)

Interconnections built around the core of an empiricist semiotics: semantics / metaphors / diachrony / mental spaces and blending / embodiment.

By way of conclusion: a typology of localisms

- **Cognitive localism** (ambiguous: relations are conceptualized in spatial terms, or relations take their origin in spatial conceptualization)
- **Semiogenetic localism**: on lexicalization (can be accepted without subscribing to cognitive localism; cf. Marty 1910, *Die “logische”, “lokalistische” und andere Kasustheorien*)
- **Semantic localism**: on basic or “prototypical” meanings
- **Evolutionary localism** (not clearly connected with lexical localism in Cassirer, coexists with a form of cognitive localism)
- **Diagrammatic localism** (e.g. Langacker)

THANK YOU !

References

- Aarsleff, Hans, 1982, *From Locke to Saussure*, Minneapolis, University of Minnesota Press.
- Aarsleff, Hans, 1983, *The study of language in England (1780-1860)*, Minneapolis / London, University of Minnesota Press / The Athlone Press.
- Anderson, John M., 1971, *The grammar of case: Towards a localistic theory*. London, Cambridge University Press.
- Anderson, John M., 1973, « Maximi Planudis in memoriam », *Generative grammar in Europe*, F. Kiefer & N. Ruwet (eds), Dordrecht, Reidel, p.20-47.
- Auroux, Sylvain, 1983, *La logique des idées*, Paris, Bellarmin / Vrin.
- Auroux, Sylvain (dir.), 1992, *Histoire des idées linguistiques*, tome 2, Bruxelles, Mardaga.
- Bopp, Franz, 1826, « Vergleichende Zergliederung des Sanskrits und der mit ihm verwandten Sprachen. III. Demonstrativum und Casuszeichen », *Abhandlungen der Berliner Akademie, Philologisch-Historische Klasse*, p.65-102.
- Bopp, Franz, 1865 [1833], *Grammaire comparée des langues indo-européennes comprenant le sanscrit, le zend, l'arménien, le grec, le latin, le lithuanien, l'ancien slave, le gothique et l'allemand*, trad. par Michel Bréal, Paris, L. Hachette et Cie.
- Brugman, Claudia, 1981, *Story of Over*. M.A. Thesis, University of California, Berkeley.
- Cassirer, Ernst 1953, *Philosophie der symbolischen Formen*, Yale University Press.
- Chanet, Anne-Marie, 1985, « Maxime Planude, localiste? », *Histoire Epistémologie Langage*, n°7(1), p.127-148.

References

- Claudi, Ulrike & Heine, Bernd, 1986, « On the metaphorical basis of grammar », *Studies in Language* 10(2), 297-335.
- Colombat, Bernard, 1981, « Préposition, cas et syntaxe latine dans l'Encyclopédie », 3(2), 3-20.
- Colombat, Bernard, 2009, « Les fondements sémantiques de la transitivité : A la recherche de la personne ». In Evrard, Ivan, Pierrard, Michel, Rosier, Laurence & Van Raemdonck (2009) *Représentations du sens linguistique 3. Actes du Colloque international RSL III* (Bruxelles, 3-5 novembre 2005), Bruxelles, De Boeck-Duculot, 285-318.
- Condillac, Etienne Bonnot de, 1765, *Cours d'étude pour l'instruction du prince de Parme. Grammaire*, Parme, Imprimerie Royale.
- Curtius, Georg, 1864, « Über die localistische Auffassung der Casus », *Verhandlungen der einundzwanzigsten Versammlung Deutscher Philologen und Schulmänner*, 30. September-2. October 1863, Leipzig, Teubner, 45-50.
- Delbrück Berthold, 1897-1916, *Vergleichende Syntax der indogermanischen Sprachen* (= Brugmann Karl & Delbrück Berthold, *Grundriß der vergleichenden Grammatik der indogermanischen Sprachen*, III), Straßburg, Trubner.
- Delbrück, Berthold, 1901, *Grundfragen der Sprachforschung*, Strasbourg, Verlag von Karl J. Trübner.

References

- Döleke, Wilhelm Heinrich, 1814, *Versuche philosophisch-grammatischer Bemerkungen II. Über die Casus, die Tempora, das Pronomen und das Verbum Substantivum*. Leipzig, Joh. Ambrosius Barth.
- Fagard, Benjamin, 2010, *Espace et grammaticalisation. L'évolution sémantique es prépositions dans les langues romanes*, Sarrebruck, Editions Universitaires Européennes.
- Formigari, Lia, 1988, *Language and Experience in 17th Century British Philosophy*, Amsterdam / Philadelphia, John Benjamins.
- Formigari, Lia, 1994, *La sémiotique empiriste face au kantisme*, Bruxelles, Mardaga.
- Fortis, Jean-Michel, 2010a, « De l'hypothèse de Sapir-Whorf au prototype: sources et genèse de la théorie d'Eleanor Rosch », Revue en ligne *Corela*, 8(2).
- Fortis, Jean-Michel, 2010b, « De la grammaire générative à la Grammaire Cognitive: Origines et formation de la théorie de Ronald Langacker », *Histoire Epistémologie Langage* 32(2), 109-49.
- Gruber, Jeffrey S., 1965, *Studies in lexical semantics*, MIT Working Papers in Linguistics.
- Harris, James, 1765, *Hermes or a philosophical inquiry concerning universal grammar*, London, John Nourse & Paul Vaillant.
- Heine, Bernd, 1997, *Cognitive foundations of grammar*, Oxford, Oxford University Press.

References

- Hartung, Johann Adam, 1831, *Über die Casus, ihre Bildung und Bedeutung in der griechischen und lateinischen Sprache*, Erlangen, Palm und Enke.
- Hjelmslev, Louis, 1972 [1935-7], *La catégorie des cas*, Copenhagen, Universitetsforlaget I Aarhus [reprint *La catégorie des cas*, München, Wilhelm Fink Verlag, 1972].
- Holzweissig, Friedrich W., 1877, *Wahrheit und Irrthum der localistischen Casustheorie*, Leipzig, Teubner.
- Hübschmann, Heinrich, 1875, *Zur Casuslehre*, München, Theodor Ackermann.
- Humboldt, Wilhelm von, 1830, *Über die Verwandtschaft der Ortsadverbien mit dem Pronomen in einigen Sprachen*, Berlin, Druckerei der Königlichen Akademie der Wissenschaften.
- Jackendoff, Ray, 1976, « Toward an explanatory semantic representation », *Linguistic Inquiry* 7(1), p.89-150.
- Jackendoff, Ray, 1983, *Semantics and cognition*, Cambridge (Mass.), MIT Press.
- Kuryłowicz, Jerzy, 1949, « Le problème du classement des cas », *Bulletin de la Société polonaise de Linguistique* 9, 20-43.
- Kuryłowicz, Jerzy, 1964, *The inflectional categories of Indo-European*, Heidelberg, Carl Winter.
- Lakoff, George, 1973, Hedges : A study in meaning criteria and the logic of fuzzy concepts, *Journal of Philosophical Logic* 2 : 458-508.

References

- Langacker, Ronald W., 1978, « The form and meaning of the English auxiliary », *Language* 54, 853-882.
- Langacker, Ronald W., 1979, « Grammar as image », *Linguistic Notes from La Jolla*, La Jolla, Cal., 6, 87-126.
- Leibniz, Gottfried Wilhelm, 1923- [1685-1686], « Analysis particularum », *Sämtliche Schriften und Briefe*, Deutsche Akademie der Wissenschaften zu Berlin, Darmstadt, VI 4, p.646-67.
- Leibniz, Gottfried Wilhelm, 1923- [1687-1688], « De lingua philosophica », *Sämtliche Schriften und Briefe*, Deutsche Akademie der Wissenschaften zu Berlin, Darmstadt, VI 4, p.881-908.
- Leibniz, Gottfried Wilhelm, 1966 [1765], *Nouveaux essais sur l'entendement humain*, Paris, Garnier Flammarion.
- Lindner, Susan J., 1981, *A Lexico-Semantic Analysis of English Verb-Particle Constructions UP and OUT*, dissertation, University of California, San Diego.
- Locke, John, 1975 [1700], *An essay concerning human understanding*, Oxford, Oxford University Press.
- Lyons, John (1977) *Semantics*, 2 vol., Cambridge, Cambridge University Press.
- Marty, Anton, 1910, *Die "logische", "lokalistische" und andere Kasustheorien*. Halle a.S., Max Niemeyer.

References

- Michelsen, Conrad, 1843, *Philosophie der Grammatik unter steter Leitung der Geschichte I. Kasuslehre der lateinischen Sprache vom kausal-lokalen Standpunkte aus*. Berlin, T. Trautwein.
- Miller, George & Johnson-Laird, Philip N., 1976, *Language and perception*, Cambridge, Harvard University Press.
- Parret, Herman, 1989, « Cognition, the localist hypothesis and back to Kant », *Worlds Behind Words. Essays in Honour of Professor F.G. Droste on the Occasion of his Sixtieth Birthday*, F.J. Heyvaert & F. Steurs eds., Leuven, Leuven University Press, p. 37-49.
- Robins, Robert Henry (1993) « Maximus Planudes: A Byzantine theoretician ». In Robins, R.H. *The Byzantine grammarians: their place in history*, p.201-234.
- Rumpel, Theodor, 1845, *Die Casuslehre in besonderer Beziehung auf die griechische Sprache*, Halle, Eduard Anton.
- Rumpel, Theodor, 1866, « Zur Casustheorie », *Programm des evangelischen Gymnasiums zu Gütersloh*, p.1-25.
- Schmidt, Karl Ernst August, 1847, « Zur Erklärung und Würdigung der grammatischen Kunstausrücke », *Zeitschrift für die Wissenschaft der Sprache*. Volume 2, Cahier 1, Albert Hoefler hrsg, Berlin, G. Reimer, p.57-75.
- Schmidt, Karl Ernst August, 1859, *Beiträge zur Geschichte der Grammatik des Griechischen und Lateinischen*, Halle, Buchhandlung des Waisenhauses.
- Serbat, Guy, 1981, *Cas et fonctions.*, Paris, Presses Universitaires de France.

References

- Talmy, Leonard, 1972, *Semantic structures in English and Atsugewi*, Dissertation, University of California, Berkeley.
- Talmy, Leonard, 1975, « Semantics and syntax of motion », *Syntax and semantics*, vol. 4. Edité par John P. Kimball. New York: Academic Press, 181-238.
- Wüllner, Franz, 1827, *Die Bedeutung der sprachlichen Casus und Modi*, Münster, Theissigsche Buchhandlung.
- Wüllner, Franz, 1831, *Über Ursprung und Urbedeutung der sprachlichen Formen*, Münster, Theissigsche Buchhandlung.
- Wundt, Wilhelm, 1912³, *Völkerpsychologie. Eine Untersuchung der Entwicklungsgesetze von Sprache, Mythos und Sitte*. 2. Bd, 2. Teil. Leipzig, Verlag von Wilhelm Engelmann.