

SLIDE 1

Text Structure and Corpus Linguistics

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“When reference is subjected to evolution : how do we construct and interpret the ‘chain’ between textuality and ontology?”

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Abstract

In my presentation, I will deal with cases that illustrate, from textual and referential points of view, the linguistic or textual and (vs) ontological problem which has been called by French semanticists evolving reference: the corpus which includes cooking recipes as well as stories of metamorphosis tends to show a conflict between principles of thematic organization (continuity) and change of denomination—in conformity with the physical process as it has been or as it can be recorded by the text.

HANDOUT

Cooking Recipes from *Cuisine et Vins de France*¹

(4) *Le lapin, c'est bien*

Quand on l'achète entier, un bon lapin doit avoir le râble rebondi, la chair rose et les rognons recouverts de graisse. On le découpe généralement en 6 morceaux : les deux pattes de devant, les deux cuisses et le râble partagé en deux. Le « derrière » (râble et cuisses) du lapin est particulièrement apprécié des amateurs. Le lapin se trouve à la découpe dans les grandes surfaces. Un demi-lapin avec son foie, ou entier, ou découpé, prêt à cuire (50 F le kilo environ). Ou seulement une cuisse (environ 75 F le kilo). Qualité garantie par le label Lapin de France. Le lapin est une des viandes les mieux pourvues en protéines (20 g aux 100 g) et en vitamines E et B.

(5) *Lapin aux oignons*

Ingrédients : 1 lapin coupé en morceaux + 1 râble [etc.]

Dans une cocotte, faites chauffer 2 cuillerées d'huile et la moitié du beurre. Faites revenir les morceaux de lapin sur toutes leurs faces. Ajoutez le miel, 10 cl d'eau, du sel, du poivre, couvrez à demi et laissez mijoter 30 min.

Pelez les oignons en laissant environ 10 cm de tiges, coupez-les en deux dans le sens de la longueur et faites-les revenir dans une casserole, à feu doux dans le reste d'huile et de beurre. Après 10 min de cuisson, ajoutez les herbes grossièrement ciselées, poursuivez la cuisson 5 min, salez, poivrez et servez avec le lapin.

(6) *Pommes confites au miel d'orange*

Ingrédients : 4 pommes Melrose [etc.]

Préchauffez le four th. 6 (210°). Pelez les pommes (pour une meilleure tenue, vous pouvez ne pas les peler), épépinez-les, puis émincez-les horizontalement. Disposez-les dans un plat allant au four en les reconstituant. Arrosez-les de jus de citron et enfournez pour 10 min. Faites chauffer le miel dans une petite casserole pour le rendre liquide. Sortez le plat du four et arrosez les pommes de miel. Remettez 10 min au four.

Lavez les framboises, réservez-en quelques-unes pour la décoration, mixez les autres avec un peu d'aspartame pour obtenir un coulis.

Pour servir, nappez le centre de 4 assiettes avec le coulis de framboises, disposez dessus les pommes reconstituées tièdes ou froides. Décorez de feuilles de menthe et de framboises.

¹ *Cuisine et Vins de France* : (4) n° 20, 1995, p. 8 ; (5) et (6) en ligne : <http://www.cuisineetvinsdefrance.com>.

FOREWORD

As foreword, I would like to thank the colleagues who organized this second Franco-Czech study day on textual linguistics and corpus linguistics, and who invited me there. I am happy to be in Prague, among you, in your Institute of Formal and Applied Linguistics, in the Faculty of Mathematics & Physics.

While preparing this paper, I reread, in parallel, some *Essays on general linguistics*, by Jakobson. One of them, translated in French as “Linguistique & Théorie de la communication”, was published in the volume XII-1961 of the collection “Proceedings of Symposia in Applied Mathematics”, entitled “Structure of Language and its Mathematical Aspects”...

What I would like to emphasize at that point is that the linguistic models we represent and defend, in the manner of Jakobson and therefore of the Prague Circle, is not only linked to human and social sciences but also to exact sciences. Thus, Jakobson, in his essay “On Translation” (1959, translated by Nicolas Ruwet as “Aspects linguistiques de la traduction”) quotes not only the German-American anthropologist Franz Boas, but also the Danish physicist Niels Bohr...

Commenté [NN1]: *Essais* page 83 et page 81

And I would like to pay tribute again to the lucidity of this essential author of the Prague Circle, because in the same essay, he uses not only the word “linguistics” but also the expression “language science” —“science” in the singular... whereas today the word in the expression is usually plural.

Commenté [NN2]: *Essais* page 80

So, I think that intervening in your institute gives us hope that linguistics still has a future as a science of *Erklären* (*Explanation*) —not only of *Verstehen* (*Understanding*).

The subject I will now deal with belongs to both fields or epistemological methods and makes it possible to consider these two approaches to a same linguistic object... I now go to my:

INTRO

I'll begin by re-reading with you and for you the summary of my presentation: in which, I said, I will deal with *cases* that illustrate, from textual and referential points of view, the linguistic and (vs) ontological problem which has been called by French semanticists *evolving reference*.

> This historical reminder or landmark will be the subject of my first part, the presentation of the problematics.

>> In the same first part, I will then have to explain myself on various words or expressions specific to this field of research: firstly, the word *cases*, that is to say, what “cases”, and why? Secondly: the expressions *evolving reference-referents* that seem to have nothing to do with language, thus with linguistics.

>>> I'll show it's not the case, of course...²

The second part of my presentation will focus on the various types of corpora/contexts and the various linguistic solutions that we have tried to provide to this issue.

These corpora (I call more precisely *evolving contexts*) include cooking recipes (see handout) as well as stories of metamorphosis and tend to show that there exists a conflict between what we could call two logics:

> On the one hand, the textual one, there are principles of textual organization – more precisely textual progression or chains construction & chains preservation— that are or can be resistant to changes that the text represents;

>> On the other one, the referential one, in our corpora, there are utterances and texts with changes of denomination in conformity with the physical process as it is represented and recorded by the text; in other words, the nominal change in an

² But I must not hide that this problematics has been was violently criticized by linguists who were not convinced of its linguistic relevance; I will also explain how & why... See below and Apotheloz & Reichler Béguelin (1995).

evolving context is the counterpart of the ontological one; in other words, the change of denomination “respects” the physical one.

1. Historical & Epistemological Data

The Evolving Referents-Evolving Reference [ER] appeared in the early 90s as part of a major project launched by the CNRS, named Cognisciences

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La Revue pour l'histoire du CNRS, 10-2004 – Dossier : « Penser la pensée. Les sciences cognitives »

Brigitte Chamak : « Les sciences cognitives en France »

<https://journals.openedition.org/histoire-cnrs/583>

§ Le programme « cognisciences » du CNRS

13 Deux mois plus tard, en 1990, le CNRS lance le programme interdisciplinaire de recherche (PIR) « Cognisciences » qui vise à développer les réseaux mis en place cinq ans auparavant. Il en confie la direction à André Holley et le comité scientifique est présidé par Mario Borillo.

14 Ce programme a financé sept réseaux régionaux, Cogniseine, Paris-Centre, Paris-Sud, Cognisud (Aix, Marseille, Nice-Sophia-Antipolis), Grand Est (Metz, Nancy, Strasbourg), Prescot (Toulouse), Rhône-Alpes. C'est à l'un des responsables du réseau Cogniseine, Alain Berthoz, que le ministère de la Recherche confie l'organisation d'un grand colloque de prospective sur les sciences de la cognition qui a lieu à Paris en janvier 1991.

15 Ingénieur et neurophysiologiste, Alain Berthoz s'intéresse à la physiologie des fonctions sensori-motrices, au contrôle de l'équilibre et à la perception du mouvement. Il organise ce colloque où biologie et informatique sont réunies. À la suite du colloque, un rapport d'un comité de suivi est présenté en novembre 1991 : dans le chapitre sur la technologie de l'intelligence et de la communication, Mario Borillo met l'accent sur les applications industrielles associées au développement des sciences cognitives, et en particulier sur l'imagerie cérébrale et les réseaux neuronaux. L'informatique y est présentée comme la discipline pivot. Le rapport insiste sur les retombées économiques et sociales de l'IA : systèmes d'aide à la décision, communication homme-machine, interprétation d'images, traitement de messages linguistiques, contrôleurs (aéronautique, espace, nucléaire...), télécommunications, industrie de la musique, domaines de l'audiovisuel, parole de synthèse, prothèses acoustiques...

I make some remarks on these first slide = historical and epistemological data:

This project was led by Alain Berthoz & Mario Borillo.

A. Berthoz was a member of the Collège de France, and held the Chair in Physiology of Perception and Action (1993-2010).

Mario Borillo is a computer scientist in Toulouse and collaborates with his wife Andrée Borillo, who is in charge of syntax and semantic research.

The Grand-Est network was interdisciplinary but dominated by linguists from the three universities mentioned above: Metz, Nancy, Strasbourg. Thus the

founding researches on evolving referents are the work of Catherine Schnedecker (Metz), who is a specialist in reference chains, Michel Charolles (Nancy), one of the founders of New Prague textual linguistics in France, and Georges Kleiber, who is the emblematic figure of research in referential and lexical semantics, in France and beyond, since the 1980s.

Michel Charolles, leader of the Great East project, and his colleagues, gave it, the name of “Anaphora and its treatment”; the project began in 1993. At the same time, I started my thesis and these three linguists were members of my jury (january 1996), with, in addition, Combettes and Adam.

One can then ask how this linguistic program, textual and semantic, can be part of the global program ‘Cognisciences’? Undoubtedly by the role that memory plays in this case: on the one hand, short-term memory, or working memory for the discursive or textual aspect of the problem; on the other one, long-term, encyclopedic memory for its semantic and lexical aspects.

By broadening these last two aspects or faces, semantic and lexical, we see how, in a realistic, referentialist linguistic model, the problem can be broadened, especially if we take as an example these “cases”, metamorphoses: it interests in the background, via categorizations, ontology or the classification of species; and via recategorizations, the scale of species.

I can now say that the term “case” has been borrowed from analytical philosophers who study “puzzling cases”, i.e. logical and ontological problems as reflected by language.

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The result is a multidisciplinary research in which philosophy (ontology or metaphysics but also phenomenology) plays a certain role.

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Nevertheless, linguists have truly given this new field of research in language sciences a real linguistic dimension, by focusing:

- on the one hand, on the question of the anaphora and reference chains
- on the other hand, on the textual typology (taïpologi), depending on whether the “case” appears —and is studied— in a mathematical demonstration (explanatory-argumentative text), a cooking recipe (action text) or a metamorphosis tale (narrative text).

Finally, linguists, and in particular Charolles and François in Nancy, have focused on the lexicon-grammar of what they have called “transformative predicates” such as change (into), transform (into), become... – and at the same time the “pseudo-transformatives”: disguise (as), take the appearance (of)...

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My synthesis book in 2001 takes into account this dual dimension of the problem, and in its second part reports on the different linguistic approaches to the issue : referential, thematic, lexical, nominal, verbal... and finally narrative : it allows to study, in turn : (i) the role of pronouns in maintaining thematic and therefore referential continuity and the limits of this maintenance; (ii) the lexical modalities of the change of nominal identification; (iii) the role of the intra- or extra-diegetic point of view in the maintenance of self...

In the second part of my presentation, I will give examples of these multiple but always dual treatments.

That being said, in conclusion, if I have any time left, I will quickly present my most recent work which aims to bring together, reunite, these dual approaches.

2. Demonstrations & case studies

So, in my book, I started by presenting the theoretical back ground of ER as a field of research: dealing with notions such as reference and identity, it appears to be fundamentally philosophical, but it is in fact a question of reporting first of

all on works in philosophy of language and then on linguistic works inspired by philosophy of language such as those of Georges Kleiber in referential semantics: here is an example, emblematic.

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We know that in Kafka's *Metamorphosis* a certain Gregor is transformed into "a monstrous insect". However, it does not change its name, immediately after... What can explain this permanence is semantics, tits the semantic & logical model of the proper name, conceived as a rigid designator on one side and empty of meaning (not descriptive) on the other one. This is not the only possible explanation, as we will see when we discuss the issue from the point of view of the narratives, but it is already an explanation.

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With regard to the other key concept, identity, the linguistic treatment of this philosophical concept now focuses on the modes and modalities (or constraints) of identification. It is therefore very important, in a realistic semantic model, to distinguish between changes in descriptive and modal designations, which have a distorting effect (metaphorical), in other words, which result from a change in point of view, and changes in nominal designation, which result from an "objective" change: see this poem *The Butterfly* by Francis Ponge (translated by Vadim Bystritski)

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In both versions, you can find two referential designations, two nominal phrases, that are autonomous and competing, *tits* that are not part of the same reference chain: we need to know the very process of metamorphosis, in order to make the link, ontological or encyclopedic, between the two, but this link is not semantic, textual or lexical... Only the temporal marker "from then on" with its role as a

connector, that is, a connector between two moments in time, reminds us what the logic of this natural process is.

And if we can then, over the course of the text, that is, over the time that the text represents, talk about a change in metamorphic designation, or really metamorphic, it is because our knowledge or encyclopedic memory on the one hand, and on the other hand the use of the anaphoric connector, allow us to establish continuity between the two states; but once again, if there is a referential continuity between the two, it is based on a numerical identity but not a sortal one.

Conversely, when the butterfly is compared to a match, not only is this nominal phrase not used with a referential function (but attributive like in Hobbes' "Man is a wolf to man"), but its feminine gender has no influence on the masculine gender of the pronoun *il* which perpetuates the reference chain. In this case, we are dealing with a metaphorical change, but not metamorphic.

That being said, nothing prevents a narrative text from having both modes of designation: in stories of metamorphosis such as werewolf stories, it is not uncommon for a person, before becoming a werewolf, to be compared to a wolf, because he or she behaves like a wolf. But behaving like a wolf is not the same thing as being a wolf, in the sense of becoming a wolf.

And this is where narrative fiction is very useful to us, even for the study of non-fictional evolving contexts: the only way to verify that the metamorphic process is effective is to see it "recorded" by the text. And the only way to record the process linguistically is to change the noun phrase with a break in the referential chain.

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But it can happen as it may not happen; in most fictional narrative cases (as in Kafka's text) it does not happen. The cases where this occurs are therefore

exceptional and as such very interesting for the “realistic” linguists, who are attached to the constraints (physical or phenomenological, as well as mental or memorial) that weigh on the representation of the referents = *tits* the way they are “grasped”, if one may say, lexically and textually.

In the examples we will study, everything is a question of points of view: objective and subjective points of view, as in Francis Ponge’s text. But in these examples, we will deal with, which also speak of “wolves”, we will see that the question of the point of view is in fact a question of vision and perception, or even of memory, which is therefore not a “point of view” in the appreciative sense, purely subjective, as can be a metaphorical distortion such as that of the “man being a wolf to man (Hobbes) (or the metaphor: butterfly = flying match).

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We will work on two medieval stories (*lais* = *lays*) that tell stories of werwolves [WW]. What is going on in these stories? The first thing to say is that the metamorphosis into a WW is reversible: so the quality of human being is never lost —lost sight of: at least for the reader or the narrator or for the familiar characters of the man (because he is always a man in the cases we are dealing with), for example and emblematically his wife. Conversely, for the other characters who do not know the hero and his story and who meet him in animal form, the WW is just a wolf.

In the previous case, there are several forms of representation of identity after metamorphosis:

The maintenance by the narrator of the original name which can be combined in the chain with pronouns “he” or “zero” if we consider that in these medieval texts the third person pronominal substitute is not systematically present in the position of verbal subject; in this first example, Biclaret is already transformed into a wolf: he looks for his clothes that will allow him to become a man again, but his wife, to whom he told his dramatic story in the previous scene, followed

him into the forest and stole his clothes in order to get rid of him... Biclaret remains a wolf or as the text says, a beast, but “beast” in an attributive way, because referentially he remains “Biclaret”.

If the narrator is the hero himself, as a human narrator, he always uses the personal pronoun “I” which is inalienable; cases of this kind are very numerous, until the 20th century when we find stories of metamorphosis or duplication inspired more or less directly by psychoanalysis: Dr Jekyll or *Aus dem Tagebuch eines Orangenbaums* (*From the Diary of an Orange Tree*) from Hanns Heinz Ewers (1907), which is properly Viennese...

In an opaque context, that is, when the story is filtered by the “vision” of a character who does not know that the wolf is a WW, the NP “the wolf” or the hyperonym “the beast” is used and competes with the omniscient vision of the narrator.

As a result, the most “extraordinary” case is when the omniscient narrator and therefore the text register the change of species designation. In this example, rare, note the paragraph change that visually marks the chain break, even if it may be only temporary...

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CONCLUSIONS

First of all: the previous example presents a paradox. This change of noun or NP, the most faithful to the truth, if we consider fiction as a possible world, in other words, a feint of the world, or a fictional image of the world, is the most creative of fiction in the sense of illusion (as the Greek *poesis poeien* —with the sense of creation).

This new demonstration shows that discourse and text are not only “construction of meaning” operations, in other words, fiction (in the very sense of “feinting”), but also “representation” of reality... However, if research on ER came to a halt

in the late 1990s, it is precisely because constructivist linguists (violently) attacked referentialists in the field of realism. In any case, the leading figures have stopped working on the subject.³

I now quickly present my research perspectives. As I said, the second part of my book describes the different linguistic domains concerned: pronouns and anaphoric chains, lexical categorization and recategorization, transformative predicates, point of view or modalizations in both phenomenological and narratological terms. Due to the diversity of the fields and their treatments, the corpora treated themselves will be diverse. But here I will focus on only one case: cooking recipes (we have seen examples of narrative and poetic metamorphoses above).

Perspectives

Apples and chicken are at the origin of ER.

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First of all, the origin can be found in Halliday & Hasan's book *Cohesion in English* where they give this example that they comment as follows :

Wash and core six cooking apples. Put them into a fireproof dish.

“It is clear that them in the second sentence refers back to (is ANAPHORIC to) the six cooking apples in the first sentence. This ANAPHORIC function of them gives the cohesion to the two sentences, so that we interpret them as a whole; the two sentences together constitute a text.” (1976: 2; their capital letters)

³ Cf. Apothéloz et Reichler-Béguelin (1995) : « Les études récentes consacrées aux référents dits *évolutifs* se proposent d'analyser les contraintes qu'exercent, sur les anaphores pronominales, les transformations ou métamorphoses subies "ontologiquement" par les référents du discours. Critiquant les prérequis méthodologiques et épistémologiques sous-jacents à cette lignée de travaux, le présent article illustrera une conception concurrente, résolument non réaliste, de la référence linguistique. Dans un premier temps, on expliquera pourquoi il est préférable de renoncer à concevoir les référents du discours comme des "choses", et on argumentera en faveur d'une conception représentationnelle et constructiviste de la référence; ceci conduit à concevoir les référents comme des *objet-de-discours*, modélisables sous la forme d'un ensemble – par définition évolutif... »

Brown & Yule use this example in their own book (1983) *Discourse Analysis*:

“They [Halliday & Hasan] assume a simple substitution view where an expression may simply be replaced by another in the text [...] If we are interested in how readers proceed through such a text [...] it is relevant to note, and for the reader to understand, that [the six cooking apples] have undergone a change of state [...] Their description has changed.”
 (“description” underlined by Brown & Yule, op. cit.: 201)

With this example and its commentaries, we see how the intersection of the ontological and semantic domains is prefigured: with their *description*, Brown & Yule direct reflection towards the intentional, and in this case changing, content of the referent.

Hence, the second emblematic example that Brown & Yule (op. cit.: 202) introduce, that of chicken:

“Consider a more violent, constructed example:

Kill an active, plump chicken. Prepare it for the oven, cut it into four pieces and roast it with thyme for 1 hour.”

Example, they comment as follows:

“Presumably the identity of the chicken is preserved, at least until it is dismembered, but its description has certainly changed...” (“identity” underlined by Brown & Yule)

But what they don’t comment, here, is that, whatever the change of identity, the text doesn’t record it because the chain “the chicken... it” continues as it is...

When I wrote my *Grammaire des Métamorphoses* (2001), I mentioned the fragmentation of treatments: logico-semantic, ontological, cognitive, textual, narratological, of which we had an overview above; however, these treatments are not only competing, or even incompatible, but useless on a diversified

corpus, if we try to transpose them from one kind of text to another—for example, from a recipe for cooking to a story of metamorphosis...

That's why, it seems to me that a unified treatment can be envisaged starting from the constitutive heterogeneity of the texts: thus, a recipe can be taken and treated as a sequence of factual transformative predicates; the notion of memory, or memories in the plural as I mentioned earlier, also makes it possible to unify the treatment between textual linguistics, referential semantics and cognitive linguistics: working memory is needed for the sequential, endophoric and retroactive interpretation of the text, therefore on the side of internal cognition; and collective or shared memory, on the side of external cognition, for the exophoric and anticipatory interpretation of the text; the question is then to know, not how each memory works for itself, but how *they do it together*.

I take up the notion of *texture* (from Halliday & Hasan) that I link to *textualization* operations (following Adam); for this purpose I consider in the same treatment, transformative process and textual sequence: thus, the semantic, logical and actancial interaction between object(s) and process(es) takes place within a framework of continuity and referential dynamics—note that *referential* in Halliday & Hasan's theory of *texture* means *informational*; therefore, it is no longer a question of dissociating the object from the text or discourse—even if I do not make the object of the discourse an *object of discourse* in the sense indicated above by Apotheloz & Reichler-Béguelin: the textual construction has to do with the referent and its evolution, whatever the reality of each other, outside the text...

Thus, we can see an “object” at the same time as a theme (topic), in the name of the two principles: (i) the ontological one, for the maintenance (vs. loss) of identity, and (ii) the textual one, for the installation of a hypertheme (what Adam calls a *thème-titre*) in a text, and then for its *evolution* in the text, *tits* its *aspectualization* by the text (I mean *aspectualization* following Combettes

[1983: 97], as the textual composition procedure which consists in a *derivation* of the hyperthematic or the title-topic referent).

From this point of view, the comparison between a descriptive-informative text and an injunctive text reveals the closeness or even the intimate mixture that exists between (i) the representation of a way of doing in the world, which consists in cutting or breaking up an ingredient, and (ii) the procedure of representation in and by the text of a referent, used as title-topic, which will be aspectualised.