

Extension of the Semantic Field of the Word 'Braking' via the Benvenistien Dialectic 'Form / Sense'

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Abstract: *In this article we try to show the possibility to proceed on one extension of the semantic field of some words as part of didactic communication. This possibility raises questions about the consistency of distinctions benvenistiennes : categories of thought / language categories ' semiotic / semantic ' and ' form / sense.*

Index Terms: *Categories of thought / Language categories, Didactic communication, Expressions corpus, Form / Meaning, Semiotic / Semantic.*

I. INTRODUCTION

A. Context of Recherche

Learning foreign languages since the beginning of compulsory schooling must be one of the fundamental pillars of the Moroccan education system. This is the decision taken recently by the relevant institutional and governmental bodies¹. A strategy for teaching these languages would therefore be welcome. We believe that this strategy should not be based on pedagogical principles alone. It must also draw its foundations from studies of general linguistics. The aim of this work is to show the possibility and fertility of this option.

II. OBJECTIVE OF RECHERCH

For Emile Benveniste the word must be conceived in linguistic works as a semantic unit. The aim of this research is to show that in the teaching of certain disciplines such as mathematics, it is necessary to articulate learning around words as semantic units: Everything must happen as if to teach these disciplines Consists of extending to the pupil the semantic fields of words of ordinary language.

III. THEORETICAL FRAME

"The problems of general linguistics, T1 & T2" by Emile

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¹ Speech of His Majesty King Mohammed VI of Thursday, July 30, 2015 on the occasion of the Feast of the Throne ; Report of Higher Council of Education, Training and Scientific Research "Strategic Vision 2015-2030" and decision of the Government Council of Thursday 1st October 201.

Benveniste constitutes the theoretical framework of this work. More precisely, three distinctions introduced by this author are placed in the principle of this study: these are the dichotomies, 'categories of thought / categories of language', 'semiotics / semantics' and 'form / sense'.

IV. PROBLEMATIC

Whether they are synchronic or diachronic, the consistency of linguistic studies requires that they should be open on prospective studies. These perspectives can only have as effective control framework the school environment an since the archetypal aim of the systems of education is the production of a specific corpus of expressions. By the pupil, thus, the consistency of a theory such as enunciation should be the ability of these truths and results to turn into relevant teaching questions. It is a real problem rufact that linguists are not interested in the prospects the results of their studies open up for teaching.

The same problem is also encountered by pedagogues and didacticians in the disciplines: There are few pedagogical and didactic works that develop concepts on a teaching strategy based on the results of linguistic studies, despite the centrality of language in teaching and learning.

In this work we try to derive from the three Benvenistiens dichotomies the outline of a general strategy for the communication of knowledge in the school environment. This derivation revolves around the following fundamental question: Are the 'Categories of Thought / Language Categories', 'Semiotics / Semantics' and 'Form / Sense' dichotomies a prediction of a theory of communication and diffusion Knowledge in the school environment? Which theory should be based on the constitution of a corpus of expressions of the pupil; Corpus that the teacher must establish beforehand before devolving the pupil to reproduce it. For this, the student must proceed by successive extensions of the semantic fields of words.

Thus, each of these three dichotomies should then contribute to dialectic of the extension of these same fields. We will then talk about of dialectics, 'categories of thought / categories of language', 'semiotics / semantics' and 'form / meaning'.

V. HYPOTHESIS OF RESEARCH

The form can generate in the pupil the sense, according to a dichotomy analogous to the benventien dichotomy 'form / sense'. And this engendering requires the dialectical mobilization, by the professor, of two

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other dichotomies analogous to Benvenistien dichotomies: 'categories of thought / categories of language' and 'semiotics / semantics'.

VI. METHODOLOGY

A. Prolegomena

In order to bring arguments in favor of the truthfulness of the research hypothesis, we consider it appropriate to test the three Benvenistien dichotomies to contextualization. This contextualization consists of the following two steps:

- a. Give of each of the three dichotomies, 'categories of thought/categories of language', 'semiotics/semantics' and 'form/meaning', an interpretation in terms of dialectics. We mean by dialectic a back and forth between the two poles of each of the dichotomies: often, in order to apprehend one of the two poles, one invokes the other pole and this call participates in the apprehension of this same pole, d 'Where a virtually incessant back and forth. It will also be necessary to reinforce each of the three interpretations by clarifying its implications for didactic communication;
- b. Clear from a. The contextual stipulations of the extension of the semantic field of a particular word, in this case the word 'braking'. The address of these stipulations must be college students (10-11 years).

B. Presentation and Interpretation of the Three Dichotomies

1) Dichotomy 'Categories of Thought / Language Categories

a) Presentation

For E. Benveniste "it is what we can say that delimits and organizes what we can think. Language provides the fundamental configuration of properties recognized by the mind to things" [1]. Now, without this configuration of these properties, nothing can assure the permanence of their recognition by the mind. In addition, this configuration is equipped with expressions which, in so far as they express these properties, refer to categories of language. For Aristotle, who first enumerated them, these expressions denote categories of thought. There are ten of them, and they are: "substance", "how much", "what", "where", "when", " " " Do "and" undergo "[2].

b) Interpretation

The present infinitive of a verb expresses a posture (intransitive verbs) or a do (transitive verbs), with the present infinitive we are in a category of thought. In passing from the present infinitive to the substantive, one exits from the categories of thought to enter the categories of language. To engage in a dialectic, in a to-and-fro, 'categories of thought / categories of language' would be necessary to understand the full meaning of every word of the language. How, from a point of view of didactic communication, to engage the learner in such a dialectic?

c) Implication for Didactic Communication

Everyone believes that in the teaching of mathematics the language of instruction is an auxiliary. But the permanence of

the categories of thought denoted by mathematics is assured only by specific categories of language. Thus mathematics learning will or will not be (depending on whether or not the purpose assigned to their teaching is the development of linguistic competence): only this competence ensures the permanence of the recognition of mathematical properties Recognized by the mind to things.

2) 'Semiotic/Semantic' Dichotomy

a) Presentation-Citation

For E. Benveniste: "*Everything that is part of semiotics has as a necessary and sufficient criterion that it can be identified in the breast and in the use of language. Each sign enters into a network of relations and oppositions with other signs that define it, which delimit it within the language. ... With the semantics, we enter the specific mode of significance that is generated by the SPEECH.*[3] ... *Semiotics is characterized as a property of the language, the semantics result from an activity of the speaker who puts into action the language* " [4].

b) Interpretation

The word is at the same time a linguistic sign and a semantic unity. It would therefore be necessary to go through the broadening of the semantic fields of words to develop the capacities of the language to refine the means of description of things while ensuring the permanence of the properties recognized by the mind to the things described. This enlargement requires, for its part, a semiotic / semantic dialectic about archetypal words or classes, crucial on some side, of words.

c) Implication for Didactic Communication

The aim is to make the disciplines play their role as means of developing the capacity to put into action the natural language. For this, it would be necessary to:

- to motivate this putting into action, as necessary so as to render perennial the properties recognized by the mind to things;
- to define the corpus of expressions in order to be produced to the students and the extension of semantic fields of words to make them work for this production.

Is this the case for mathematics (for example)?

3) Dichotomy 'Forme/Sense'

a) Presentation-Citation

According to E. Benveniste "... *the form of a linguistic unity is defined as its capacity to dissociate itself into lower level constituents. While, the meaning of a linguistic unit is defined as its ability to integrate a higher-level unit.* [5]

... Form and meaning thus appear as joint properties, given necessarily and simultaneously, inseparable in the functioning of the language. Their mutual relations are revealed in the structure of the linguistic levels, traversed by the descending and ascending operations of analysis, and thanks to the articulated nature of language " [6].

b) Interpretation

According to Benveniste, "the word is the semantic unity, it is the minimal unity of the message and the necessary unity of the coding of thought." Insofar as it is this minimal unit, could it be said that 'the ability to dissociate into lower level constituents' is a property that the word does not possess? If so, then the word would be an amorphous entity and its meaning would remain suspended in the context of enunciation. To adopt this suspension is to deny it the attribute of semantic unity, the latter invoking a primary meaning which is not too sensitive to this context. We are confronted with an aporia. To solve it, we must dissociate form and meaning, or find other forms at the word. With the second alternative it is admitted that the word admits forms other than that which the alphabetical writing confers on it. The form that alphabetical writing gives to the word is certainly not the one in which Emile Benveniste is primarily interested: besides this form, other forms can be solicited, including that provided, for example, by logographic writing. The form of the word brings together all the mediations by which the word gives itself to manifestation. Thus, the consistency of the benvenistian 'form / meaning' distinction is confirmed when, whenever the word is liable to dissociate into lower-level constituents in one of its manifestations, its semantic field widens. We mean by semantic field of the word, the corpus of expressions, of sentences, of which the pivot is this word.

Assuming the consistency of the Benvenist distinction 'form / meaning', it is incumbent on us to begin by finding, for particular words, manifestations liable to dissociate into lower-level constituents.

c) Implication for Didactic Communication

René Thom defines meaning in a way that suggests adopting the assumption of this consistency. Indeed, for this author "meaning is the attribution of a place of a spatial nature to a formal expression coded" [7]. J.-C. Milner, with the meaning he gives to the exposition *more geometrico*, [8] only suggests the same thing. In this sense, logographic writing can be successfully replaced by geometric writing.

Consequently, in education, should geometric figures be treated for what they are or what can be expressed to them? While these figures have ontological properties out of any context, they also have praxeological and pragmatic properties that are given by appropriate contexts. It is these contexts that make them capable of carrying to the expression of relationships that they do not possess intrinsically. Finding these contexts and relationships can prove crucial in didactic communication of knowledge.

C. Contextual Clauses of The Extension of The Semantic Field of The Word 'Braking' In The Context of Didactic Communication

1) Organizational Principle of the Extension

The word braking admits a geometric writing capable of generating an exposition that can be described, after J.-C. Milner, as *more geometrico*². More precisely, it is so if it turns out that this writing:

- Can be set up at the level of a logographic writing,
- Is likely to dissociate into lower level constituents,

- Is likely to induce 'impossible' language data: at first sight are contrary to Good Usage [9] but otherwise interpretable judiciously.

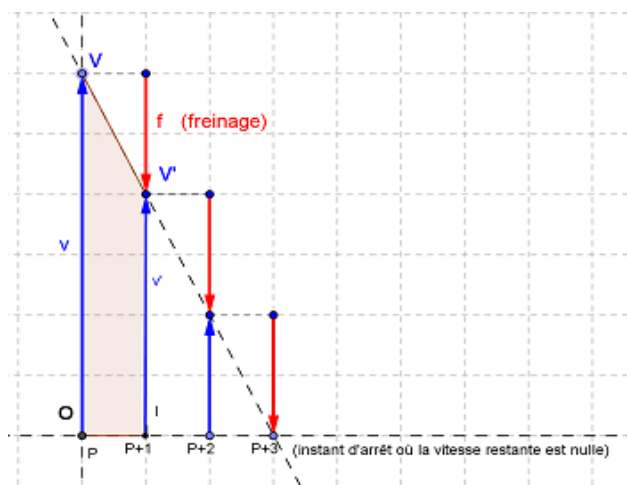
Such a genesis of such a statement is an argument in favor of the conclusion that form generates meaning according to the Benedictine dichotomy 'form / meaning' and this begetting requires the dialectical mobilization of the two other dichotomies: 'Categories of Thought / Categories Of language 'and' Semiotics / Semantics'. It is above all an argument in favor of the consistency of the Benveniste distinction 'Form / Sens'.

2) Geometric Writing of The Word 'Braking' For A Descending Analysis of The Word

a) Descending Analysis

A braking being the fixed amount by which a current velocity will decrease successively second by second, the rectangle trapezoid may play the role of stenogram of this definition : When the driver holds the brake pedal at a certain level : 1) the arrow segment [OV] (see figure opposite) Represents the speed of the vehicle immediately before braking ; 2) braking is the quantity f To be subtracted from [OV] to find the arrow segment [IV'] Which represents the speed of the vehicle one second after ; 3) The same operation is repeated to obtain the successive speeds at the following instants (a second second, a third, a fourth , etc.).

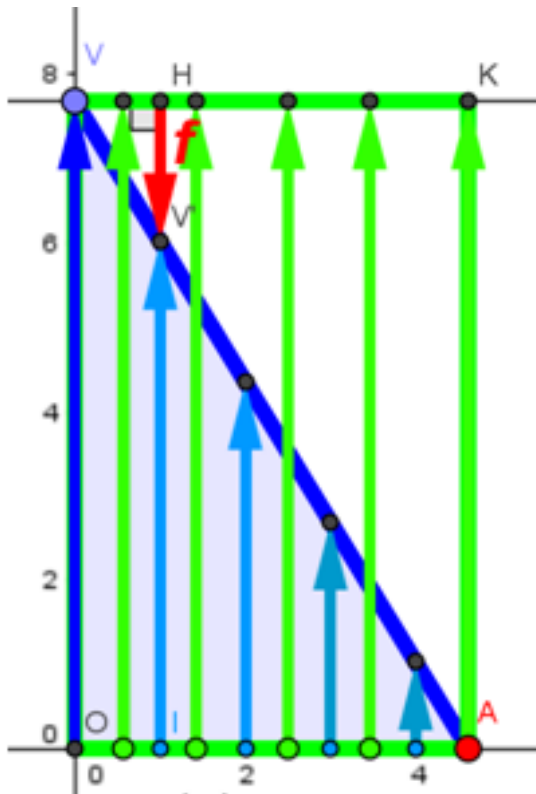
To carry out this operation it is sufficient to know the trapezoid rectangle OVV'I (the dark part).



b) Ascending Analysis

Two historical instantaneous speeds of the mobile are in the running : 1) speed history with braking (in blue). It covers the time interval between the start of the braking and the stop time ; 2) the speed history without braking (in green) covering an identical interval.

The history in blue covers the surface of a right triangle and the history in green covers a **double surface**, that of the rectangle. These surfaces give information on the distances traveled in the time interval in question. Thus, between the beginning and the end of this interval, the distance traveled by the mobile with braking is half that which it would have traveled without braking.



3) Sentences Necessary For To Broaden Semantic Field Of The Word Braking

The foregoing shows that the rectangular trapezoid is a geometrical form through which the word 'braking' gives itself to manifestation. This manifestation allows a descending and then ascending analysis of the word which induces two types of sentences, all of which express aspects of the dynamic deployment of the rectangle trapezium which has become for this circumstance a "pheno-physical morphology" [10]

Some of these sentences fit in with the correct use of language. Others, although potentially rare in performance, do not conflict with the good use evoked by J.-C. Milner (Milner, 1995). We classify the first as impossible sentences and the second as possible sentences. In the following we present examples of each of these two types of sentences.

a) Possible Sentences

- The braking assigns to the mobile a drop point and an interval of time to arrive at this point. Without the braking, the speed of the mobile would make him miss or even surpass this point. By counting only the extent of this time interval, that is to say the duration of the braking, the overrun will be spread over a distance equal to that which, immediately before the beginning of the braking, separates the mobile from the point of fall.
- Thus, whether one rolls, slips or trots, braking chokes the readiness to go ahead and annihilate it in the middle of the ford.

b) Impossible sentences

- Braking halves the distances (contrary to the good use by which the means of transport reduce the distances) ;
- Braking doubles distances ;
- Braking leads to good port ;
- Braking shortens distances.

VII. CONCLUSION

The word braking admits as one of its possible manifestations the geometric form 'The trapezoid rectangle'. This form, we have called it geometric writing of this word. With this writing this word lends itself to a reading which consists of a descending and then ascending analysis of the word. This analysis induces sentences that can be presented intentionally within the framework of didactic communication in so far as they are supposed to make sense for the reader of this writing of the word. Some of these phrases can be recognized as offensive to good use of the language, others not. From a linguistic point of view, the former can be classified as "impossible sentences" and the second "possible sentences".

We consider that the derivation of such sentences from the writing in question is a strong enough argument in favor of the following conclusion: The form generates meaning according to the Benedictine dichotomy 'form / meaning' and this engenderment requires the dialectical mobilization of Dichotomies 'categories of thought / categories of language' and 'semiotics / semantics'.

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