

***Le Morpheur*: An Online Tool to Teach French Verbal Inflectional Morphology**

Stephanie Doyle Lerat

Dalhousie University
Halifax, Canada
sjdoyle@dal.ca

Abstract

This paper describes a web-based conjugator which was developed using insight from the Meaning-Text Theory. This website, *Le Morpheur*, seeks to present L2 verbal inflectional morphology to adult Anglophone learners of French by adopting a semantic approach. Participants in a study evaluating this pedagogical resource were enthusiastic about the website indicating that continued development of this tool is desirable.

Keywords

Verbal inflectional morphology, Second language acquisition, French L2, Computer-assisted language learning, Meaning-Text Theory

1 Semantic Approach

Language allows a speaker to express meaning. In order to effectively express a meaning the grammatical rules of a given language must be respected. For example, if a speaker wishes to express the future tense in French, there is a verbal suffix which conveys this meaning (along with the grammatical meaning ‘indicative’), **-r**, as in, *Jean finira son travail dans trois jours* ‘Jean will finish his work in three days’.

This system of correspondences between inflectional meanings (grammemes) and their means of expression is known as verbal inflectional morphology. Verbs are very important in French, as in all languages; therefore it is important that French language learners become proficient users of this system.

Researchers in the field of Second Language Acquisition affirm that a pedagogical approach which focuses on the rule-based nature of language is the most effective for adult learners (Norris & Ortega 2000, Spada & Tomita 2010). For the specific case of verbal inflectional

morphology, this finding is important as morphological means are not the sole way to express these meanings and learners in non rule-based teaching environment may not pick up on verbal inflection by themselves. VanPatten (2002) underlines that learners tend to pay more attention to lexical ways of expressing a meaning than to morphological ones. For example, in the sentence *Jeanne te téléphonerà demain* ‘Jeanne will call you tomorrow’, a L2 learner is more likely to pay attention to the lexical means of expressing the future, *demain* ‘tomorrow’, than the morphological means, the suffix *-ra*¹. According to VanPatten, learners need a pedagogical approach which explicitly focuses on these morphological means of expression. For us, the link between an inflectional meaning and its expression needs to be clarified for learners. This responds to Davis’ (2009) call for the further development of semantic approaches to grammar teaching.

Adult second language learners, contrary to child language learners, possess a lot of language knowledge. They have completely mastered at least one other language². As a rational learner, an adult makes hypotheses about L2 based on past experience with L1 (Hashamdar, 2010). It is important, therefore, not only to consider systems which exist in the target language but also to keep in mind the possible sources of correspondence and divergence between L1 and L2. Pedagogical approaches adopting this perspective (Kupferberg & Olshtain, 1996, Corbeil, 2005, Ghabanchi & Vosooghi, 2006, Paradowski, 2007, Kupferberg, 2009) have been effective in assisting learners to develop proficiency with difficult structures in L2.

The objective of our Master’s thesis project (Doyle, 2011), which this paper is based on, was to develop a way to assist adult learners of French with verbal inflectional morphology by focusing on the link between the meanings which are expressed through this system and their means of expression. Our main focus was on applying linguistic theory to pedagogy rather than developing a new theory concerning verbal inflectional morphology. Three steps were followed in order to do so. First, the elements of French verbal inflectional morphology were outlined. Next, a means of presenting this system to adult learners was developed. Finally, a prototype of our pedagogical tool was evaluated by French language learners. The rest of this paper will describe how this objective was met by looking at each of these three steps.

2 Theoretical Notions

The Meaning-Text Theory (Mel’čuk, 1997, Milićević, 2006), with its synthetic approach to language, is well adapted to our objective of helping learners comprehend and put into practice the link between inflectional meanings and their means of expression. The formalisms of the Meaning-Text Theory can help us elucidate the meanings expressed through verbal inflectional morphology. (We are assuming the reader has some knowledge of these formalisms.) A simple example can demonstrate this. Let us consider the simplified Semantic Structure of the following sentence (Figure 1):

¹ It is quite possible that learners might in fact notice the suffixes expressing both the future and the person/number agreement such as *-rai*, *-ras*, *-ra*, etc.

² The field of L3, L4, etc., acquisition is a rich field of study which merits further consideration; however, for the time being, we have only taken into account the case of an adult learning a second language.

(1) *Jeanne téléphonera au médecin.* ‘Jeanne will call the doctor’

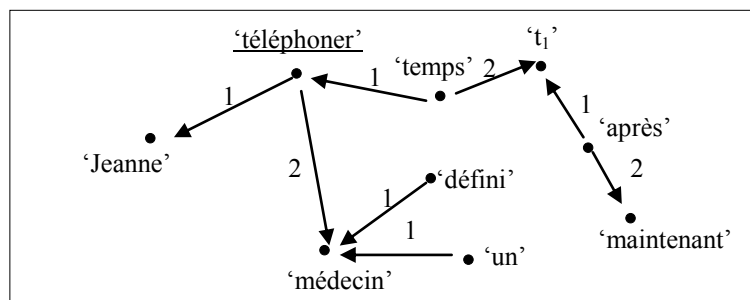


Figure 1 : Semantic Structure of (1)

In this Semantic representation, we can see the meaning ‘[téléphoner] après maintenant’ (‘[to call] after now’). This is an inflectional meaning which will later be expressed through a verbal suffix. Let us now consider the Deep Syntactic Structure of (1):

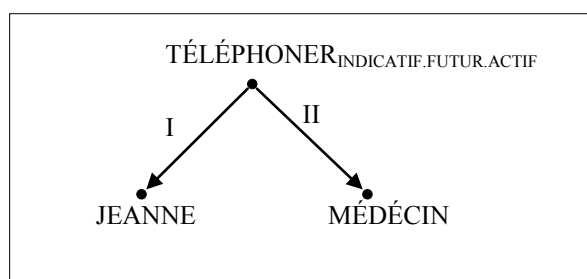


Figure 2 : Deep Syntactic Structure of (1)

In Figure 2, the meaning ‘[téléphoner] après maintenant’ (‘[to call] after now’) is expressed by the grammeme FUTUR, that is to say, by verbal inflection.

These formal representations allow us to observe the transition of a meaning to its expression; in later levels of representation, it is possible to see each grammeme’s means of expression.

A lot of theorisation exists concerning French verbal inflectional morphology. The first big challenge we faced was to determine what was to be considered as part of this system. Our description was based on the theoretical notions outlined in the *Cours de Morphologie Générale* (CMG) (Mel’čuk, 1993-2000). We decided to deal with verbal forms used in Standard French, thus excluding *imparfait du subjonctif* and *plus-que-parfait du subjonctif*. As well, periphrastic expressions such as *être en train de V-infinitif*, *être sur le point de V-infinitif* and *venir de V-infinitif* were not included. We also did not take into account any of the *surcomposé* forms.

Our preliminary description has been simplified. For a more detailed description of French verbal inflectional morphology based on MTT, see Lareau (2008). Descriptions and discussions concerning this system in other frameworks include, among many others, Vet (1980), Wilmet (1993), and Gosselin (1996, 2005).

A comprehensive description of French verbal inflection morphology requires a clear identification of all its inflectional categories. An inflection category is a set of significations ‘s’ which are expressed with a class **C** of linguistic signs, so that 1) an element of ‘s’ must be expressed with each member of **C** and 2) the elements of ‘s’ are mutually exclusive, i.e., only

one element of 's' can be expressed at a time (CMG I: 262-264). For example, the inflectional category of mood in French contains the following elements: INDICATIF 'indicative', IMPÉRATIF 'imperative', SUBJONCTIF 'subjunctive' and CONDITIONNEL 'conditional'. These elements are called *grammmemes* and we refer to them using small capitals.

There are two types of inflectional categories: semantic inflectional categories and syntactic inflectional categories. A speaker can freely choose an element from a semantic inflectional category, selecting the element which represents the meaning he wishes to express. Table 1 outlines the four semantic inflectional categories of French verbs as well as their constituent grammemes.

Semantic inflectional categories	Grammmemes
Mood	INDICATIF, IMPÉRATIF, SUBJONCTIF, CONDITIONNEL
Tense	PRÉSENT, PASSÉ (IMPARFAIT, PASSÉ COMPOSÉ, PASSÉ SIMPLE), FUTUR
Relative Tense	SIMULTANÉ (SIMULTANÉITÉ DANS LE PASSÉ), ANTÉRIEUR (PLUS-QUE-PARFAIT, PASSÉ ANTÉRIEUR, FUTUR ANTÉRIEUR), POSTÉRIEUR (FUTUR DANS LE PASSÉ)
Voice	ACTIF, PASSIF COMPLET, PASSIF SANS AGENT, RÉFLÉCHI DIRECT, RÉFLÉCHI INDIRECT

Table 1 : Semantic Inflectional Categories of the French Verb³

An element from a syntactic inflectional category is chosen for grammatical reasons and is not present in the semantic structure of the corresponding sentence. There are four syntactic verbal inflectional categories in French: finiteness, person/number agreement of the finite verb with its subject, gender/number agreement of the past participle with the subject and gender/number agreement of the past participle with the direct object. Table 2 outlines these categories and the grammemes which make them up.

Syntactic Inflectional Categories	Grammmemes
Finiteness	FINI, INFINITIF, PARTICIPE, GÉRONDIF
Person/Number Agreement of the finite verb with its subject	1.SG, 2.SG, 3.SG, 1.PL, 2.PL, 3.PL

³ In this table the three grammemes, IMPARFAIT, PASSÉ COMPOSÉ, and PASSÉ SIMPLE, are between brackets because they express a meaning in addition to 'before now'. The grammemes of relative tense between brackets express both a relative tense and a tense. For example, PLUS-QUE-PARFAIT expresses both 'anterior' and 'before now'.

Gender/Number Agreement of the past participle with the subject	MASCULIN, FÉMININ, SINGULIER, PLURIEL
Gender/Number Agreement of the past participle with the direct object	MASCULIN, FÉMININ, SINGULIER, PLURIEL

Table 2: Syntactic Inflectional Categories of the French Verb⁴

The second part of our description involves the grammemes' means of expression, that is to say the formal means used to express these significations. There are four possible means of expression in language: lexical units, prosody (declarative, interrogative, ironic, etc), word order and inflection. The French grammemes above are expressed by two different means: 1) a morphological marker, such as an affix or 2) an analytical form of a lexeme.

An affix is a morph which expresses a grammatical signification. As we have already observed, the French grammeme FUTUR is expressed by the suffix **-r**, (*[il] li+r+a* '[he] will read').

An analytical form is a construction which is made up of two or more word-forms. One of these word forms expresses a lexical meaning and the other(s) inflectional meanings. (CMG I: 338). For example, in French, *[j'] ai lu* '[I] read', *[il] aura lu* '[he] will have read', *ayant lu* 'having read', *[elles] avaient été lues* '[they] had been read', etc., are all analytical forms of the lexeme LIRE 'to read'. The grammeme PASSÉ COMPOSÉ is expressed through the analytical construction **Auxiliary**_{INDICATIF.PRÉS} + **V**_{PARTICIPE.PASSÉ} (*[il] a lu* '[he] read').

In French, some grammemes are expressed cumulatively. This means that there is one morphological means which expresses two or more grammemes. For example, INDICATIF, a grammeme of mood, is expressed cumulatively with the grammeme IMPARFAIT from the inflectional category of tense by the suffixes **-ai** (*[il] lis+ai+t* '[he] was reading') and **-i** (*[nous] lis+i+ons* '[we] were reading').

3 Le Morpheur: The Website

After having described French verbal inflectional morphology as well as having undertaken a comparative study of this system and English verbal inflectional morphology, we sought to present this information to language learners. As technology is more and more present in Canadian university classrooms, and students respond favourably to computer-based pedagogical tools (Peters *et al.*, 2009), we surveyed existing websites offering to assist language learners with French verbal inflectional morphology. (The results of our study can be found in Doyle, 2011: 30-35.) It became clear that there was no existing website which described this system using a semantic approach.

⁴ We have combined syntactic inflectional categories to simplify our description. For example, in the case of the agreement of the finite verb with the subject, the verb agrees with both the number and the person of the subject, these being two separate inflectional categories.

To meet this need, we developed *Le Morpheur*, a web-based pedagogical tool accessible at www.lemorpheur.fr. This section will briefly describe the three main parts of the bilingual website: 1) The semantic-based conjugator, 2) Descriptions of the inflectional categories and 3) Sample exercises.

3.1 Le Morpheur: The Conjugator

The current version of our website's main page, illustrated in Figure 3, is the semantically oriented conjugator we developed.

LE MORPHEUR	FOR BEGINNERS	USER'S GUIDE	INFLECTIONAL CATEGORY DESCRIPTIONS	EXERCISES	FRANÇAIS
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Welcome!

To begin, select a verb.
 Next, select the appropriate grammemes.
 Click to see the conjugated verb which expresses the selected grammemes.

Acheter

Finiteness	Mood	Tense	Relative Tense	Voice	Person and number of the subject
☒ FINI	☐ INDICATIF ☐ IMPÉRATIF ☐ SUBJONCTIF ☐ CONDITIONNEL	☐ PRÉSENT PASSÉ ☐ IMPARFAIT ☐ PASSÉ COMPOSÉ ☐ PASSÉ SIMPLE ☐ FUTUR	☐ SIMULTANÉITÉ DANS LE PASSÉ ANTÉRIORITÉ DANS LE PASSÉ ☐ PLUS-QUE-PARFAIT ☐ PASSE ANTÉRIEUR ☐ FUTUR ANTÉRIEUR ☐ FUTUR DANS LE PASSÉ	☐ ACTIF ☐ PASSIF COMPLET ☐ PASSIF SANS AGENT ☐ RÉFLÉCHI DIRECT ☐ RÉFLÉCHI INDIRECT	☐ 1.SG ☐ 2.SG ☐ 3.SG ☐ 1.PL ☐ 2.PL ☐ 3.PL

Non-finite

Acheter

Finiteness	Relative Tense
☐ INFINITIF ☐ PARTICIPE ☐ GERONDIF	☐ PRÉSENT (SIMULTANÉ) ☐ PASSÉ (ANTÉRIEUR)

Participe passé

Acheter

Finiteness	Relative Tense	Gender and number of the subject	Gender and number of the direct object
☐ PARTICIPE	☐ PASSÉ (ANTÉRIEUR)	☐ MASC.SG ☐ FEM.SG ☐ MASC.PL ☐ FEM.PL	☐ MASC.SG ☐ FEM.SG ☐ MASC.PL ☐ FEM.PL

Don't understand? Click [here](#) to consult the user's guide.

Created by Stephanie Doyle: sjdoyle [at] dal.ca

Figure 3 : Le Morpheur

The user is presented with a table of inflectional categories of French and their grammemes. In order to access a verbal form, the user first selects a verb from the drop down menu. The current choice is limited to 10 verbs which represent frequently used verbs from the three conjugation groups that exist in French. Naturally, we intend to expand this choice in the

future. The user next selects the configuration of grammemes representing the meaning he wishes to convey. The user then clicks on “Conjuguez” ‘conjugate’ and the corresponding verbal form is shown. If the user has a question about the meaning expressed by a given grammeme, there are two options available. When the cursor is passed over the name of a grammeme, it is highlighted and a brief descriptive message appears next to it. For a more in-depth description, the user can click on the name of the grammeme and the description in question will appear in another window.

In order to help learners to understand how grammemes can be combined, the user can potentially select a non-existent configuration of grammemes. In this case, when the user clicks on “Conjuguez”, he will see a message explaining the reason why the configuration is erroneous. For example, if the configuration **IMPÉRATIF.PRÉSENT.ACTIF.1.SG** (the problem appearing here in bold) is selected, a message will appear reminding the user that the grammeme IMPÉRATIF can only be combined with 2.SG, 1.PL and 2.PL.

3.2 Inflection Category Descriptions

The purpose of the description section is to introduce each inflectional category and describe all the grammemes which make up the category. The layout adopted includes a brief description of the meaning expressed by the grammeme, how it is expressed as well as examples in order to help learners understand how each grammeme fits into the system of verbal inflectional morphology as a whole. As it is important to keep in mind that learners consider L1 in order to facilitate understanding of L2, if there is an English equivalent of a grammeme, it is indicated. If a grammeme does not have an equivalent in L1, this is also indicated. Figure 4 is the description of the grammeme CONDITIONNEL (from the inflectional category of mood).

CONDITIONNEL
Meaning: The existence of the occurrence described by the verb depends on a condition
Limitations:

- Can be combined with **PRÉSENT** et **PASSÉ**

CONDITIONNEL PRÉSENT
Marker: The suffix **-rai** for 1.SG, 2.SG, 3.SG and 3.PL, **-ri** for 1.PL and 2.PL.
English equivalent: **PRESENT CONDITIONAL** (She **would** walk.)
For example:

- Si elle avait les moyens, elle s'achète+**rai**+t une voiture. (If she had the money, she **would** buy a car.)
- Si vous faisiez du sport tous les jours, vous se+**ri**+ez capable de courir 5 km. (If you worked out every day, you **would** be able to run 5K.)

CONDITIONNEL PASSÉ
Contruction: Auxiliary **CONDITIONNEL.PRÉSENT** + Verbe **PARTICIPE.PASSÉ**
English equivalent: **PAST CONDITIONAL** (She **would have** walked.)
For example:

- S'il avait fait plus chaud, je **ser+ai+s allé** à la plage. (If it had been warmer, I **would have gone** to the beach.)

Figure 4 : Description of CONDITIONNEL, a grammeme of mood

3.3 Exercises

Two sample exercises based on *Le Morpheur* have been developed to allow users to test their understanding of the way verbal inflectional meanings are expressed in the system presented. The first exercise, “Determining the Verbal Form”, models the process of language

production. In this exercise, the user is presented with a meaning, represented by a configuration of grammemes, and must determine the verbal form which expresses this meaning.

The second exercise is called “Determining the Meaning” and reflects the process required in linguistic analysis. In this exercise, the user must, from a given verbal form, determine the expressed meaning, that is to say the configuration of grammemes it expresses.

4 Evaluation by Students

A preliminary evaluation of *Le Morpheur* was carried out with a group of students taking a first-year French course at Dalhousie University (Canada). The purpose of this evaluation was to ascertain language learners’ opinion of this resource. Participation was on a voluntary basis. Following a short demonstration of *Le Morpheur*, a two-part questionnaire was distributed to the participants to fill out outside of class and return to the researcher. Part one of the questionnaire was made up of two different types of questions. The first type asked for the verbal form which expressed a configuration of grammemes and the second type for the configuration of grammemes expressed by a given verbal form. Part two of the questionnaire asked the participants to give their opinion of *Le Morpheur*. The participants indicated their level of agreement with a set of five statements from 1 (strongly disagree) to 5 (strongly agree) and were given the opportunity to elaborate upon their reasons for their answer. At the end of the questionnaire, space was provided for additional comments.

The overall reaction to *Le Morpheur* was positive: 10 out of the 13 participants indicated that this tool helped them better understand how French verb conjugation works. The participants were very successful in using and applying the notions presented on the website. Due to the low participation rate and the limited breadth of the questionnaire, it is impossible to draw any definitive conclusions from this evaluation; however, the enthusiasm of the participants is encouraging.

5 Future Work

In this paper, we presented *Le Morpheur*, a pedagogical resource created to help adult Anglophone learners with French verbal inflectional morphology. Our objective is to eventually determine if a semantic based approach to teaching this system is more effective than a traditional approach. Before being able to do so, the site requires further development in the areas of accessibility as well as content.

From an accessibility perspective, the grammeme descriptions could particularly benefit from further work. The development of user-friendly descriptions is challenging because it is difficult to offer descriptions which are both theoretically accurate and accessible to language learners. A remark made by students who evaluated the resource was that the explanations were, by times, too abstract. Future descriptions will be developed with input from language learners in order to ensure their accessibility.

With respect to the content of the site, the description of French verbal inflectional morphology must be developed. The current descriptions are limited in so far as they only take

into consideration one meaning for each grammeme. For instance, the current version of the site describes the grammeme IMPARFAIT, as expressing ‘V taking place before now’ and the unaccomplished nature of the occurrence, as in *À ce moment-là, Sarah regardait la télé* ‘Sarah was watching TV then’. The meaning ‘a repetitive occurrence in the past’, as in *Sarah regardait la télé tous les soirs* ‘Sarah watched TV every evening’ has not yet been included on the website. We intend to expand the descriptions to include all possible meanings expressed by each grammeme.

From a pedagogical perspective, it is important to add details concerning the different verbal groups in French which are currently not given consideration on the site. For example, language learners need information concerning changes in verbal radicals.

Following improvements to the site, we wish to undertake a study to determine the effectiveness of *Le Morpheur*. We will compare our semantic approach with the traditional method of teaching French verbal inflectional morphology by measuring the proficiency of two groups of students prior to and following, in one case traditional instruction, and in the other use of *Le Morpheur*.

Two of our goals for the long term are 1) the elaboration of a version of *Le Morpheur* for Francophone adult learners of English and 2) the development of a comprehensive grammar course which integrates this approach.

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