

***FLEXTrans Rule Generator* User Documentation**

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1 Introduction

FLEXTrans Rule Generator is a tool that enables you to write some *FLEXTrans* transfer rules in a more linguist-friendly manner.

FLEXTrans Rule Generator is currently only available on 64-bit Windows computers.

Each rule defined in *FLEXTrans Rule Generator* describes a pattern that is used to match a source language structure and then map it to a transfer language structure.

1.1 Installation

To install *FLEXTrans Rule Generator*, obtain the installer from <https://drive.google.com/file/d/1sFHyqW5gs-bLzAJS9lDTi09uagKf9z-n/view>.

Note that *FLEXTrans Rule Generator* needs to be invoked from within *FLEXTrans*.

1.2 Invocation

You use a command line to invoke *FLExTrans Rule Generator*. The arguments are as in (1).

- (1) `FLExTransRuleGenerator <rule-file> <source/target-FLEx-category/features> (<max vars>)`

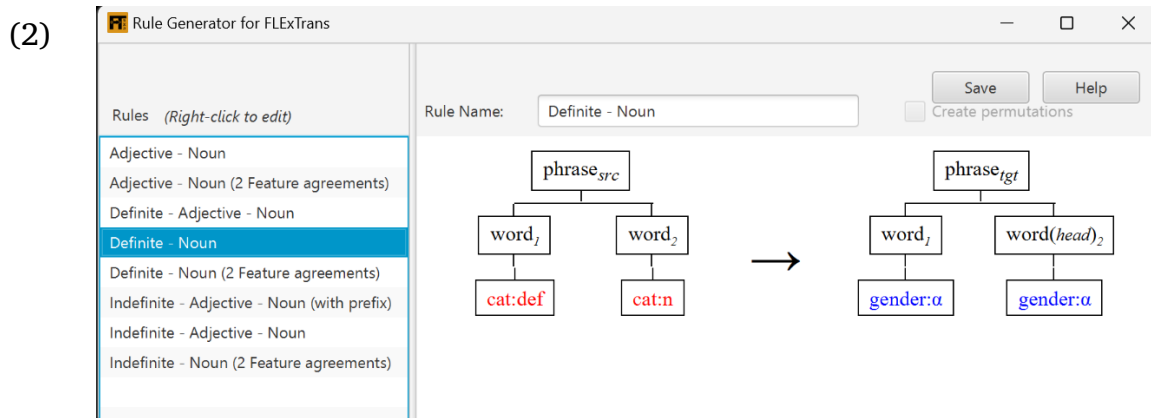
`<rule-file>` Specifies the FLExTrans transfer rule file.

`<source/target-FLEx-category/features>` Specifies the XML file with both source and target categories and features.

`(max vars>` Specifies the optional max number of variables to show in values (default is 4)

1.3 Appearance

FLExTrans Rule Generator looks something like what is shown in (2).



There are two panes. The left one contains one transfer rule per line. The right pane shows a tree diagram of the selected rule.

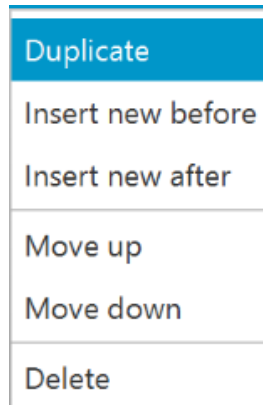
The “Save” button is used to save changes made to rules or newly added rules.

The “Help” button is used to get this user documentation file or to show the “About” dialog box.

2 Editing rules

You can create new rules, rearrange them, or delete them by right-clicking on one. You will then see a context menu like what is in (3).

(3)



Use the "Rule Name:" text box to add or edit the name of a rule.

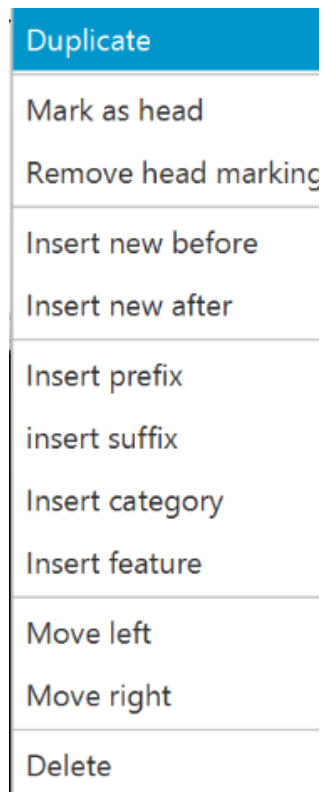
3 Editing trees

The right pane contains a simplified tree diagram. Each such diagram has two parts: a source phrase is on the left and the corresponding target phrase is on the right. Every phrase will always have at least one word in it.

3.1 Editing a word

When you click (or double-click or right-click) on a word item in the tree, the context menu shown in (4) appears.

(4)

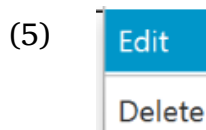


Select the item you wish to use. They are as follows:

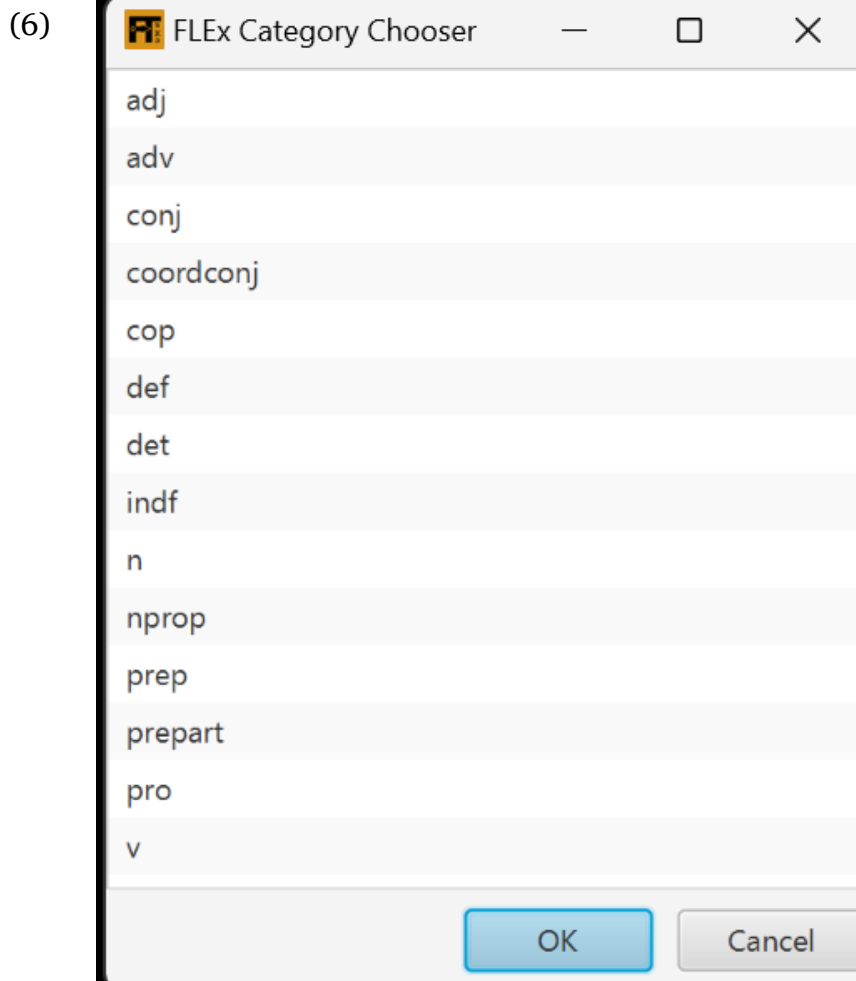
- Duplicate: creates a complete copy of the current word.
- Mark as head: labels this word as being the head of the phrase.
- Remove head marking: removes any head marking on this word.
- Insert new before: inserts a new word item before the selected word.
- Insert new after: inserts a new word item after the selected word.
- Insert prefix: inserts an affix item labeled as a prefix. This is available only if the selected word has no affix items yet.
- Insert suffix: inserts an affix item labeled as a suffix. This is available only if the selected word has no affix items yet.
- Insert category: inserts a category item. This is available only if the selected word has no category item yet.
- Insert feature: inserts a feature item.
- Move left: moves the selected word to the left.
- Move right: moves the selected word to the right.
- Delete: removes the selected word.

3.2 Editing a category

When you click (or double-click or right-click) on a word item in the tree, the context menu shown in (5) appears.



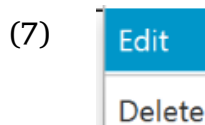
The Category chooser appears if you choose “Edit.” Which categories are listed in the chooser depends on whether the category is in the source or the target portion of the tree diagram. *FLEXTrans* gives *FLEXTrans Rule Generator* the list of categories for the source *FLEX* project and the target *FLEX* project. In one case, the category chooser looked like what is in example (6).



If you choose “Delete,” the category item will be deleted.

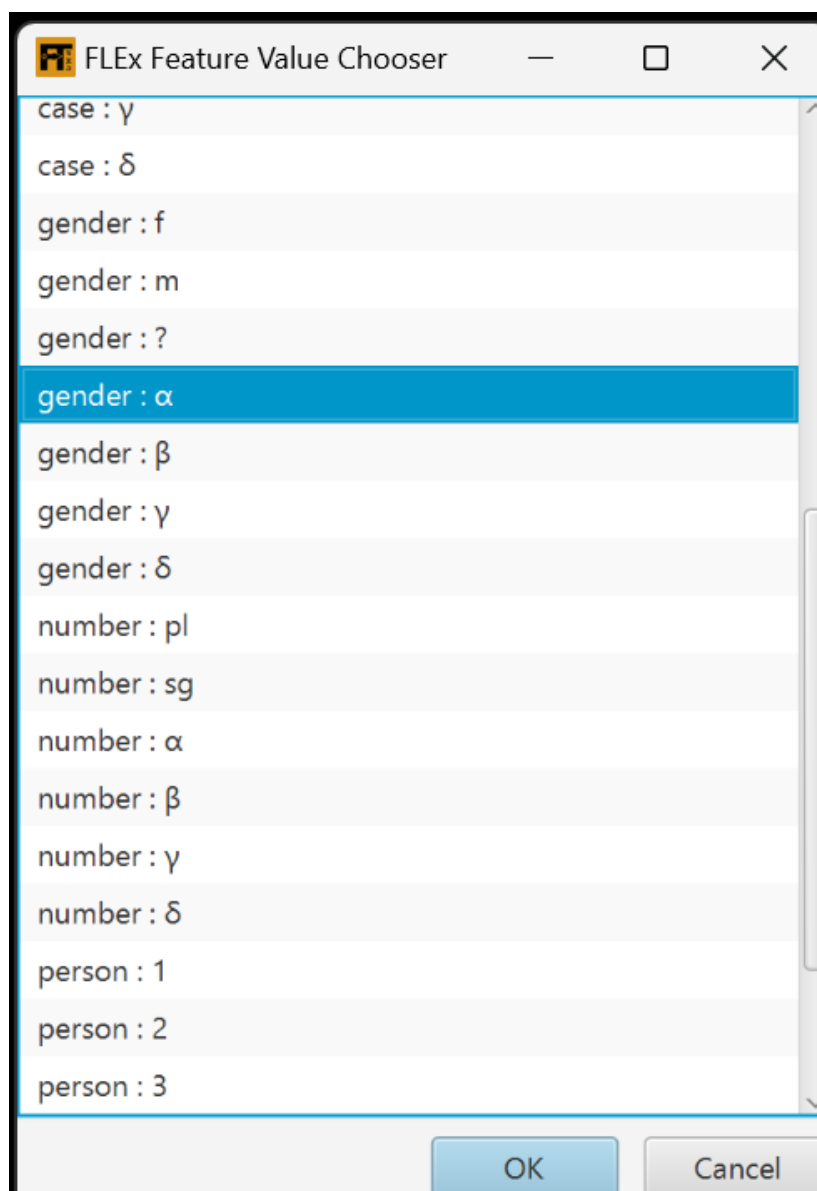
3.3 Editing a feature

When you click (or double-click or right-click) on a word item in the tree, the context menu shown in (7) appears.



The Feature chooser appears if you choose “Edit.” Which features are listed in the chooser depends on whether the feature is in the source or the target portion of the tree diagram. *FLExTrans* gives *FLExTrans Rule Generator* the list of features for the source *FLEx* project and the target *FLEx* project. In one case, the category chooser looked like what is in example (8).

(8)

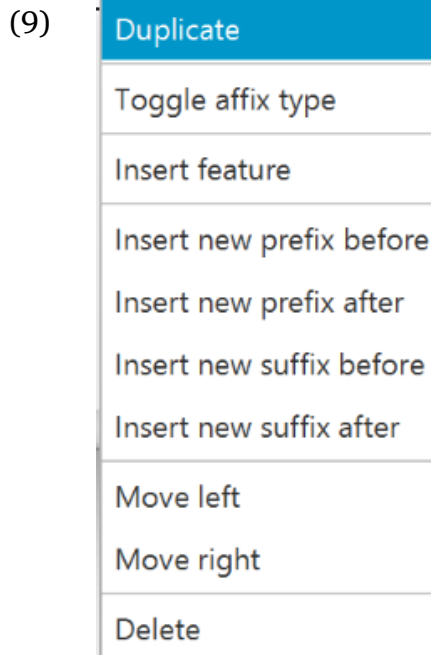


The number of Greek letter variable values shown defaults to four. You can set the number via the optional third command line parameter. See section 1.2.

If you choose “Delete,” the feature item will be deleted.

3.4 Editing an affix

When you click (or double-click or right-click) on an affix item in the tree, the context menu shown in (9) appears.



Select the item you wish to use. They are as follows:

- Duplicate: creates a complete copy of the current affix.
- Toggle affix type: changes the type from prefix to suffix or from suffix to prefix.
- Insert feature: inserts a feature item.
- Insert new prefix before: inserts a new affix item labeled as a prefix before the selected affix.
- Insert new prefix after: inserts a new affix item labeled as a prefix after the selected affix.
- Insert new suffix before: inserts a new affix item labeled as a suffix before the selected affix.
- Insert new suffix after: inserts a new affix item labeled as a suffix after the selected affix.
- Move left: moves the selected affix to the left.
- Move right: moves the selected affix to the right.
- Delete: removes the selected affix.

3.5 Create permutations check box

To the right of the rule name is a check box labeled "Create permutations." This check box is enabled only when the target portion has at least three words and one of them is marked as the head. If you want *FLExTrans* to create separate rules for each possible combination of the three or more word items, check this box.

4 Restarting *FLExTrans Rule Generator*

Whenever you exit and restart *FLExTrans Rule Generator*, it will do the following:

1. remember its window size, location, and layout;
2. remember which rule you last chose;
3. remember the category chooser size, location, and layout;
4. remember feature chooser size, location, and layout;.

5 Known problems

The following items are known to be less than desirable with this version of *FLExTrans Rule Generator*:

1. *FLExTrans Rule Generator* only works on WIndows.
2. The user interface is in English only (but can potentially be translated into other languages).

6 Support

If you have any questions with *FLExTrans Rule Generator* or find bugs in it, please send an email to blackhandrew@gmail.com.