FLEX – Allomorphs, Variants, Complex Forms

FLEX Session 4– Allomorphs, Variants, Complex forms

Objectives

- To be able to add allomorphs, variants, and complex forms to the lexicon.

Why?

The default parser in Flex is a morphological parser, and the more complete the description of a morpheme and its use the parser has available to it, the better it will be able to parse that morpheme. Certain kinds of information help to constrain or limit the parser so it identifies morphemes correctly. Some of the information that constrains the parser includes allomorphs and their environments, and variants (free, spelling, dialectical, and irregularly inflected). Morphemes can occur in simple word forms or in complex forms. Compound words can “hide” morphemes. Helping the parser understand these complex forms is usually the best practice. It is recommended that you mark all the compound forms in your lexicon. However, depending on your research goals you may not want to do this.

Entering Allomorphs

Start FLEX and open Simple project.

How to add an allomorph to the lexicon

1. Go to -s entry (noun).

2. Click on the white space to the right of Allomorph. The Insert Allomorph link will become visible; click on it. In the Affix Allomorph slot enter es. (e.g., foxes).

3. To add an Environment for the Allomorph, first click just to the left of Environment, and a drop down triangle will appear. Select Insert Environment Slash. Type x. Click on the drop down triangle to the left of Environment and select Insert Environment bar. Click on the drop down triangle again, and select Insert Word Boundary.

Exercise

1. Have the participants add allomorph -t to -ed (e.g., built). Don’t forget to add the environment.

Entering Variants

Flex comes preconfigured with four variant types: Dialectal, Free, Irregularly inflected, and Spelling. These variants should have their own entries in the lexicon since they are not predictable by the normal grammar rules of the language. For example, irregular inflections such as ‘broke’ (the past tense of
'break') go into the lexicon separately from the base form. The two forms “break” and “broke” will be linked together by Flex. You have the option of configuring the entry for the Irregularly inflected form as a minor entry of the base form.

**How to add an Irregularly inflected variant to the lexicon**

1. In the project Simple, go to the entry break.
2. Click in the white space in the Variant area. The Insert Variant link will become visible, click on it. Enter broke and click create.
3. Now to set the Variant Type, click on the white space next to Variant Type. Then click on the button with the three dots. The Choose Variant Type Window will appear; select Irregularly Inflected Past Form; then click OK. The Show Minor Entry will be checked by default.
5. Add the variant: spoke - speak (pst) - verb with Variant Form = speak, Variant Type = Irregularly Inflected Form. This time using the menu Insert → Variant, to demonstrate the alternative method of adding a variant to an entry.
6. Next set the Variant Type, click on the white space next to Variant Type. Then click on the button with the three dots. The Choose Variant Type Window will appear; select Irregularly Inflected Past Form; then click OK. The Show Minor Entry will be checked by default.

**Exercise**

1. Have the participants add thought as an Irregularly inflected past form for think.
2. Have the participants add an entry for go, and add went as an irregularly Inflected past form of go.

**How to link variants that already exist in the lexicon**

It is likely that you may discover that two entries in your lexicon are variants of each other. There is an easy way to link variants such as these. We will look at the example of gray and grey which are dialectal and/or spelling variants in English.

1. In the project Simple, create a new entry: gray - black white - adjective.
2. Create a new entry: grey - black white - adjective.
3. Go to gray entry. In the Insert menu, click Variant. Type grey, and click Add Variant. Click on the white space to the right of Variant Type. Click on the button with the three dots that appears, and check Dialectal and Spelling Variant. Click OK.
Exercise

1. Have the participants add color and colour as new entries. Then link them as a Dialectal Variant. (Each participant can choose which will be the “normal” form and which will be the variant depending on his or her dialect of English.)

Entering Complex Forms

Complex forms are forms which contain more than one morpheme, such as derivatives, compound words, idioms, etc. Derivatives are typically word forms whose word class or transitivity has been changed by the addition of morpheme(s), but other types of derivatives are possible. Compound words are words like “blackboard” in English.

How to add a Derivative complex form

1. Create a new entry: -er (suffix) - “makes noun” - Affix Type: Derivational- Attaches to Category: Verb - Changes to Category: Noun
2. Create a new entry: kick (stem)- “strike with foot” - Verb
3. Create a new entry: kicker - stem - “ person who kicks” - Noun
4. Now to set the Components click on the white space next to Components. Then click on the button with the three dots. The Choose Lexical Entry or Sense Window will appear; in the box labelled Find, type kick, click on Specific Sense radio button, then click OK.
5. Now to specify the remaining component, click on the white space next to Components. Then click on the button with the three dots. The Choose Lexical Entry or Sense Window will appear; in the box labelled Find, type er, click on Specific Sense radio button, and then click OK.
6. Notice that the Complex Form Type field is now visible. In order to set the Complex Form Type, click on the white space to the right of it. Then click on the button with the three dots. The Choose Complex Form Type Window will appear; check the box labelled Derivative; then click OK.

How to add a Compound complex form

1. Create a new entry: piggy bank by clicking on the Create New Entry Icon.
2. The New Entry Window will appear; in the box labelled Lexeme Form type piggy bank. (Note: Morph type will be automatically set to "phrase".)
3. In the box labelled Complex Form Type, click on the drop down arrow and choose Compound.
4. Enter gloss of “recipient for small coins”.
5. Set Category to Noun.
6. Click on Create.
7. Now to set the first **Component** click on the white space next to **Components**. Then click on the button with the three dots. The **Choose Lexical Entry or Sense Window** will appear; in the box labelled **Find**, type “piggy”; then click **Create**.

8. The **New Entry Window** will appear; fill in “small pig” for the **Gloss**, and **Noun** as the **Category**; then click **Create**. “Piggy” should now be listed as the first component of “piggy bank”.

9. Now to set the last **Component** click on the white space next to **Components**. Then click on the button with the three dots. The **Choose Lexical Entry or Sense Window** will appear; in the box labelled **Find**, type “bank”. Click on **Specific Sense** radio button; then click **OK**. Now “bank (financial institution)” should be added beside “piggy” as one of the components of “piggy bank”.

**Exercise**

1. Have the participants add **heater** (makes hot) and **strainer** (sieve) as **derivatives**.

2. Have the participants add **blackboard** as a **compound** form.