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.

4. Create a new entry: **speak** - verb.

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.