

TBTA Tutorial Lesson 14: Beginning a New Language Project

14.0 Introduction

Congratulations! You've finished learning how to use TBTA's grammar. Learning how to use TBTA hasn't been easy, but this project will save you many years of work. Hopefully by now you have a pretty good understanding of each type of rule in the descriptive grammar. You should also be familiar with most of the capabilities of the transfer rules. By carefully and creatively combining the capabilities of the transfer rules, you'll be able to restructure the semantic representations into a new underlying representation that is appropriate for your target language. Then as you develop your lexicon and descriptive grammar, you'll be able to generate texts in your language that are easily understandable, grammatically perfect, and semantically equivalent to the source texts. This tutorial is going to walk you through the startup process for a new language project.

14.1 Beginning a New Language Project

Begin by going to Utilities, 'Select / Add a Target Language.' Click on the button labeled 'Add a New Target Language,' and enter a name for the language such as **My Final Tutorial**. You'll see a progress dialog indicating that TBTA is building the case frame adjustment rules for each verb and adjective in the ontology. You'll then be prompted to select a font; choose 'Arial Black.' Answer Yes when asked if you want to use the Roman Alphabet. You'll then be asked to select the phonetic features that are relevant to your language; go ahead and select all of them. Then close the alphabetic sequence dialog.

14.1.1 Lexicon and Grammar Development Setup dialog

Go to the Lexicon and Grammar Development screen and click the Setup button. In the View tab, select the appropriate 'Screen Arrangement.' If you select 'Standard Arrangement,' the Grammar Tree will be in the lower left corner of your screen; if you select 'Wide Screen Arrangement,' the Grammar Tree will be in the upper right corner of your screen. You should also check the box labeled 'Show Brief Glosses.' When this option is checked, TBTA will include brief glosses (e.g., BE – E 'existential') for many of the concepts when it displays the semantic representations. Including the brief glosses is helpful while you're becoming familiar with the semantic representational system.

In the View tab, there's a frame called 'Theta Grid Adjustment Rules – Adposition Insertion.' If your language uses prepositions, you should probably select 'Only the First NP in a Series'; if your language uses postpositions, you should probably select 'Only the Last NP in a Series.' This option tells the Theta

Grid Adjustment rules whether they should insert prepositions/postpositions into only the first NP of a series (e.g., John gave books to Mary, Bill, and Peter.), the last NP of a series (e.g., John gave books Mary, Bill, and to Peter.), or all the NPs in a series (e.g., John gave books to Mary, to Bill, and to Peter.)

Quotation Frame propositions (e.g., John said to Melissa, “Come here. I want to show you something.” John said to Melissa.) are embedded propositions that repeat the speaker, listener, and verb of communication after multi-sentence quotations. If your language doesn’t use Quotation Frame propositions, then you should check the box labeled ‘Delete Closing Quotation Frames.’

If your language uses different speech styles, then you should check the box labeled ‘Prompt for new Speaker – Listener situations.’ This box informs TBTA that whenever you go to a new verse, it will scan through the speech features and check whether or not any of the Direct Speech Style rules fit the speech situation. If none of the Speech Style rules fit a speech situation, TBTA will alert you to the new speech situation. You may now close the Setup dialog.

14.1.2 Activate Analysis Notes

At the Lexicon and Grammar Development screen click the yellow Analysis Notes button in the lower right corner. When you see the Analysis Notes dialog, check the box in the lower left corner labeled ‘Automatically display the Analysis Notes when working in the Grammar Introduction.’ By checking that box, TBTA will automatically display helpful notes whenever you begin working on a new verse. The Analysis Notes button will be yellow whenever the currently selected verse has helpful notes that you should read before you begin working on that verse. Most of the verses in the Grammar Introduction have helpful notes that you should consult. Those notes will walk you through the process of developing your target grammar.

14.1.3 Complex Concepts

As was described in an earlier tutorial, the semantic representations consist almost exclusively of semantic primitives, semantic molecules, and inexplicable concepts; explicable semantically complex concepts are not generally included in the semantic representations. However, when a language has a lexical equivalent for a semantically complex concept, that complex concept may be inserted into the semantic representations by the Complex Concept Insertion rules.

Click the button labeled ‘Complex Concepts’ in the lower right corner of the Lexicon and Grammar Development screen, and go through the lists of nouns, verbs, and adjectives. Rest your cursor on each concept in the list and you’ll see a popup showing how that concept has been explicated throughout the semantic representations. If your language has a lexical equivalent for a complex concept, then you should check the associated box. Then that complex concept will be inserted into the semantic representations.

14.1.4 Grammar Library

An earlier tutorial described the Grammar Library – a set of prewritten rules that perform tasks required by many different languages. In order to see the Grammar Library, check the box labeled ‘Show Grammar Library’ near the lower right bottom of the screen. Then carefully go through the rules in the library, particularly the rules in the group called ‘Common Transfer Rules.’ After reading a rule’s name, if you think that rule might be appropriate for your language, open the rule and read the comments for the various structures in the rule. If the rule is appropriate for your language, drag that rule from the library to the group called ‘Common Transfer Rules Copied from the Library’ under the node labeled ‘Complex Concept Insertion Rules and Library Rules.’ The act of dragging a rule from the library to that group automatically activates that rule. After you’ve considered each of the rules in the library, close the library by unchecking the box.

14.1.5 Feature Adjustment Rules

Double click on the node labeled ‘Feature Adjustment Rules’ in the grammar tree, and you’ll see the Feature Adjustments dialog. As was described in a previous tutorial, this dialog has three sections: 1) hiding features in the semantic representations that are irrelevant to your language, 2) collapsing feature values in the semantic representations that aren’t significant in your language, and 3) adding new features that are relevant to your language. Right now the button labeled Hide Features is depressed indicating that you’re ready to specify which features in the semantic representations should be hidden because they’re irrelevant to your language. In this dialog you’ll see each of the syntactic categories with their features and feature values. If you rest the cursor on any row in the final column, a popup will show you all of the values associated with that particular feature. You should look at each of the features listed in this dialog and decide which ones aren’t relevant to your language. For each feature that isn’t relevant, check the box in the leftmost column. Then that feature won’t be displayed in the semantic representations and it won’t appear anywhere in your grammar. For example, scroll down and look at the features for clauses. Some of those features are already checked so they’ll be hidden. If your language uses a system of honorifics in direct speech, then you should unhide the six features associated with direct speech. Carefully consider every feature listed in this dialog and hide the features that are irrelevant to your language.

Now click the button labeled ‘Collapse Feature Values.’ Every language will require some feature collapsing, so go through the features and collapse the values that are unnecessary for your language. For example, if your language only distinguishes singular and plural nouns, select Nouns in the left dropdown and Number in the right dropdown. Then click on Dual and drag it down to Plural. Similarly drag Trial and Quadrial down to Plural. By dragging these values down to plural, you’ve collapsed them with Plural, as was described in an earlier tutorial.

Go through each feature in each syntactic category and collapse the values that aren't relevant to your language. Features that are good candidates for collapsing include noun Number, 'Participant Tracking,' Proximity, Person, and verb Time. Add as many new values to these features as you want. The goal here is to modify the feature system so that it contains values that are relevant to your language.

After you've finished the feature collapsing process, click the 'Add New Features' button in the upper right corner. This panel lets you add some very common and useful features to the semantic representations. You should probably activate the rules in rows 1, 2, and 6. If your language has a technique for promoting patients to subjects, then you should also activate rows 3 and 5; if your language doesn't have a method of promoting patients to subjects, then you should activate row 4 rather than rows 3 and 5. Writing your grammar will be much easier if you add these features that distinguish the various types of adverbial clauses, the various types of stative clauses, voice, and grammatical relations.

14.1.6 Styles of Direct Speech Rules

Some languages have different styles of speech depending upon the respective status of the speaker and listener. For example, a language may use one set of personal pronouns to indicate respect, and another set of pronouns may be used to indicate familiarity. If your language distinguishes different styles of direct speech, then you'll want to use these rules. Open the dialog by double clicking on the node labeled 'Styles of Direct Speech' in the grammar tree. You'll need to define the speech styles for your language as was described in a previous tutorial, so you should go through that process now.

14.1.7 Target Tense / Aspect / Mood Rules

The process of defining the various tenses and verbal forms that are relevant to your language was discussed in a previous tutorial. You should repeat that process now.

14.1.8 Relative Clause Rules

A great deal of typological research has been done with respect to relative clauses, and common patterns throughout the world's languages have been observed. In particular linguists have observed four different encoding strategies and a relativization hierarchy. Not all languages employ relative clauses; some languages form the semantic equivalent with topical clauses. If your language uses topical clauses rather than relative clauses, you'll need to write structural adjustment rules to convert relative clauses to topical clauses. But if your language does use relative clauses, you should go through the process of describing them now using the Relative Clause rules.

14.1.9 Target Tense / Aspect / Mood Rules

A previous tutorial described the Target Tense / Aspect / Mood rules, so you should go through this process now.

14.2 Notes on Grammar Topics

As you develop your target grammar, you should enter many notes and comments into your rules. At the time when you're writing a particular rule, the purpose of the rule will always seem obvious. However, when you look at the rule a month later, you may not be able to remember why you originally entered that rule. So you should always enter at least one example into the comment for each rule. Later when you edit a rule and change something in it, you should indicate in the comment why you changed the rule. For example, suppose you edit a rule so that it no longer applies in a particular environment. You should then indicate in the comment why you don't want that rule to apply in that environment.

As you're building your grammar, you should also build a set of notes for each topic in your grammar. On the main toolbar is a button labeled 'Target Notes.' When you click on that button a new dialog will appear. Click on the button labeled 'New Topic,' and enter something like **Relative Clauses**. You may then enter notes relevant to relative clauses into the large text box. You should develop a set of notes for relative clauses, complement clauses, adverbial clauses, tenses, aspects, moods, and any other topic that you deal with in your grammar. Later those notes will be very helpful when you're trying to remember why you wrote the rules that you did. When you're entering notes, you may alternate back and forth between the standard font and the target language font by pressing the Alt key, just like when you're editing a rule's name or comment.

14.3 Conclusion

You've now completed the TBTA tutorials. The next step is to begin working through the Grammar Introduction. It's highly recommended that you first work through the Grammar Introduction in English. By developing an English lexicon and grammar first, you'll become more familiar with the rules and how TBTA operates. But as you're developing your English grammar and lexicon, you should certainly be thinking about how to handle the various constructions in your target language.

You should now go to Utilities, 'Select / Add a Target Language' and click the 'Add a New Target Language' button. Enter the name of the language that you want to generate texts for. Then begin your new language project just as you have several times in these tutorials.