• Imperfective verbs: The [-pf] feature prevents the system from deriving a coherent semantics for [perfect].

Returning to the folklore mentioned in the introduction, aspect is a grammatical category in Russian: verbs in all contexts must be either perfective or imperfective (or in our terms, to occur in clauses where Asp is either [+pf] or [-pf]). But, according to this study, is not true that all lexemes have perfective and imperfective forms, since verbs with lexically marked aspect do not. As perfective aspect of verbs without lexical marking can only be derived on the basis of telic aspectuality, only verbs with internal arguments that can participate in the derivation of a value for aspectuality occur in such true aspectual pairs (whether the aspectual morphology is pre- or suffixal). Such verbs may be transitive or unaccusative, which, as Schoorlemmer indicates, in turn provides a very powerful diagnostic for unaccusativity in Russian: if an intransitive verb shows aspectual pairing it must have an internal argument at least in the perfective, and therefore it must be an unaccusative verb.

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## **COUNTING FOR LINGUISTS**

## By Andrew Carnie

An explanation of Microsoft Word98's renumbering features

A few months ago, I put the finishing touches on a manuscript I'd been revising. Previous to my revisions, it had sixty seven examples and four major section headings; once I was done, I had seventy three examples, and five major section headings. Further, I'd reversed the order of two of major sections. My final task then, before sending the paper off to a journal, of course, was to go through the whole document and renumber all the examples, all the references to those examples in the text and all the section headings. It took me the better part of a day to do this, and even then, I discovered that I'd made a mistake in renumbering around example (20), and had to do it all over again. Frustration reigned! Despite my general love for computers and all that they could do, and despite my strong views against sweatshop labor, I almost yearned for the days when academics regularly had assistants that they could assign such boring tasks to. I knew then that I had to finally take the plunge and invest in some software that could do the work for me.

This is not the first time I've toyed with automatic example-renumbering programs. Betsy Ritter introduced me to Jonathan Mead's RENUM-BER program in 1995. This program serves as a filter on the output of word processors, and renumbers specially marked symbols. Each example is given a tag (e.g. \$N1) and each reference to that example is given an identical tag. Once you are finished editing the document, you save it in rich text format (RTF), run it through RENUM-BER, then decode it back into normal format. I gave it a fair try, and for the most part it seemed to work well. It did have its down sides: I found the tags very distracting, especially if I was trying to put some finer touches on the formatting. I was also disappointed in the fact that if I wanted to continue to use the renumbering features, I always had to be certain that I was editing a version of the document with the tags, rather than the output of the renumber program. This meant I had to keep two copies of every document. More than once I made changes to the wrong version of documents, and had to go back and do them again. I was also, I admit, far too lazy to use this program consistently. The program is shareware, and in 1995 cost \$20 (I'm not sure if it is still available). After an initial flirtation, I quickly found myself back in the land of manual renumbering, and decided to spend my \$20 on books

In 1992, 1994 and 1996, there was some discussion in the Linguist list as to various programs and scripts that people could run to renumber their examples. These discussions can be found at:

http://linguistlist.org/issues/3/3-956.html#2 http://linguistlist.org/issues/5/5-637.html#1 http://linguistlist.org/issues/7/7-1675.html#1 Suggestions ran from a number of scripts and applets which people had written to purchasing the language oriented word processor: Nisus Writer. Although I read the discussions with interest, inertia kept me from trying any of these options.

When Microsoft announced that Word98 contained automatic list renumbering features, my heart skipped a beat. 'Finally', I thought, 'I can just get my word processor to do it for me.' I was initially not only disappointed with the results, but incredibly frustrated. Like most people, I had no desire to work my way through Word98's poorly

designed help features. So I just started in. Word automatically numbered for me, it is true, but it didn't do it in any coherent way that I saw. Regular text intervening between examples (as is standard in our discipline) seemed to throw the sequence off. Numbered section headers also seemed to throw a spanner in the works. Word kept trying to automatically renumber my section headings as part of my example numbers. Further, it isn't at all obvious how to make reference to these numbers in the body of the text. With one particular document I was working on, the sequence of numbers as automatically generated by Word98 was 1,2,3,47,48,32,33,34,4,5,6. Don't ask me how that happened, I'm still not sure. Much swearing resulted, and I turned the automatic numbering off (which in itself was not a task for the faint of heart). This said, these kinds of problems could easily have been resolved if I'd bothered to do a little more background research. In fact, renumbering and cross-referencing are incredibly easy, and work quite well. After some initial pain in setting it up, it will work for all your documents. Below, I've set out the steps for setting up Word98 to renumber and cross-reference a typical linguistics document. The initial task is rather long and daunting, but once it's done, you never have to do it again, and you'll be free and clear with renumbering.

The keys to making renumbering work correctly are three concepts from typesetting: **styles**, templates and cross-referencing. Styles are essentially prepackaged (or user defined) bundles of formatting features. They can also be used to mark off certain text (like examples or headings) so that functions like renumbering apply only to them and not to other parts of the document. Once you've defined certain styles, the renumbering feature works like a charm. The problem with styles is that, with the exception of a few ugly prepackaged ones, documents in Word98 don't have universal access to your user-defined styles. This is where a template comes in handy. Templates are user-definable groups of document formatting instructions. Templates include styles. Part of the initial set-up in getting renumbering to work is to create a template that you will use for all your documents. The third tool is cross-referencing. It is possible to refer to one part of the document in another part if you've set things up correctly. In particular you can cross reference example numbers, tables, section headers and even footnotes. I'll now go through the steps necessary to get you going in renumbering. What I'm describing here is primarily for Word98 for Macs. However, most of what I say should also be true of Word97 and Word98 for PCs.

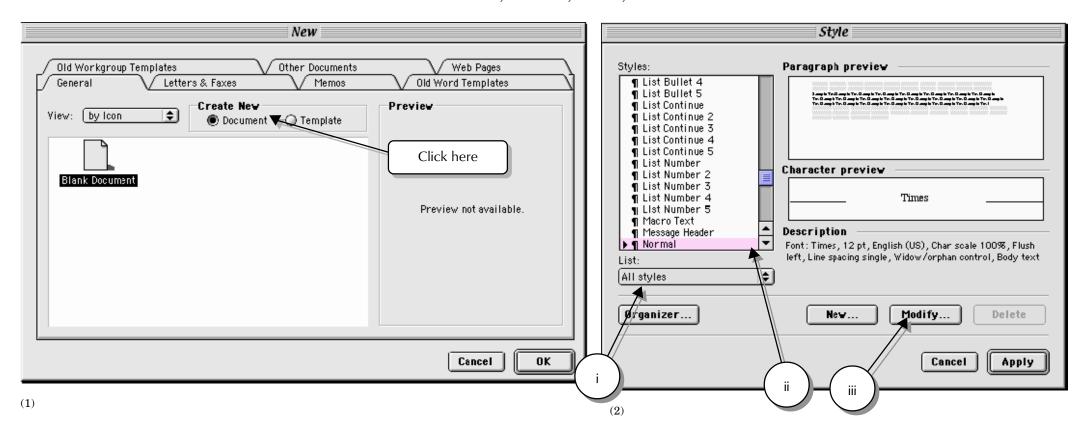
#### 1. Setting up a template

First, you need to create a template that you will use for all your documents. A stuffed example of such a template can be found at

http://www.linguistlist.org/~carnie/papers/ Word.template.sit

Point at the **File** menu, and select **New...**. A dialog box like (1) will appear on your screen.

Next, click on the **Template** toggle switch under **Create New**, then click on the **OK** button. This will bring up a window that looks suspiciously like a blank document. Don't be fooled, however, this is not a document, but a template. At this stage you can do all sorts of magical things, like typing in



text that you want to appear in every document (like a consistent running header or footer), or change the margins. I found Gookin and Sydow's (1998) *Word 98 for Macs for Dummies* (Foster City, CA: IDG books, US\$20.00) an excellent introduction to playing with templates. What is most important for renumbering, however, is the defining of styles.

#### 2. Defining Styles

In order to do a standard linguistics document, you'll need at least 3 styles:

- a normal style for regular text,
- a style for examples,
- · at least one style for headings.

Personally, I use three different heading styles, which allows me to use different levels of subsections (e.g. 3., 3.1, and 3.1.1) with different formattings. To define a style, with your blank template document open, go to the **Format** menu, and pull down and select **Styles**. The style dialog box will pop up as in (2).

(i) Start by clicking on the list bar and select **All styles**. This will bring up a list of all the predefined styles. First we're going to edit the 'Normal' style. (ii) Make sure that the 'Normal' item is highlighted in the style list. (iii) Next click on the **Modify** button. A new dialog box will now pop up (3).

At this stage you can do all sorts of fancy things,

such as changing the default font for the main body of the text, changing your margins etc. This is all done via the **Format** button (i) at the bottom of the window. One crucial point to remember is to make sure that the **Add to template** (ii) box is clicked and that the **Style for following paragraph** (iii) is set to 'Normal'. I personally find it easiest to manipulate styles if I have a keyboard shortcut defined. You can assign a keyboard shortcut by clicking on the **Shortcut Key** button (iv). Once you have completely formatted the style as you want it, you click on OK, to edit the next style.

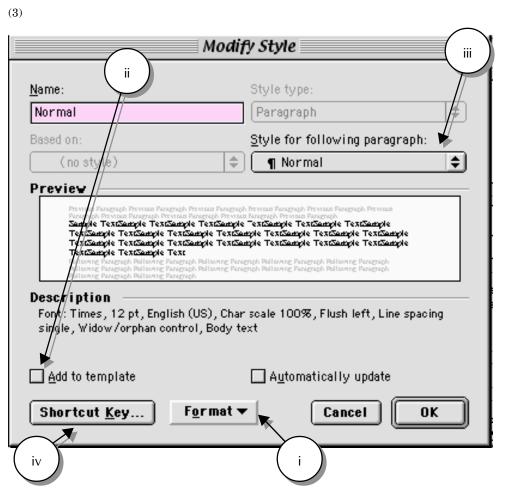
Next, we set up the headers. The basics are the same: click on 'Header 1' in the styles window, then click the **Modify** button. Again you can set up the formatting exactly as you want it. To get Word98 to renumber your section headers, you have to add one important step here. Click on the **Format** button, and pull down until you select **Numbering**. A new dialog box will pop up (4). Click on the tab that says **Outline Numbered** (4i). Be sure to use 'outline numbering' and not 'numbering'.

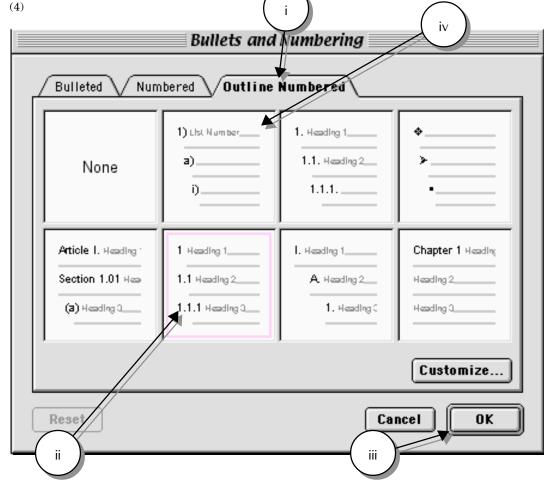
Select the format of header numbering you want (or if you are really adventurous, click on customize and make your own!). I recommend the unindented 1, 1.1, 1.1.1 sequence (ii). Then click on OK (iii). This is the function that will automatically number your headers. You will now be back in the modify style box. Other important parameters

include making sure that the **Add to template box** is clicked, and that the **Style to follow** is set to 'Normal'. Again, at this stage, you may want to set up a shortcut key. When all this is done click on **OK**, which will take you back to the **Styles** box.

It is possible to have more than one heading style (e.g., **1. Main Heading**, *1.1 Sub-heading* etc.) and yet keep the numbering sequential. To do this, you simply modify the prepackaged styles 'Heading 1', 'Heading 2', 'Heading 3' etc. These form a *style family*. The numbering will be consistent throughout the family, but the actual formatting of individual styles may differ. 'Heading 1' is for main section divisions (whole numbers: 1, 2, 3), 'heading 2' for subsections (1.1,1.2,1.3 etc) and 'heading 3' for sub-sections (1.1.1, 1.1.2, 1.1.3 etc.) For more on styles and style families, see any decent book on Word98 (e.g. Gookin and Sydow).

Finally, now that we're experts in defining styles, we need to define a style for numbered examples. To define a new style, start by clicking on the **New** button in the main **Styles** dialog box. Up comes the **New style** dialog box. It looks suspiciously like the **Modify style** box (3). Again, you can format this as you like, by clicking on the **Format** button. Also, once again, the **Add to template button** should be clicked, the following style should be 'normal' and you can set up a shortcut key. The most important step here is to set up the numbering. Again, this is reached by clicking on **Format** and selecting **Numbering**,





then clicking on the **Outline Numbered** tab. Then select the numbering style you like. I like the indented '1),a),i)' sequence which is indicated in (4iv) above. Using 'outline numbering' is particularly important if you want to have example numbers with lettered sub-examples as in (5):

(5)

a) peanut butter

sandwiches

b) jelly

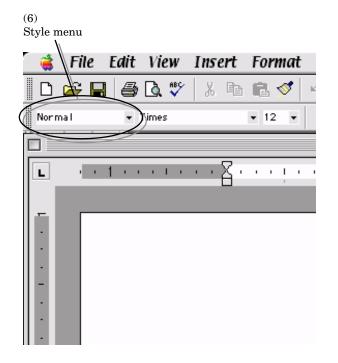
If you use **Numbered** instead of **Outline Numbered**, you won't be able to do this. To finish up, click **OK**, and then click **OK** again to get back to the **Style** box. Somewhat counter-intuitively, you next click on the **Cancel** button.

You have now defined all the styles for your template. Save and close the template by choosing **Save** from the **File** menu. Give your template a name. It should be saved in the templates folder, which is in the Microsoft Office98 or Word98 folder, which in turn is in your applications folder. Finally, close the template by choosing **Close** from the **File** menu. Be sure to do this before you start work on any documents.

### 3. Using the styles to automatically renumber

The hard part is now over, by having taken the time to set up a template with styles, renumbering is a piece of cake. Start by opening a new document. Don't use the button on the tool bar, as this won't allow you to access your template. You have to use the **New...** selection under the **File** menu. When the dialog box appears double click on your template. A blank document will open, with all your defined styles active.

There are two ways to access the styles; one is by using any keyboard shortcut you may have assigned. The other is by clicking on the downwards pointing arrow next to the rightmost menu on the second tool bar (6).



When typing the body of your text, the style should be 'normal'. To make a numbered header, simply change the style to the relevant 'header' style, and start typing. The number will appear automatically. Similarly, when typing an example, choose the 'example' style and start typing; the number will appear automatically.

When typing an example with interlinear glosses and a translation, only the first line of the example should be in the 'example' style:

The number is inserted automatically as part of the 'example' style.

If you want to have lettered examples, the technique is slightly more complicated. It is impossible to have *both* a number and a letter on the same

line, so in order to use both; it is necessary to have a blank first line. Start by typing the text you want to be numbered, preceded by a single carriage return:

first line of example second line of example third line of example

Then highlight the text and apply the 'example' style to all the lines including the carriage return

- (8)
- (9) first line of example
- $(10)\ \ second\ line\ of\ example$
- (11) third line of example

This temporarily throws off your numbering, but will be fixed in the next step. Next click your mouse at the beginning of the first line that you want lettered and insert a tab. The number should automatically turn into a letter and the example should indent:

(12) ¶
a) ⇒ first line of example
b) ⇒ second line of example
c) ⇒ third line of example

example style with no tab example style with 1 tab example style with 1 tab example style with 1 tab

To get a third layer of numbering (e.g. i, ii, iii, etc), insert an additional tab:

(13) ¶ example style with no tab
a) in first line of example
(i) in second line of example
(ii) third line of example
example style with 2 tabs
example style with 2 tabs

Since headings, examples, and the main body of the text are all in different styles, they don't interact with one another, and the number sequences should be distinct. If you want to see how the renumbering works, you can go back and insert an example and apply the 'example' style to it, and you'll see that all subsequent examples are automatically renumbered.

#### 4. Inserting references to examples in the text

Once you have created automatically renumbering examples, making similarly automatic references to them in the body of the text is also simple. This involves cross-referencing. Cross-referencing only works if you have applied an automatically numbered style to your examples. If you insert the example numbers by hand, the cross-referencing won't work. To insert a reference to an item into the text, the numbered item must already be in the document. Consider the example numbered (14):

(14) Cross-referencing is remarkably like binding theory

To cross-reference this item, you first put your cursor where you want the reference to go. Next, go to the **insert** menu, and select **cross-reference**. A dialog box like (15) will pop up.

(i) Under reference type, select numbered item; (ii) under Insert reference to, select Paragraph number. (iii) Next select the item you want to make reference to. Then finally (iv), click on the insert button. In your text where your cursor was placed a number with a gray background will appear, looking like: 15). This is your cross-reference. It will automatically renumber if your examples change in number too.

While this works well in most cases, there are a couple of annoying features that I find extremely distracting. When you insert the reference, the cross-referencing automatically inserts the closing bracket on the number. This means that to create a standard kind of bracketing (such as '(15)'), the first bracket "(" must be typed manually, but the second one is inserted automatically. While it is possible to manually edit out the automatic bracket, one has to do it by hand for every single example. On a related note, the only way to insert a reference to a lettered sub-example of a numbered example is to insert two cross-references: First, you insert a cross-reference to the number, then a second one to the letter. Unfortunately, since each of these involves the insertion of a right bracket, the result is particularly ugly: (14)a). Again, manual correction is possible, but I found it irritating that I couldn't turn this off somewhere. Finally, it sometimes may appear as if the cross-references aren't automatically updating. If this occurs, save and close the document, and then re-open it. The act of opening the document seems to retrigger the renumbering function.

#### 5. Is it worth it?

At this point, those readers who have made it this far through all the technical material will be asking themselves if going through all this is worth the bother. It isn't trivial to set up the initial template with all the right styles. It took me three ruined templates, and a couple of hours to get it right. Probably more difficult than setting up the system, is remembering to use it. Before trying this out, styles seemed to be strange exotica that only copy-editors and typesetters might use. Admittedly, at first blush, using styles is a technique beyond the ken of your average linguist, who just wants to get their brilliant thoughts on paper and has neither the time nor inclination to work out the details of their word processor.

Despite all this, I'm now a convert. Setting up the template can be a once-in-a-lifetime thing. When you have your template in place, you can use it for all your documents, if you so wish. If you've set up shortcut keys, then using styles is no more difficult than applying a new font or adding italics. Similarly, using cross-referencing is simply like choosing from a menu. I am fairly sure that the initial investment of time will save me a great deal of grief in the future.

A stuffed Macintosh copy of the template described above can be uploaded from: http://www.linguistlist.org/~carnie/papers/ Word.template.sit

