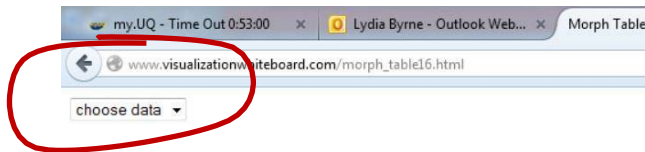
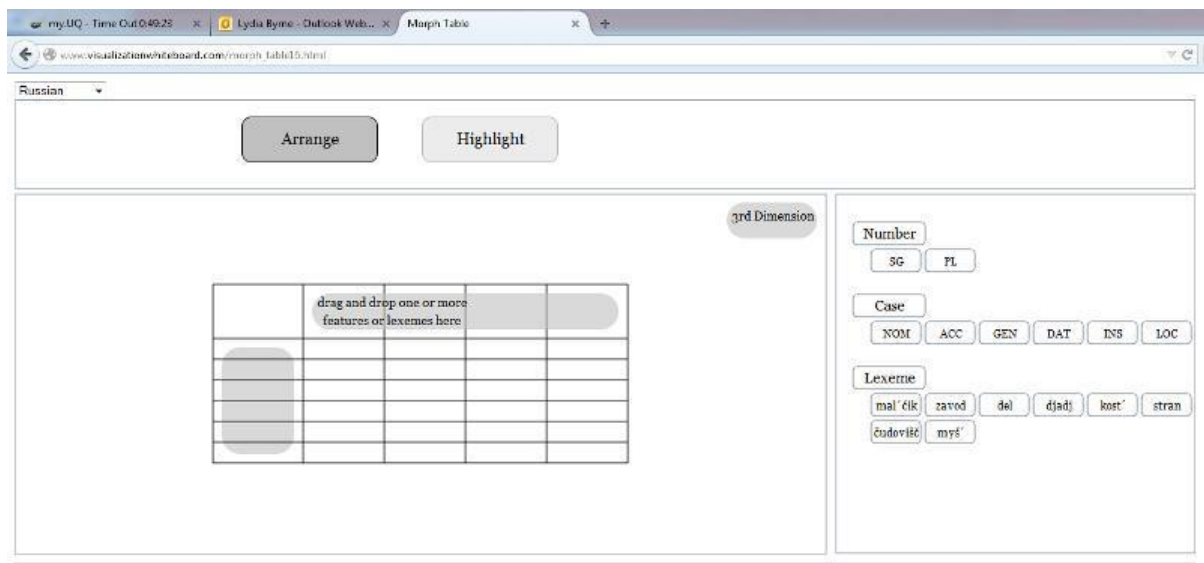


Steps for using:

1. Select a data set from the very top left hand corner (only the Russian & Murrinhpatha paradigms are in there at the moment)

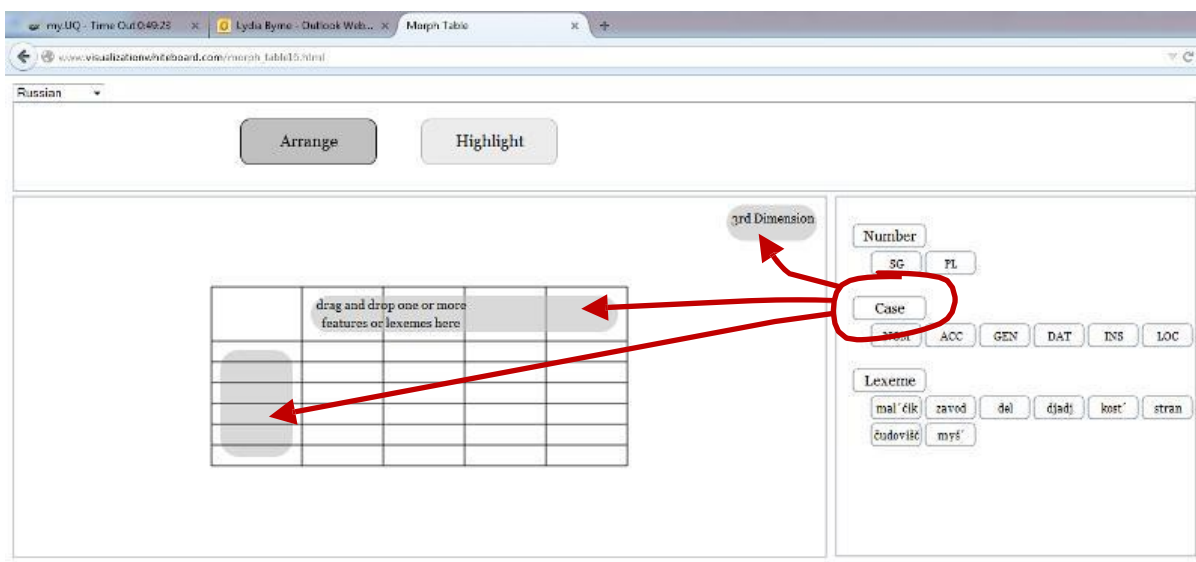


2. A layout should appear showing two buttons at the top



3. Click and drag any of "Number" "Case" or "Lexeme" headings over to either of the grey areas on the table or onto the "3<sup>rd</sup> Dimension" area. The mouse needs to be over the target area when you release the mouse.

**UPDATE: You can now add up to 2 features of the paradigm to the same dimension of the table, with the option of leaving the 3<sup>rd</sup> dimension blank (show the whole paradigm in a single table).**



4. Repeat with the other two headings until all the areas are filled. The data should appear:

The screenshot shows the Morph Table interface with the URL [www.visualizationwhiteboard.com/morph\\_table16.html](http://www.visualizationwhiteboard.com/morph_table16.html). The main area displays a table for the lexeme 'mal'čik' with columns for SG and PL and rows for NOM, ACC, GEN, DAT, INS, and LOC. Below this, there are six smaller tables for other lexemes: zavod, del, djadj, kost', čudovišč, and myš', each with similar SG and PL columns and NOM-LOC rows. The control panel on the right shows the 'Case' buttons (NOM, ACC, GEN, DAT, INS, LOC) and 'Lexeme' buttons for the words shown in the tables.

	SG	PL
NOM	mal'čik	mal'čik-i
ACC	mal'čik-a	mal'čik-ov
GEN	mal'čik-a	mal'čik-ov
DAT	mal'čik-u	mal'čik-am
INS	mal'čik-om	mal'čik-ami
LOC	mal'čik-e	mal'čik-ax

	SG	PL
NOM	zavod	zavod-y
ACC	zavod	zavod-y
GEN	zavod-a	zavod-ov
DAT	zavod-u	zavod-am
INS	zavod-om	zavod-ami
LOC	zavod-e	zavod-ax

	SG	PL
NOM	del-o	del-a
ACC	del-o	del-a
GEN	del-a	del
DAT	del-u	del-am
INS	del-om	del-ami
LOC	del-e	del-ax

	SG	PL
NOM	djadj-a	djadj-i
ACC	djadj-u	djadj-ej
GEN	djadj-i	djadj-ej
DAT	djadj-e	djadj-am
INS	djadj-ej	djadj-ami
LOC	djadj-e	djadj-ax

	SG	PL
NOM	kost'	kost-i
ACC	kost'	kost-i
GEN	kost-i	kost-ej
DAT	kost-i	kostj-am
INS	kost'-ju	kostj-ami
LOC	kost-i	kostj-ax

	SG	PL
NOM	stran-a	stran-i
ACC	stran-u	stran-i
GEN	stran-i	stran
DAT	stran-e	stran-am
INS	stran-oj	stran-ami
LOC	stran-oj	stran-ax

	SG	PL
NOM	čudovišč-e	čudovišč-a
ACC	čudovišč-e	čudovišč
GEN	čudovišč-a	čudovišč
DAT	čudovišč-u	čudovišč-am
INS	čudovišč-em	čudovišč-ami
LOC	čudovišč-e	čudovišč-ax

	SG	PL
NOM	myš'	myš-i
ACC	myš'	myš-ej
GEN	myš-i	myš-ej
DAT	myš-i	myš-am
INS	myš-ju	myš-ami
LOC	myš-i	myš-ax

5. If you want to see a different arrangement just refresh the webpage and repeat steps 1-4 (eventually I will set up a more sophisticated overwrite function which will let you undo the mapping of a feature to a dimension).

**UPDATE:** Once data has been filled in, arrows will appear around the edges of the table. You can click the line of an arrow to swap features to different dimensions.

Click!

Case  
NOM

Case : NOM

	SG	PL
mal'čik	mal'čik	mal'čik-i
zavod	zavod	zavod-y
del	del-o	del-a
djadj	djadj-a	djad-i
kost'	kost'	kost-i
stran	stran-a	stran-i
čudovišč	čudovišč-e	čudovišč-a
myš'	myš'	myš-i

When multiple features are placed on one dimension, it's possible that the data will match one of the features but not have a value for the other. For example, Murrinhpatha, doesn't have separate forms for inclusive number. If the table is set up with cells for a SG-incl-CLASS1-NFUT form, the code creates copies of the incl form for each of the person values, with a striped pattern to show they are not proper forms.

TENSE : NFUT

	1	6	7	8	13	19	22	30	31	34
SG-1	nga-0-im	ngu-rr-an	ngu-n-ungam	0-m-am	0-b-am	nga-0-am	nga-ntj-in	ngu-rd-am	ngu-l-am	nga-m-am
SG-1incl	tji-0-im	thu-rr-an	thu-n-ungam	thu-m-am	thu-b-an	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	tha-m-am
SG-2	tji-0-im	thu-rr-an	thu-n-ungam	n-0-am	d-0-am	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	n-0-am
SG-3	di-0-im	wu-rr-an	0-n-ungam	0-m-am	0-b-am	da-0-am	ka-ntj-in	wu-rd-am	wu-l-am	0-m-am
PC-1	nga-rr-im	ngu-mp-an	ngu-nn-ungar	ngu-m-am	ngu-b-am	nga-rr-am	nga-ntj-in	ngu-dd-am	ngu-ll-am	nga-m-am
PC-1incl	tji-0-im	thu-rr-an	thu-n-ungam	thu-m-am	thu-b-an	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	tha-m-am
PC-2	ni-rr-im	nu-mp-an	thu-nn-ungar	nu-m-am	nu-b-am	na-rr-am	na-ntj-in	nu-dd-am	nu-ll-am	na-m-am
PC-3	pi-rr-im	pu-mp-an	pu-nn-ungar	pu-m-am	pu-b-am	pa-rr-am	pa-ntj-in	pu-dd-am	pu-ll-am	pa-m-am
PL-1	nga-rr-im	ngu-mp-an	ngu-nn-ungar	ngu-m-am	ngu-b-am	nga-rr-am	nga-ntj-in	ngu-dd-am	ngu-ll-am	nga-m-am
PL-1incl	tji-0-im	thu-rr-an	thu-n-ungam	thu-m-am	thu-b-an	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	tha-m-am
PL-2	ni-rr-im	nu-mp-an	thu-nn-ungar	nu-m-am	nu-b-am	na-rr-am	na-ntj-in	nu-dd-am	nu-ll-am	na-m-am
PL-3	pi-rr-im	pu-mp-an	pu-nn-ungar	pu-m-am	pu-b-am	pa-rr-am	pa-ntj-in	pu-dd-am	pu-ll-am	pa-m-am

If you click on arrows to rearrange the table so the undifferentiated forms are next to each other, the cells will merge:

TENSE : NFUT

	1	6	7	8	13	19	22	30	31	34
1-SG	nga-0-im	ngu-rr-an	ngu-n-ungam	0-m-am	0-b-am	nga-0-am	nga-ntj-in	ngu-rd-am	ngu-l-am	nga-m-am
1-PC	nga-rr-im	ngu-mp-an	ngu-nn-unga	ngu-m-am	ngu-b-am	nga-rr-am	nga-ntj-in	ngu-dd-am	ngu-ll-am	nga-m-am
1-PL	nga-rr-im	ngu-mp-an	ngu-nn-unga	ngu-m-am	ngu-b-am	nga-rr-am	nga-ntj-in	ngu-dd-am	ngu-ll-am	nga-m-am
1incl-SG	tji-0-im	thu-rr-an	thu-n-ungam	thu-m-am	thu-b-an	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	tha-m-am
1incl-PL										
2-SG	tji-0-im	thu-rr-an	thu-n-ungam	n-0-am	d-0-am	tha-0-am	tha-ntj-in	thu-rd-am	thu-l-am	n-0-am
2-PC	ni-rr-im	nu-mp-an	thu-nn-ungar	nu-m-am	nu-b-am	na-rr-am	na-ntj-in	nu-dd-am	nu-ll-am	na-m-am
2-PL	ni-rr-im	nu-mp-an	thu-nn-ungar	nu-m-am	nu-b-am	na-rr-am	na-ntj-in	nu-dd-am	nu-ll-am	na-m-am
3-SG	di-0-im	wu-rr-an	0-n-ungam	0-m-am	0-b-am	da-0-am	ka-ntj-in	wu-rd-am	wu-l-am	0-m-am
3-PC	pi-rr-im	pu-mp-an	pu-nn-ungam	pu-m-am	pu-b-am	pa-rr-am	pa-ntj-in	pu-dd-am	pu-ll-am	pa-m-am
3-PL	pi-rr-im	pu-mp-an	pu-nn-ungam	pu-m-am	pu-b-am	pa-rr-am	pa-ntj-in	pu-dd-am	pu-ll-am	pa-m-am

6. Once you are happy with the table arrangement, click “Highlight”

7. Use the “colour”, “Hide stem” and “ignore” buttons to highlight aspects of the data:

- **colour** shades the wordforms so that a unique form is left white, and shared forms are given the same colour. You can turn colour off by clicking the button again. ‘Shared form’ is crudely calculated at this stage by comparing the wordform to a single stem. Ultimately I’d like to set up multiple ways of shading the tables, either linguist guided or using machine learning.
- **Hide stem** hides what the tool is considering as the ‘stem’, and leaves the affix. At the moment the tool can deal with prefixes, suffixes and initial/final subtraction (indicated by ‘\*’ – is there a standard notation I should be using?), but nothing more complicated. As with the colour button, press it again to reset.
- The **ignore** button works slightly differently: use the text field to type a string of characters you want the tool to ignore when it’s deciding which affixes are the same (e.g. to make ‘e’ and ‘ej’ the same colour, type ‘j’). The text doesn’t change, but the colours do. This is starting to explore the idea of ‘sameness’. Eventually, I’ll set up a button with two text inputs so that you can tell the tool treat [character string1] as equal to [character string2]. I’ll also get the text inputs to accept regular expressions so that you can ignore more than

one string at the same time, or search for complicated strings (skipping characters). To reset the ignore button, just clear the text field.

**You can still rearrange the tables using the arrows, but you might need to turn colour off and on again to re-colour the table.**

my.UQ: Timed Out 0:00:00 x UQ Staff Email: The Univer... x Morph Table x +

www.visualizationwhiteboard.com/morph\_table16.html

Russian

Arrange Highlight

Lexeme: mal'čik

	SG	PL
NOM	-	-i
ACC	-a	-ov
GEN	-a	-ov
DAT	-u	-am
INS	-om	-ami
LOC	-e	-ax

Colour

Hide Stem

Ignore: j

Lexeme: zavod

	SG	PL
NOM	-	-y
ACC	-	-y
GEN	-a	-ov
DAT	-u	-am
INS	-om	-ami
LOC	-e	-ax

Lexeme: del

	SG	PL
NOM	-o	-a
ACC	-o	-a
GEN	-a	-
DAT	-u	-am
INS	-om	-ami
LOC	-e	-ax

Lexeme: djadj

	SG	PL
NOM	-a	*-i
ACC	-u	*-ej
GEN	*-i	*-ej
DAT	*-e	-am
INS	*-ej	-ami
LOC	*-e	-ax

Lexeme: kost'

	SG	PL
NOM	-	*-i
ACC	-	*-i
GEN	*-i	*-ej
DAT	*-i	*-j-am
INS	-ju	*-j-ami
LOC	*-i	*-j-ax

Lexeme: stran

	SG	PL
NOM	-a	-i
ACC	-u	-i
GEN	-i	-
DAT	-e	-am
INS	-oj	-ami
LOC	-oj	-ax

Lexeme: čudovišč

	SG	PL
NOM	-e	-a
ACC	-e	-
GEN	-a	-
DAT	-u	-am
INS	-em	-ami
LOC	-e	-ax

Lexeme: myš'

	SG	PL
NOM	-	*-i
ACC	-	*-ej
GEN	*-i	*-ej
DAT	*-i	*-am
INS	*-ju	*-ami
LOC	*-i	*-ax

8. Once you're in the Highlight panel you can't go back to the arrangement, but you can just refresh the webpage to start over.