Spotlight Session Handout:
MAXDictio

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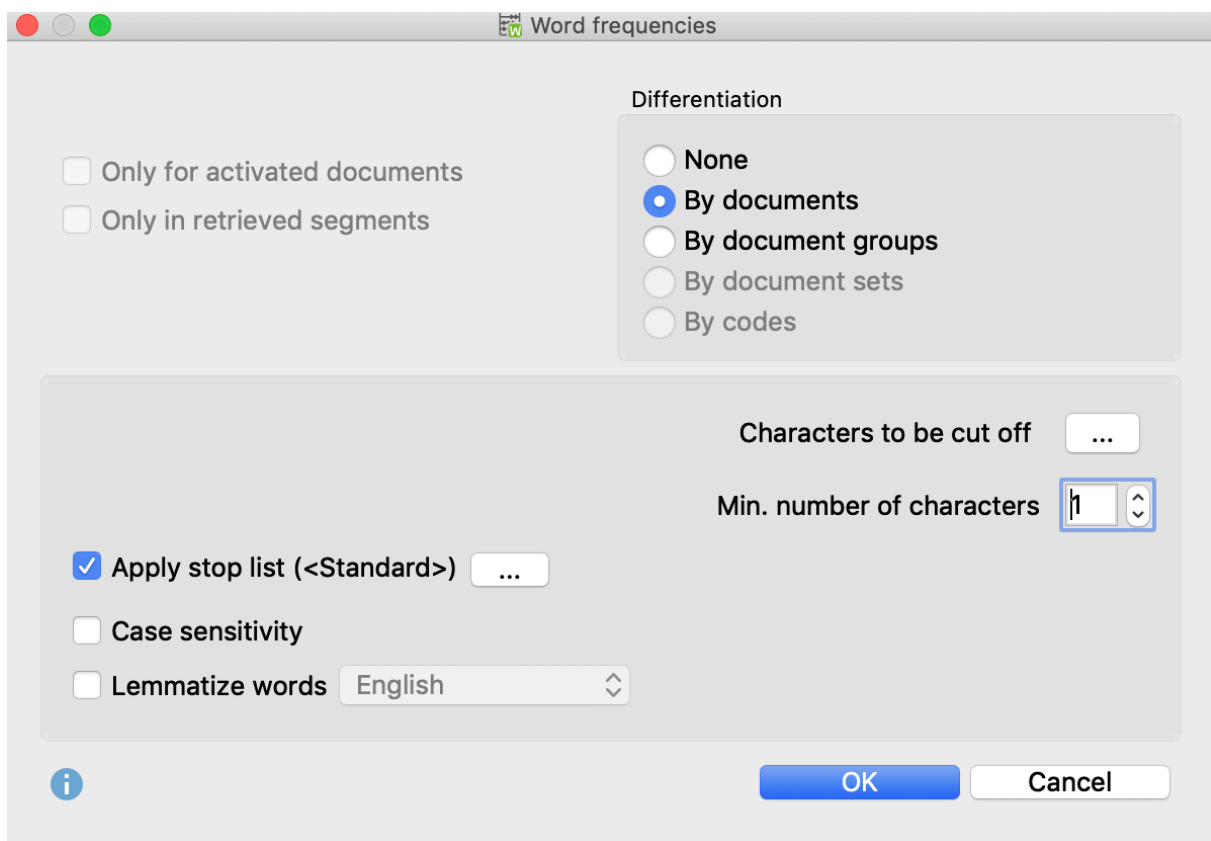Chair of Political Science

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Literature:

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- Kenneth Benoit & Michael Laver (2003): Estimating Irish party policy positions using computer wordscoring: the 2002 election – a research note. Irish Political Studies, 18:1, 97-107.
- Klüver, Heike (2009): Measuring Interest Group Influence Using Quantitative Text Analysis. European Union Politics, 10(4), 535–549.
- Proksch, Sven-Oliver and Slapin, Jonathan B.(2009): How to Avoid Pitfalls in Statistical Analysis of Political Texts: The Case of Germany'. German Politics,18:3, pp. 323 – 344.
- Will Lowe: Software for Content Analysis – A Review, http://dl.conjugateprior.org/preprints/content-review.pdf
- Laver, Michael, Benoit, Kenneth, & GARRY, John (2003): Extracting Policy Positions from Political Texts Using Words as Data. American Political Science Review, 97(2), 311-331.

Word frequencies

- MAXDictio is accessed as a plug-in within MAXQDA. If you use MAXQDA Plus or MAXQDA Analytics Pro, MAXQDA's main ribbon menu contains an additional tab called "MAXDictio".
- Open the MAXQDA-project „MAXDictio_Rasch".
- Let's start with the Word frequencies function and differentiate between the two documents. Go to **MAXDictio > Word Frequencies** in the ribbon-menu.

- As you can see, you can apply a stop list or even lemmatize the words.
- 'Stop lists' are lists of words or other data items which, for a specific reason, should be ignored or bypassed by a particular data processing operation.
- 'Lemmatizing' the identified words: they will be simplified to their word stems (*lemmas*) by using a lemma lexicon in the chosen language. For example, if a text contains the words "gave", "given", and "gives", MAXDictio will list the base form "give" in the results table only.

- The results table shows the words, their length, their frequency, percentage of all words, the rank, in how many documents it appeared and how often it appeared in each text.
- We found 3638 words in total, but only 1123 different words, which makes a type-token-relation (TTR) of 0,31. The higher the TTR becomes, the more complex a text.

Word	Word length	Frequency	%	Rank	Documents	Documents %	Obama	Trump
the	3	176	4,84	1	2	100,00	105	71
and	3	163	4,48	2	2	100,00	89	74
our	3	124	3,41	3	2	100,00	76	48
of	2	118	3,24	4	2	100,00	69	49
we	2	113	3,11	5	2	100,00	67	46
to	2	103	2,83	6	2	100,00	66	37
that	4	63	1,73	7	2	100,00	55	8
will	4	60	1,65	8	2	100,00	20	40
a	1	53	1,46	9	2	100,00	38	15
is	2	46	1,26	10	2	100,00	25	21
for	3	45	1,24	11	2	100,00	28	17
are	3	35	0,96	12	2	100,00	21	14
in	2	35	0,96	12	2	100,00	21	14
not	3	33	0,91	14	2	100,00	23	10
but	3	26	0,71	15	2	100,00	13	13
applause	8	25	0,69	16	1	50,00	25	0
all	3	24	0,66	17	2	100,00	12	12
america	7	23	0,63	18	2	100,00	6	17
this	4	23	0,63	18	2	100,00	13	10
us	2	23	0,63	18	2	100,00	21	2
be	2	22	0,60	21	2	100,00	10	12
it	2	22	0,60	21	2	100,00	12	10
from	4	21	0,58	23	2	100,00	10	11
with	4	21	0,58	23	2	100,00	13	8
people	6	20	0,55	25	2	100,00	11	9
must	4	19	0,52	26	2	100,00	16	3
–	1	18	0,49	27	2	100,00	5	13
american	8	18	0,49	27	2	100,00	6	12
as	2	18	0,49	27	2	100,00	12	6

- You can now sort the results by each column.
- You can also combine words by dragging one word and drop it on the other, for example with the words "America" and "American".
- And, if you now want to add certain words to the stop list, just double click the very first column of this word.
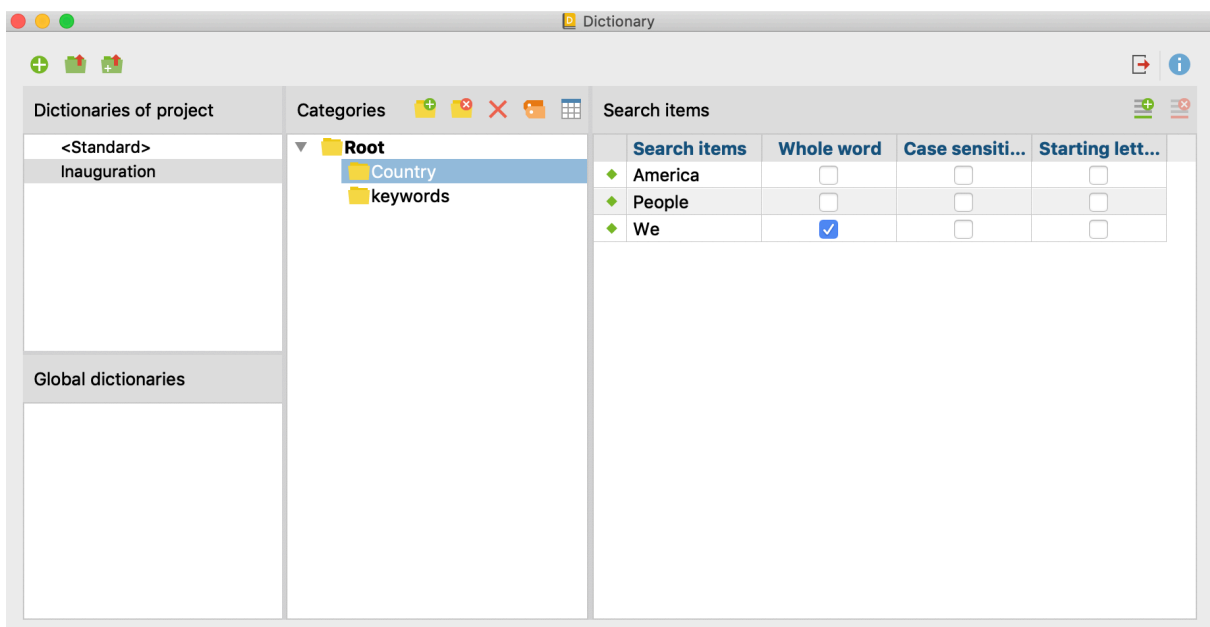
Interactive word tree

- The 'Keyword-in-context' function can be used to compare specific words within its context. The more frequently a word or word combination occurs, the more distinctly it appears in the tree. The 'Interactive Word Tree' function offers two-way interactivity:
    - First, it can be navigated via its individual "branches" in order to visualize words in their contexts.
    - Second, the data is interactively linked to the original texts, so you can view words and phrases in MAXQDA's "Document Browser".
- One of the main functions of the Interactive Word Tree is to search for interesting words within a text and to explore them in their respective contexts. To this end, a search field is located at the top of the window. Hit Enter key to begin the search process; if there is a hit, it will go directly to the new root of the tree:
- Let's look at the "America" in Obama's speech and in its context.

rising middle class. We know

that

thrives when every person can find indep

deficit. But we reject the belief

must choose between caring for the gene

will be long and sometimes difficult. But

cannot resist this transition, we must lead

America

ably lift suspicion and fear. (Applause.)

will remain the anchor of strong alliances

striving, hopeful immigrants who still see

as a land of opportunity -- (applause) --

ay He forever bless these United States of

. (Applause.)   END 12:10 P.M. EST

Dictionary-Based Content Analysis

- Dictionary-based content analysis allows you to count the category frequencies for texts (or parts of text) based on the dictionary.
- Independent from the texts, you will have to create a dictionary or encyclopedia first before you can work with it. This dictionary consists, on the one hand, of an unlimited number of categories. On the other hand, it includes the words that are attached to these categories.
- Let's discover the main differences between Obama's and Trump's speeches using previous selected words. This is our dictionary:
  - o Country:
    - ▪ America
    - ▪ People
    - ▪ We
  - o Keywords:
    - ▪ Free
    - ▪ Secure
    - ▪ Right
    - ▪ Terror

- Analyzing the two speeches using a Quantitative Content Analysis methodology, we find that Obama's speech is longer (more words) and contains more references to the country than to the keywords. A similar phenomenon can be found in Trump's speech.
- You can now calculate row and column percentages, export the numbers to a statistical package, transform the numbers into document variables, and even look at the qualitative differences by clicking on search results.

Quantitative Content Analysis

All — 2 Units of analysis

Document g...	Document	Words	Country	keywords
	Obama	2.159	7	9
	Trump	1.479	6	5

- The search results show the context of each word.

Search results

215 hits in 2 documents and 0 document groups

Document	Search string	Beginning	End	Preview	Category
Trump	America	78	78	Proud Again. We Will Make AMERICA Safe Again. And, Yes, Together, We	Country
Trump	America	76	76	Strong Again. We Will Make AMERICA Wealthy Again. We Will Make	Country
Trump	America	74	74	your dreams, will define our AMERICAn destiny. And your courage and	Country
Trump	America	70	70	we all salute the same great AMERICAn Flag. And whether a child is	Country
Trump	America	62	62	big and dream even bigger. In AMERICA, we understand that a nation is	Country
Trump	America	58	58	pursue solidarity. When AMERICA is united, America is totally unst	Country
Trump	America	50	50	rules: Buy American and Hire AMERICAn. We will seek friendship and	Country
Trump	America	49	49	with American hands and AMERICAn labor. We will follow two simple	Country
Trump	America	46	46	never, ever let you down. AMERICA will start winning again, winning	Country
Trump	America	43	43	will be made to benefit AMERICAn workers and American families. We	Country
Trump	America	37	37	the millions upon millions of AMERICAn workers left behind. The	Country
Trump	America	32	32	industry at the expense of AMERICAn industry; Subsidized the armies	Country
Trump	America	29	29	unrealized potential. This AMERICAn carnage stops right here and	Country
Trump	America	19	19	this, the United States of AMERICA, is your country. What truly	Country
Trump	America	10	10	giving it back to you, the AMERICAn People. For too long, a small	Country
Trump	America	6	6	you. We, the citizens of AMERICA, are now joined in a great nationa	Country
Trump	America	5	5	Bush, President Obama, fellow AMERICAns, and people of the world:	Country
Trump	People	10	10	it back to you, the American PEOPLE. For too long, a small group in	Country
Trump	People	12	12	flourished – but the PEOPLE did not share in its wealth. Polit	Country
Trump	People	21	21	be remembered as the day the PEOPLE became the rulers of this nation	Country
Trump	People	56	56	and pleasant it is when God's PEOPLE live together in unity." We must	Country
Trump	People	49	49	nation. We will get our PEOPLE off of welfare and back to work –	Country
Trump	People	20	20	is controlled by the PEOPLE. January 20th 2017, will be rememb	Country
Trump	People	11	11	of government while the PEOPLE have borne the cost. Washington fl	Country
Trump	People	6	6	its promise for all of our PEOPLE. Together, we will determine the c	Country
Trump	People	5	5	Obama, fellow Americans, and PEOPLE of the world: thank you. We, the	Country
Trump	We	8	8	and the world for years to come. WE will face challenges. We will	Country
Trump	We	8	8	We will confront hardships. But WE will get the job done. Every four	Country
Trump	We	9	9	peaceful transfer of power, and WE are grateful to President Obama	Country