

Teaching and exegetical Research with

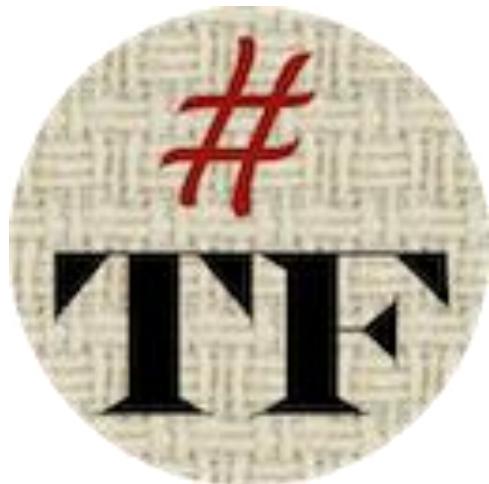


&





Scenario #1: Large Classroom
(> 15 students)



Scenario #2: Small Classroom
(< 15 students)

Scenario #3: Research
(PhD project, personal)



AIM

- ⇒ Tool for the exeget. process:
 - ⇒ Valence patterns
 - ⇒ Linguistic variation
 - ⇒ Text-syntactic hierarchy
 - ⇒ Publication/sharing of queries

METHOD

- ⇒ Written tutorial
- ⇒ Video tutorial
- ⇒ Query assignments
- ⇒ SHEBANQ quizzes
- ⇒ Paper

SHEBANQ/EMDROS MQL-tutorial v1.26

(Oliver Glanz, Old Testament department, Andrews University)

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SHEBANQ tutorial

TOPIC:
Browsing the Hebrew
text.

◀ ▶ ⏪ ⏩ 0:10 / 13:53

The screenshot shows the main landing page of the SHEBANQ website. The page has a clean, modern design with a white background. At the top, there's a navigation bar with links for 'SHEBANQ', 'The Text', 'Words', 'Queries', 'Notes', 'Tools', 'Help', 'News', and 'Sources'. On the far right of the top bar, there's a 'Log In' button. Below the navigation, there's a large orange cylinder icon with Hebrew text and a '#' symbol, which serves as a central visual element. To the left of the cylinder, there's a sidebar with several sections: 'What is SHEBANQ?' (with a brief description), 'Get started' (with a link to 'Read the text, view words, queries and notes, and move around'), 'Next step' (with a link to 'Make your own queries and notes'), 'Advanced' (with a link to 'Share and publish your queries and notes'), 'Expert' (with a link to 'Engage in data analysis and disseminate your results'), 'Free software' (with a link to 'Use SHEBANQ as you like!'), and 'Contact' (with an email address: shebanq@ancient-data.org). To the right of the cylinder, there are several smaller sections: 'Companion tools based on ETCBC data' (with links to 'laf-fabric' and 'LAR Fabric'), 'For researchers' (with a link to 'Work offline, beyond the limits of SHEBANQ, and share your results online. Programming skills required!'), 'Examples: promoted tools' (with a link to 'Bible Online Learner'), 'For teachers and students of Hebrew' (with a link to 'Select and perform drills in context. From a chapter in SHEBANQ, click the logo to jump directly to that chapter in BOL.'), 'Created by Nicolai Winther-Nielsen and Claus Tøndering.', 'set of real-life, yet tutorial style queries' (with a link to 'feature-doc'), and 'For all users of the ETCBC data' (with a link to 'Your reference guide for interpreting the ETCBC data with hints for writing queries'). At the bottom of the page, there are logos for VU University Amsterdam, Deutsche Bibelgesellschaft, DANS, and DH Awards. There's also a Creative Commons license logo and a 'Winner: Best DH tool or suite of tools' badge.

SHEBANQ tutorial no1: The Text

357 views • Sep 8, 2016

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Scenario #1: Large Classroom

SHEBANQ

BibleSoftware Glanz - 1 / 13



SHEBANQ tutorial no1: The Text

BibleSoftware Glanz

SHEBANQ tutorial no2a: Building Queries (simple: finding Abraham in...)

BibleSoftware Glanz

SHEBANQ tutorial no2b: Improving Query Building Efficiency

BibleSoftware Glanz

SHEBANQ tutorial no3a: Using the AND and OR operators in queries

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SHEBANQ tutorial no3b: Defining Distances between blocks with "...", "*..."

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SHEBANQ tutorial no3c: Excluding and Including Elements with "IN",...

BibleSoftware Glanz



BibleOL episode no03 class enrollment

BibleSoftware Glanz

148 views

Major OT Prophets Class: week 07

min	item
R	<p><input type="checkbox"/> Quiz#B (in-class-quiz)</p> <p><input type="checkbox"/> Class Content</p> <ul style="list-style-type: none"> <input type="checkbox"/> Text#1a: Jer 37:1-16, 17-21 (the last days of Jerusalem) [see here] <input type="checkbox"/> Text#1b: Jer 38:1-13, 38:14-28 (The last days of Jerusalem) [see here] <p><input type="checkbox"/> Assignments (due Week#08-T 10am)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Translation of Jer 1 (upload text-syntactical analysis) <input type="checkbox"/> Do the following: <ul style="list-style-type: none"> <input type="checkbox"/> Indent clauses according to their dependency <input type="checkbox"/> Mark direct speeches <input type="checkbox"/> Mark paragraphs on the basis of text-syntaxis (explicit (re)introduction of participants) <input type="checkbox"/> Mark those cases (when existing) where the logical coherence of the text seems to be interrupted/broken. Do the marking by color highlighting and written comments. <input type="checkbox"/> Mark those cases (when existing) where the reference to participants changes unexpectedly (e.g. from 2P to 3P or from Masculine to Feminine or from Singular to Plural). Do the marking by color highlighting and written comments. <input type="checkbox"/> Mark where (when existing) the time and space continuum appears to be interrupted. Do the marking by color highlighting and written comments. <input type="checkbox"/> Online Based Translation Quiz <input type="checkbox"/> Queries: <ul style="list-style-type: none"> <input type="checkbox"/> ETCBC (SHEBANQ, TextFabric, Accordance, Logos) Query1: Find all cases where all lexemes of נָתַן קְבָרִירָה appear in exact this order (all tenses of נָתַן should be included, קְבָרִירָה should be in construct to נָתַן). You should find 84 cases (Because of a bug only 83 cases are found in the ETCBC data of Accordance. Because of an outdated WIVU database Logos has only 83 results). Take a screenshot of your query and upload it to the Learninghub. <input type="checkbox"/> ETCBC (SHEBANQ, TextFabric, Accordance, Logos) Query2: Find all cases where all lexemes of נָתַן קְבָרִירָה appear in exact this order (קְבָרִירָה should be in construct to נָתַן) and exact the same tense (יְהוָה) is utilized. You should find 83 cases. Take a screenshot of your query and upload it to the Learninghub. <input type="checkbox"/> ETCBC (SHEBANQ, TextFabric, Accordance, Logos) Query 3: Find all clauses that have a verbal predicate and an object. As predicate we want JYR/בָּא. As object we want anything (e.g. object-suffix [phrase function = PreO] or separate object phrase [phrase function = ObjC]) is used as predicate. Search the entire OT. You should find 13 cases (due to an outdated WIVU database Logos has only 10 results). The motivation for the query is Jer 1:5. Take a screenshot of your query and upload it to the Learninghub. <input type="checkbox"/> ETCBC (SHEBANQ, TextFabric, Accordance, Logos) Query 4: Find all nominal clauses (clause typ = NmCl) that contain the statement "With X (any person, number, gender, proper name, noun) I am"/"I am with X (any person, number, gender, proper name, noun)". Be aware that there are two Hebrew prepositions that carry the meaning "with" (בְּ, תְּ). Homographs (e.g. תְּ and תְּ) are distinguished with "=" (e.g. >T/nota accusativi, >T=="/with"). From a syntactical perspective the statement "I am with you" would consist of the elements "Subject (Subj)/I" and "Predicate Complement (PreC)/with X". Search the entire OT. You should find 18 cases (due to an outdated WIVU database Logos has only 15 results). The motivation for the Query is Jer 1:8. Take a screenshot of your query and upload it to the Learninghub. <input type="checkbox"/> Close reading of Jer 2:1-4:4 <input type="checkbox"/> Longman 2008, 19-45 (27p) [MDiv+MA]
	<p><input type="checkbox"/> Prospect on Week #08</p> <p><input type="checkbox"/> Theme#10: Syntax Queries</p> <ul style="list-style-type: none"> <input type="checkbox"/> The ETCBC database model <input type="checkbox"/> Text#2: Jer 1 <input type="checkbox"/> Text#3: Jer 2:1-4:4 (emotional chaos)

Question 3

Not yet answered

Points out of 1.00

 Flag question Edit question

Search for all cases in the book of Jeremiah in which God explicitly speaks to Jeremiah and all cases in which Jeremiah explicitly speaks to God. Thus you are looking for the following type of clauses: (a) God (אֱלֹהִים, יְהוָה) speaks (דבר/אמר/עונה/קרא) to Jeremiah. (b) Jeremiah speaks (דבר/אמר/עונה/קרא) to God (אֵל, אֱלֹהִים, יְהוָה). The indirect Object (to whom one speaks) is a Complement (phrase function = Cmpl). Make sure that you find all syntactical variations (subject-predicate-complement; subject-complement-predicate, predicate-subject-complement, predicate-complement-subject, complement-predicate-subject, complement-subject-predicate). Also, make sure that you include both orthographic variations for the name of Jeremiah (יְרֵמִיאָה, יְרֵמִיָּהוּ). How often does Jeremiah speak explicitly to God?

Select one:

- 0
- 30
- 40
- 10
- 20

question-C: Search for all cases in the book of Jeremiah in which God explicitly speaks to Jeremiah and all cases in which Jeremiah explicitly speaks to God. Thus you are looking for the following type of clauses: (a) God (אֱלֹהִים, בָּהֲהָה) speaks (דָּבָר/אָמֵר/עַנְהָה/קָרָא) to Jeremiah. (b) Jeremiah speaks (דָּבָר/אָמֵר/עַנְהָה/קָרָא) to God (אֱלֹהִים, בָּהֲהָה). The indirect Object (to whom one speaks) is a Complement (phrase function = Cmpl). Make sure that you find all syntactical variations (subject-predicate-complement; subject-complement-predicate, predicate-subject-complement, predicate-complement-subject, complement-predicate-subject, complement-subject-predicate). Also, make sure that you include both orthographic variations for the name of Jeremiah (יְרֵמֶיהוּ, יְרֵמִיָּהוּ). How often does Jeremiah/God speak explicitly to God/Jeremiah?

SHEBANQ:

The screenshots illustrate the search process in SHEBANQ. The first window shows the search query "Quiz#03c: JHWH"/"Jer" speaking to "Jer"/"YHWH". The second window shows the resulting XML code for the search results. The third window shows the search results table with zero results.

TextFabric 7.8:

The screenshots illustrate the search process in TextFabric 7.8. The left window shows the search query "GodSpeaksToJeremiah" and the resulting XML code. The right window shows the search query "JeremiahSpeaksToGod" and the resulting XML code.

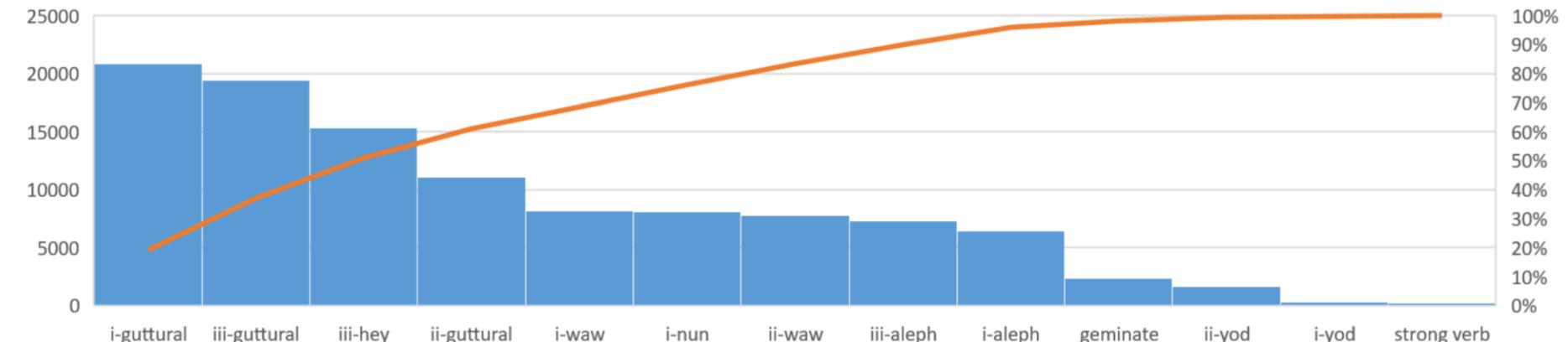
In Hebrew I-II:

- ⇒ Creating Vocabulary lists
- ⇒ Statistics on grammatical features
- ⇒ Detecting Hebrew text with only few words of a frequency of under 100
 - ⇒ For teaching
 - ⇒ For exams

In Hebrew III:

- ⇒ Creating Vocabulary lists
- ⇒ Finding exam texts

Verbal Class Distribution (inclusive): BHS occurrence



week 2 Gen 19:1-2

אֲדֹנָן	lord, master
אֶל	toward (prep), unto; towards
אָמַר I	qal: say, think; ni: be said, be called; hi: declare;
אָרֶץ	nose, nostril; anger
אָרֶץ	earth; land, territory
בְּ	in, at (time, place); with; by; by means of
בָּוֹא	qal: come, enter, go in; hi: bring; let come; ho: be brought;
בֵּית	house; family
דָּרֶךְ	way, road, journey; custom (ext)
I הִ	the (art)
הַלְּכָה	qal: go, walk; ni: be gone, fade; pi: go, walk; hit: go, walk, go about; hi: lead, bring, cause to go;
וְ	and; also, even (conj); but
I חֹזֶה	hst: bow down;
שָׁבֵב	qal: sit, dwell, inhabit; ni: be inhabited; pi: set up; hi: cause to sit, cause to dwell; marry; ho: be inhabited, be made to dwell; to, toward (prep); Do, Yes, (voc); in regard to, for
לֹט	Lot
מֶלֶךְ	messenger, angel
סָדָם	Sodom
יֹוֹדֵעַ	slave, servant

week 3 Gen 19:2-4

אִישׁ	man; human being; somebody; each one
אָכַל	qal: eat, devour; qal pass: eat; ni: be eaten; pu: be consumed; hi: feed;
אָפָה	qal: bake; ni: be baked;
הִנֵּה I	behold, look, lo (intj)
כִּי	for, because, that, when, but; indeed, truly (con); yea
כָּל	all, every
לֹא	not, no (neg)
לִין	qal: spend the night, lodge; hit: dwell, abide;
מָאֵד	force, might (n); very, exceedingly (adv)
I מִן	from, out of, part of, because of (prep); than (comp)
מַצְהָה I	unleavened bread
מִשְׁתַּחַת	(drinking-) feast
וְ	now; please; pray (particle giving emphasis)
גַּעֲרָה	youth, young boy, lad, servant
סָור	qal: turn aside; pi: disarrange; hi: take away, remove; ho: be removed;
עַד	to (prep), unto, as far as (spacial); until, while (temporal)
I עִיר	city
עַל	on, upon, against, over (prep); on account of; opposite to
עַם	people; kinship; relative
עַשְׂתָּה	qal: do, make; ni: be made, done; pi: press, squeeze; pu: be made;
פָּצַר	qal: urge (someone); hi: (meaning uncertain);
קָצָה II	edge, end, border, extremity
רָגֶל	foot, leg
רַחֲבָה III	plaza, broad open place
רָחַץ	qal: wash; wash oneself; pu: be washed; hit: wash oneself;
שָׁכַב	qal: lie down; have sexual intercourse; ni: be slept with; pu: be slept with; hi: lay down; ho: be laid down;



AIM	<p>⇒ Tool for the exeget. process:</p> <p>⇒ Valence patterns</p> <p>⇒ Linguistic variation</p> <p>⇒ Text-syntactic hierarchy</p> <p>⇒ Visualisation</p>
METHOD	<p>⇒ Jupyter notebooks (in class)</p> <p>⇒ Jupyter notebooks (assign)</p> <p>⇒ Jupyter notebooks (paper)</p>



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1 Introduction to Jupyter Notebooks

1.1 What is a notebook?

Jupyter Notebooks are the ideal environment for doing python (its a programming language) based research in both the sciences and humanities.

Each notebook consists of two types of cell blocks:

1. Markdown cells
2. Code cells

The markdown cells are used to describe what one is doing in the code cells.

The code cells are used in order to write code and execute it. The next cell is a code cell with a very simple code:

```
In [1]: x=17  
y=23  
  
print(x, "times", y, "is", x*y)
```

17 times 23 is 391

This cell block is a markdown cell. You can double click with your mouse on this cell and you will see the Markdown codes used to write this cell block. All important Markdown commands can be found in this handy Markdown Cheat Sheet: <https://github.com/adam-p/markdown-here/wiki/Markdown-Cheatsheet>.

1.2 Installing the necessary environment to run jupyter notebooks

1. Go to <https://www.anaconda.com/distribution/> and download the Python 3.7 version for your platform (available for Linux, MacOS, Windows).
2. After Anaconda has been installed start the Anaconda prompt terminal.
3. Once the terminal is available you want to install the TextFabric environment that holds all the biblical data of the ETCBC research group (<http://etcbc.nl/>). You do so by writing the following command into the terminal:

```
pip3 install text-fabric
```

or when you are on windows

```
pip install text-fabric
```

T	<ul style="list-style-type: none"> <input type="checkbox"/> Logistics <ul style="list-style-type: none"> <input type="checkbox"/> Paper/Project/Take Home exam... <input type="checkbox"/> PhD defense of Chris Vogel <input type="checkbox"/> Class Content <ul style="list-style-type: none"> <input type="checkbox"/> Discussing assignment: "0000_ETCBC-TF_0000-BHS_intro" <input type="checkbox"/> The exegetical workbench <ul style="list-style-type: none"> <input type="checkbox"/> The Library: Logos/Accordance <ul style="list-style-type: none"> => translate your text <input type="checkbox"/> The Text (with Codes): SHEBANQ <ul style="list-style-type: none"> => understand the structure of your text <input type="checkbox"/> The Analytic Tool-Kit: Text-Fabric (i.e. SHEBANQ-query-tool on steroids) <ul style="list-style-type: none"> => turn your exegetical questions into queries => study your query results <input type="checkbox"/> Working at the workbench: how to interplay with Library, Text, analytic Tool-Kit <ul style="list-style-type: none"> <input type="checkbox"/> Analyze the text-grammar of Gen 20:1-4 <input type="checkbox"/> Display the text in SHEBANQ <input type="checkbox"/> Question to Query <ul style="list-style-type: none"> <input type="checkbox"/> Who are the dominant actors in Gen 20? <ul style="list-style-type: none"> => search explicit subjects <input type="checkbox"/> Who is acted upon in Gen 20? <ul style="list-style-type: none"> => search explicit objects <input type="checkbox"/> Where do we have fronted elements? <ul style="list-style-type: none"> => search for clause-types with fronting <input type="checkbox"/> Findings Paragraph markers and background clauses <ul style="list-style-type: none"> => search for <u>WayX</u> clauses and narrative interruptions. <input type="checkbox"/> Valence of LKX[<input type="checkbox"/> Working on <u>Jupyter</u> notebook "0000_ETCBC-TF_0001-BHS_ETCBC-db" <input type="checkbox"/> Homework (due next day at 12pm) <ul style="list-style-type: none"> <input type="checkbox"/> Study <u>Jupyter</u> Notebook "0000_ETCBC-TF_0001-BHS_ETCBC-db" and finish the In-Class-Task section (upload your notebook to the <u>Learninghub</u>) <input type="checkbox"/> Read: Glanz, Oliver. "Bible Software on the Workbench of the Biblical Scholar: Assessment and Perspective." AUSS 56.1 (2018): 5-46. (https://digitalcommons.andrews.edu/auss/vol56/iss1/3/) <input type="checkbox"/> Translate: Gen 4:1 (upload your translation to the <u>Learninghub</u>) <input type="checkbox"/> Study Commentaries on Gen 4:1 and develop a research agenda: How do the commentaries render/analyze/interpret the phrase אַתְּ־הָרָא ? What type of research would you have to do in order to test Doukhans suggestion to translate the phrase as an object phrase (or apposition of שִׁירָא)? Upload your thoughts and research suggestion to the Learninghub) <ul style="list-style-type: none"> <input type="checkbox"/> Doukhans commentary on Gen 4:1 <input type="checkbox"/> Gerhard von Rad: Westminster <input type="checkbox"/> Claus Westermann: <u>Hermeneia</u> <input type="checkbox"/> John Walton: NIV Application Commentary
---	--

Seminar OT Exegesis: Day 02

Day #02

 Study Jupyter Notebook "0000_ETCBC-TF_0001-BHS_ETCBC-db" and finish the In-Class-Task section (upload your notebook to the Learninghub)

 0000 ETCBC-TF 0001-BHS ETCBC-db o.glanz

 Read: Glanz, Oliver. "Bible Software on the Workbench of the Biblical Scholar: Assessment and Perspective." AUSS 56.1 (2018): 5-46. (<https://digitalcommons.andrews.edu/auss/vol56/iss1/3/>)

 Translate: Gen 4:1 (upload your translation to the Learninghub)

 Study Commentaries on Gen 4:1 and develop a research agenda (upload to Learninghub)

Day #03

 Study Jupyter Notebook "0000_ETCBC-TF_0002-BHS_Gen20" and finish the In-Class-Task sections (upload your notebook to the Learninghub)

 0000 ETCBC-TF 0002-BHS Gen20-Gen4 o.glanz

 Close Reading: Read closely (in a good English translation [e.g. ASV] two times 2 Sam 1-5 and thus get well acquainted with the text.

 Christian Vogel, The Nature of Davids Kingship at Hebron Revised

 Read and Translate (see descriptions):

 TF Queries (read description, upload your work to the Learninghub):

 0000 ETCBC-TF 0003-BHS c.vogel dissertation-queries o.glanz stud-edition



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 - 1.3.3 Where are the Codes?
- 2 Searching for Verbal Valence

1 Working at the exegetical workbench

1.1 Setting up your workbench

The most efficient way of working with Biblical Hebrew texts is by using *three tools*:

Tool	Function
The Library: commercial BibleSoftware (Logos, Accordance)	great for looking up dictionaries, commentaries, and annotating your text (notes, highlighting, etc.)
The Text with linguistic annotations on all language levels (phonology, morphology, syntax, text-grammar): SHEBANQ	great for understanding the linguistic structure of a text and registering database codes useful for building queries
The Analytic Tool-Kit: Text-Fabric (i.e. SHEBANQ-query-tool on steroids)	great for turning your exegetical questions into queries AND for analyzing your query results

1.2 The Texts in SHEBANQ

Lets pull up Gen 20 in SHEBANQ. Do the following:

1. Go to <https://shebanq.ancient-data.org/>
2. Click on "Text" in the upper left corner
3. Maneuver to Gen 20
4. Visualize the text-grammatical structure of Gen 20 by clicking on the "Notes (1/3)" button until it shows "Syntax (2/3)". You should see something like this:

The screenshot shows the SHEBANQ interface for the text of Genesis 20:1. The text is displayed in Hebrew, with various parts annotated with labels such as Loca, Subj, Cmpl, Pred, Conj, and N. The annotations are color-coded, with some in blue and others in orange. The interface includes a toolbar at the top with various buttons and a status bar at the bottom indicating '18 verses'.

Annotation Type	Text Element	Annotation Value
Loca	ארצָה	Loca
Subj	אֶברְהָם	Subj
Cmpl	מִשְׁם	Cmpl
Pred	נִסְעָן	Pred
Conj	וּבֵין	Conj
N	וּבֵין	WayX 0
N	וּבֵין	WayX 477
N	בְּגַדְרָה	WayX 200

► # Task 1
check out the relations operators by running the following code:
S.relationsLegend()

You can study how these relational operators are used by looking at the examples in this notebook:
<https://nbviewer.jupyter.org/github/annotation/tutorials/blob/master/bhsa/searchRelations.ipynb>

► # Task 2
search for clauses in Gen 20 in which we find >LHJM/ as subject
with a predicate, where both words (subject and predicate) match in number.
Look at your final result. Isn't there a surprising result? What might it tell you about Abraham's theology?

```

▶ TwoSpeachesSameSpeaker = ''
verse book=Genesis chapter=20
c1:clause domain=N
phrase function=Pred
word lex=DBR[ |QR>[ |>MR[
phrase function=Subj
speakerA:word lex*
phrase function=Cmpl
addresseeB:word lex*
<3: clause domain=Q
c2:clause domain=N
phrase function=Pred
word lex=DBR[ |QR>[ |>MR[
phrase function=Subj
speakerA:word lex*
phrase function=Cmpl
addresseeB:word lex*

c1 < c2
c1 <50: c2

speakerA .lex=lex. speakerA
addresseeB .lex=lex. addresseeB
...
TwoSpeachesSameSpeaker = A.search(TwoSpeachesSameSpeaker)
A.table(TwoSpeachesSameSpeaker, start=1, end=20, condensed=True)

```

```

▶ # Task 3
# change the code and find all cases of this phenomenon in Gen 16
# (we could search the entire OT but that would take too long for this time)
# What observation do you make? And what does that mean for our case in Gen 20?

```

Scenario #2: Small Classroom

- Logistics
 - PhD defense of Chris Vogel
 - Time: Arrive at 2:20pm latest! Doors close at 2:30pm. The defense takes 2h.
 - Location: S215
 - phd@andrews.edu
 - Project/Paper/Take Home exam - tell me by Thursday (tomorrow)
- Class Content
 - Discussing article "BibleSoftware on the Workbench of the Biblical Scholar".
 - Discussing assignment: "0000_ETCBC-TF_0001-BHS_ETCBC-db"
 - From Data processing to Data Interpretation: Arriving at textual meaning
 - Working at the workbench: how to interplay with Library, Text, analytic Tool-Kit
 - Analyze the text-grammar of Gen 20:1-4
 - Display the text in SHEBANQ.
 - Question to Query
 - Who are the dominant actors in Gen 20?
=> search explicit subjects
 - Who is acted upon in Gen 20?
=> search explicit objects
 - Where do we have fronted elements?
=> search for clause-types with fronting
 - Findings Paragraph markers and background clauses
=> search for WayX clauses and narrative interruptions.
 - Valence of LKX[

- Homework (due next day at 12pm)
 - Study Jupyter Notebook "0000_ETCBC-TF_0002-BHS_Gen20-Gen4" and finish the In-Class-Task sections (upload your notebook to the Learninghub)
- Homework (due Tuesday at 12pm [ideally you have finished most of the homework on Sunday before 2pm])
 - Close Reading: Read closely (in a good English translation [e.g. ASV] two times 2 Sam 1-5 and thus get well acquainted with the text.
 - Read and Translate:
 - From Chris Vogel's dissertation read the following:
 - the Abstract (beginning of the document)
 - Chapter 1: Introduction: Background of the Problem => Methodology (pp1-9), Summery (p58)
 - Chapter 2:
 - Verse 3-4 (pp5-81) & Translate the Hebrew Text of 2 Sam 2:3-4
 - Verse 7 (p89) & Translate the Hebrew Text of 2 Sam 2:7
 - Chapter 3:
 - Verse 2 (pp165-167) & Translate the Hebrew Text of 2 Sam 3:2
 - Chapter 4:
 - Delimitation (pp253-254) & Translate the Hebrew Text of 2 Sam 4:1-2
 - Verse 1 (pp285-289) & Translate the Hebrew Text of 2 Sam 5:1
 - Chapter 5 - Conclusion (pp303-321)
 - TF Queries (upload your work to the Learninghub):
 - Choose 1 or 2 claims that are made in the sections of the dissertation that you read and studied.
 - Identify the argument that is being made for substantiating the claim.
 - Build at least 2 TF queries that test the claim you have chosen. Explain in your notebook what you are doing, why you are building the query the way you do, and how your query results contribute to the critical examination of Vogel's claims.
 - Feel free to consult me in the process in case you run into a problem.

2 Genesis 4:1

Lets investigate the case in Gen 4:1 and build a query that informs us about how to treat the issue and how to respond to the scholarly debate! I did some queries in SHEBANQ that should inform your own query building:

<https://shebang.ancient-data.org/hebrew/query?version=2017&id=946>

<https://shebang.ancient-data.org/hebrew/query?version=2017&id=947>

<https://shebang.ancient-data.org/hebrew/query?version=2017&id=948>

► # Task 4
Study the SHEBANQ queries and rebuild all queries as TF queries.

► # Task 5
Look at the GT (stands for Greek Text = Septuagint) and check how it is rendered there.
How do the GT translators treat our case?

► # Task 6
Write up a short conclusion. What is your decision on the matter. How should one translate the phrase in question,
and what is right/wrong about the argumentation that you find in Jacques Doukhan's commentary on Genesis?

1 Response to Christian Vogel's Dissertation

2 Prelude

```
▶ %load_ext autoreload
  %autoreload 2

▶ # First, I have to load different modules that I use for analyzing the data and for plotting:
  import sys, os, collections
  import pandas as pd
  import numpy as np
  import seaborn as sns
  import matplotlib.pyplot as plt; plt.rcParams()
  from matplotlib.pyplot import figure
  from collections import Counter

  # Second, I have to load the Text Fabric app
  from tf.fabric import Fabric
  from tf.app import use

▶ A = use('bhsa', hoist=globals())
  connecting to online GitHub repo annotation/app-bhsa ... connected
  Using TF-app in C:\Users\Oliver Glanz/text-fabric-data/annotation/app-bhsa/code:
    rv1.2=#5fdf1778d51d938bfe80b37b415e36618e50190c (latest release)
    connecting to online GitHub repo etcbc/bhsa ... connected
  Using data in C:\Users\Oliver Glanz/text-fabric-data/etcbc/bhsa/tf/c:
```

```

JeremiahX = ''
book book=Jeremia
    chapter chapter=36|37|38|39|40
        clause typ=WayX
            phrase function=Subj
                word lex=JRMJH/ | JRMJHW/
            phrase function=Pred
                word sp=verb lex*
...
JeremiahX = A.search(JeremiahX)
A.table(JeremiahX, start=4, end=16, condensed=False, colorMap={2: 'red', 3: 'blue', 6: 'yellow', 8: 'pink'})

```

4.46s 16 results

n	p	book	chapter	clause	phrase	word	phrase	word
4	Jeremiah 37			וַיֹּאמֶר יְהוָה	וַיֹּאמֶר	וַיֹּאמֶר	וַיֹּאמֶר	וַיֹּאמֶר
5	Jeremiah 37			וְיִשְׁבֵן כְּפָרִים:	וְיִשְׁבֵן	וְיִשְׁבֵן	וְיִשְׁבֵן	וְיִשְׁבֵן
6	Jeremiah 37			וַיֹּאמֶר יְהוָה	וַיֹּאמֶר	וַיֹּאמֶר	וַיֹּאמֶר	וַיֹּאמֶר
7	Jeremiah 37			אֲלֵהֶם צְדָקָה	אֲלֵהֶם	אֲלֵהֶם	אֲלֵהֶם	אֲלֵהֶם
8	Jeremiah 37			בְּמִתְרָהָה	בְּמִתְרָהָה	בְּמִתְרָהָה	בְּמִתְרָהָה	בְּמִתְרָהָה

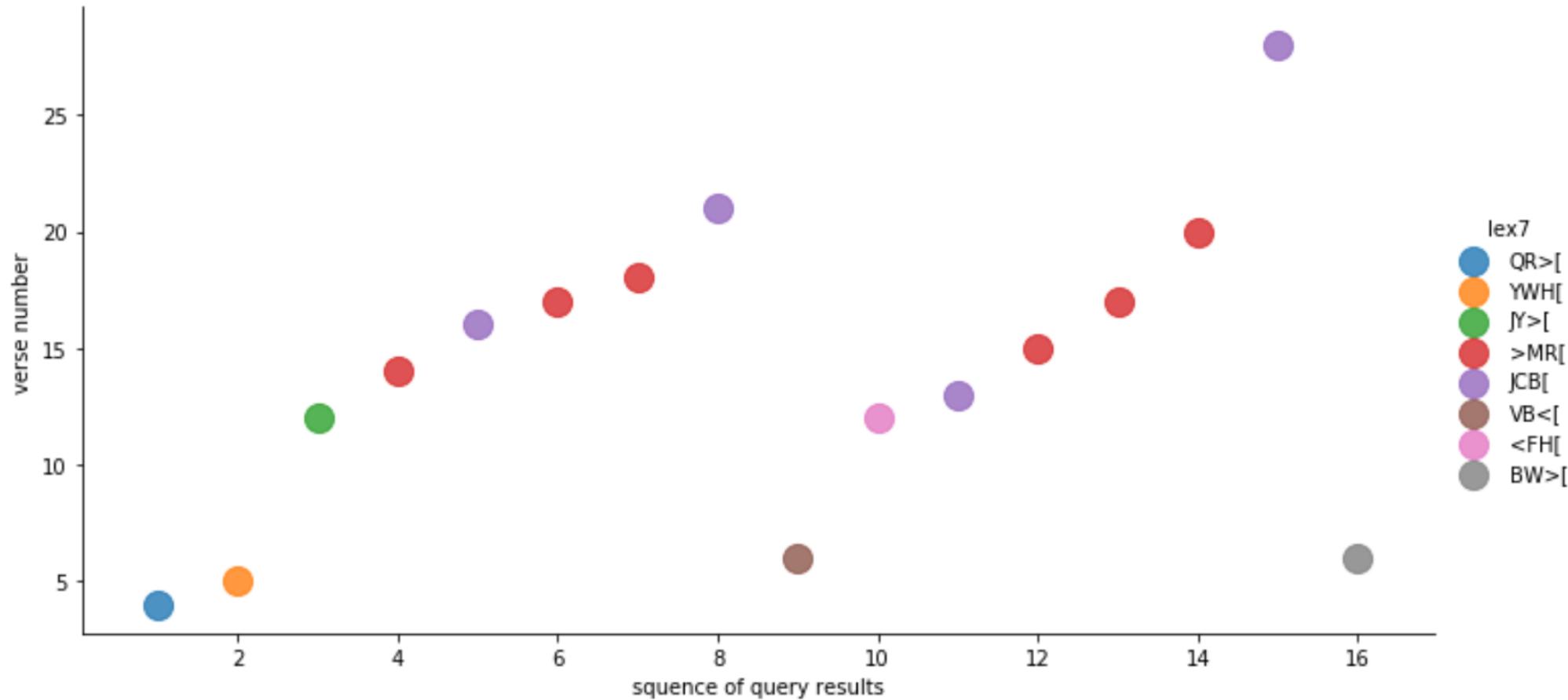
Scenario #2: Small Classroom

```

sns.lmplot(x="R", y="S3", data=JeremiahX, hue='lex7', height=5, aspect=2/1, fit_reg=False, scatter_kws={"s": 200})
ax = plt.gca()
ax.set_ylabel('verse number')
ax.set_xlabel('sequence of query results')

```

Text(0.5, 20.80000000000002, 'squence of query results')





AIM	⇒ Pattern detection ⇒ Visualization ⇒ Textual Criticism
METHOD	⇒ Jupyter notebooks

Scenario #3: PhD/Personal Research



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 - 3.2 Testing LCS
 - 3.2.1 Simple Test with words
 - 3.2.2 Simple Test with words
 - 3.2.3 Experimenting with words
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- 6 Adding statistical information
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 - 6.1.1 Writing a simple function
 - 6.1.1.1 Calculating P
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 - 6.1.2 Writing a simple function
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- 9 Visualizing!
 - 9.1 Distribution over Query
 - 9.2 Distributions in Isaiah's
- 10 MISC
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1 Introduction

	Ø	A	G	C	A	T
Ø	0	0	0	0	0	0
G	0	↑0	↖1	↖1	↖1	↖1
A	0	↖1	↑1	↖1	↖2	↖2
C	0	↑1	↖1	↖2	↑2	↖2

In this notebook I will use the LCS (Longest Common Subsequence) algorithm for finding similar sounding word pairs in the ETCBC database. The problem was first brought up by [Lidvar Andvik \(PhD student, Andrews University, SDATS\)](#).

He was asking whether it is possible to detect similar sounding word pairs in the TNK. As an example he used [Isa 53:11](#):

מְעַמֵּל נָפְשׁוֹ יְרָאָה a יִשְׁבַּע b בְּדֻתֹּו c יְצִדִּיק

עֲבָדִי לְרַבִּים וְעַזְנָתֶם הַזָּה יִסְבֶּל:

As one can see the words used in predicate and object position are very similar and belong to the same lexical family. However, they are two different lexemes:

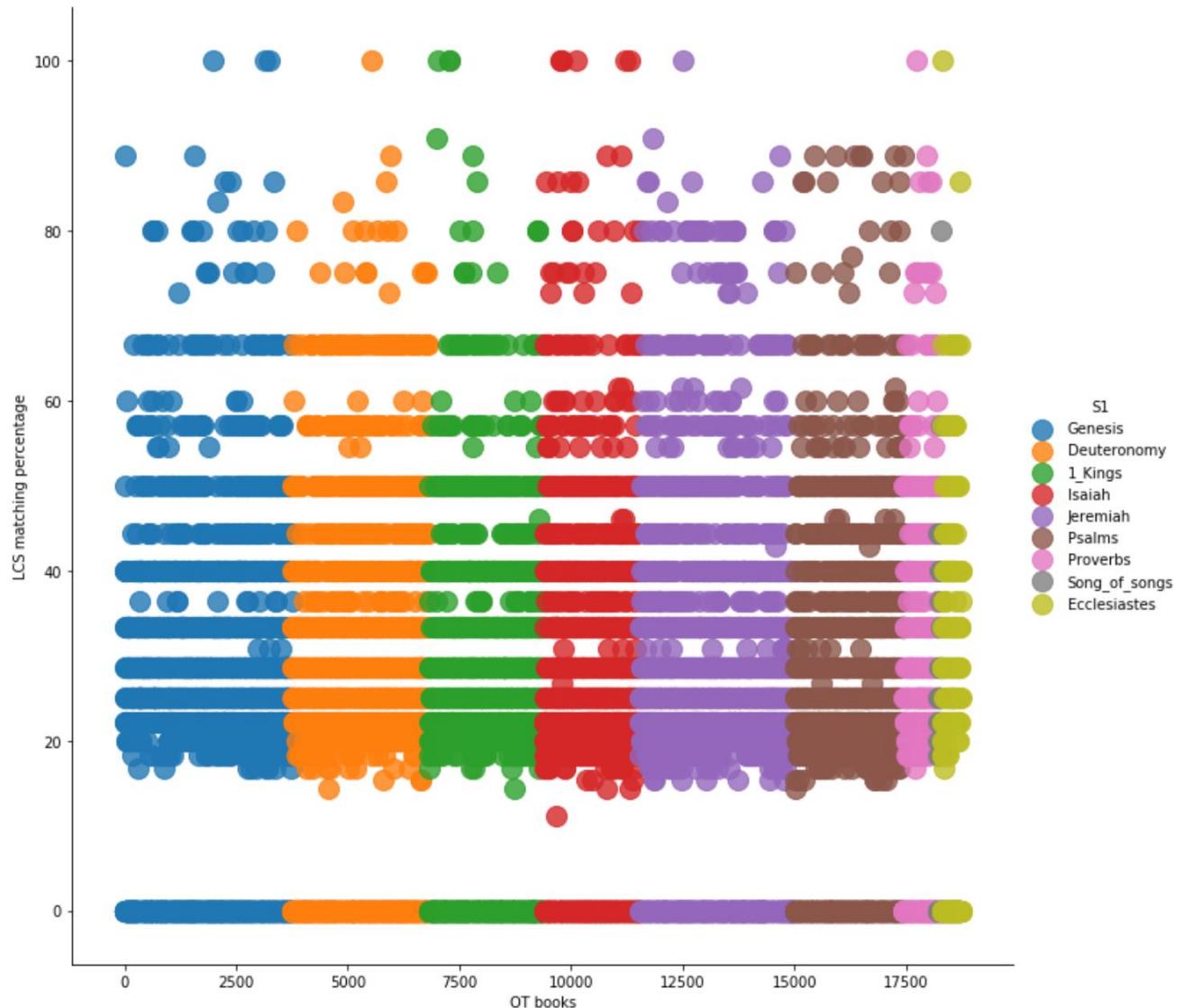
דעתו	ב	ישבע	יראה	נפש	עמל	מן
D<T/ subs f sg NA a NA NA	B FB< prep NA NA NA NA NA NA	verb m sg p3 NA impf qal	verb m sg p3 NA impf qal	NPC/ subs f sg NA a NA NA	<ML/ subs unknown sg NA c NA NA	MN prep NA NA NA NA NA NA
det Adju NA 12703 1	det Adju NA 12703 1	NA Pred NA 12702 1	NA Pred NA 12701 2	det Adju NA 12700 1	det Adju NA 12700 1	det Adju NA 12700 1
Q xYqX NA 3 1 111 4671 1	Q xYqX NA 3 1 111 4671 1	Q ZYq0 NA 4 1 111 4670 1	Q xYq0 NA 2 1 111 4669 1	Q xYq0 NA 2 1 111 4669 1	Q xYq0 NA 2 1 111 4669 1	Q xYq0 NA 2 1 111 4669 1
3481 45	3481 45	3480 44	3479 43	3479 43	3479 43	3479 43

```

sns.lmplot(x="R", y="LCSObjcPredMeanMatch", data=PredObjWordListsXL, hue='S1', height=10, aspect=1/1, fit_reg=False, scatter_
ax = plt.gca()
ax.set_ylabel('LCS matching percentage')
ax.set_xlabel('OT books')

```

i8]: Text(0.5, 20.79999999999983, 'OT books')



We can see quickly that Isiah, Jeremiah, and Psalms have a much higher density of high matching (>=80%) LCS cases.

4.2 Looking at 11QpsalmsA/11Q5

Lets have a look at another beautifully written DSS scroll, the Psalms Scroll: Below you see column VII-XIII of that scroll:



4.2.1 Displaying the first lines of column X and XI

We want to look at the first three lines (line line = 1|2|3) of column X and column XI (fragment fragment=10|11) and there each of the first three lines with the help of the TF-DSS app:

```
▶ FirstLineOf11QpsalmsA ='''  
scroll scroll=11Q5  
col10:fragment fragment=10|11  
line line=1|2|3  
...  
FirstLineOf11QpsalmsA=A.search(FirstLineOf11QpsalmsA)
```

0.43s 6 results

```
▶ A.table(FirstLineOf11QpsalmsA, start=1, end=6, withNodes=True, colorMap={3: 'magenta'}, fmt='layout-orig-full')
```

n	p	scroll	fragment	line
1	11Q5 10	scroll 11Q5 1606836	fragment 10 1542375	1603820 כלתה עיני לאמרת'כה לאמור מתי תהמ'ני :
2	11Q5 10	scroll 11Q5 1606836	fragment 10 1542375	1603821 כי עשית'ני ננאו בקיטור הס'כה לוא שכחתי :
3	11Q5 10	scroll 11Q5 1606836	fragment 10 1542375	1603822 כמו ימי עבד'כה מתי תעשה ברודפי משפט :
4	11Q5 11	scroll 11Q5 1606836	fragment 11 1542376	1603835 נֶר לרגלי דבר'כה אוֹר לנטיבותי :
5	11Q5 11	scroll 11Q5 1606836	fragment 11 1542376	1603836 נשבעתי ואקימה לעשות משפט צדק'כה :
6	11Q5 11	scroll 11Q5 1606836	fragment 11 1542376	1603837 נעוויתי עד מואד'ה זהה כאמרת'כה חונ'ני :

What we see is the text of Psa 119:82-84 (column X, line 1-3) and Psa 119:105-107 (column XI, line 1-3).

4.2.2 Displaying the photocopy of the actual scroll

We can now click on the hyperlink and look at the actual scroll:

```
▶ n p scroll fragment line  
1 11Q5 10 scroll 11Q5 1606836 fragment 10 1542375 1603820  
כלתה עיני לאמרת'כה לאמור מתי תהמ'ני :
```

Teaching and exegetical Research with



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