SHEBANQ/EMDROS MQL-tutorial v1.2

1 Basic introduction: Tool preparation

1) Introduction
2) Database architecture
   a) Selection of popular data categories (see Gen 20:1-4 CTT):

Level **object types**	**Feature**	**Value**
text section		
verse	book	Genesis, etc.
	chapter	1, 2, etc.
	verse	1, 2, etc.
syntax		
sentence	sentence	
clause	typ	WayX, Way0, etc.
	rela	Attr, Objc, etc.
	domain	N, Q, etc.
phrase	typ	VP, NP, etc.
	function	Pred, Subj, Objc, etc.
lexeme/morphology		
word	lex	">BRHM/"
	lex_utf8	"אברהם/"
	gn	m, f
	nu	sg, pl, du
	ps	p1, p2, p3
	st	a, c
	vs	qal, nif, etc.
	vt	perf, impf, etc.

Query samples:

Finding Gen 1:1

=> `[verse book IN (Genesis) AND chapter IN (1) AND verse IN (1)]`

Finding attributive clauses

=> `[clause rela IN (Attr)]`

Finding the word “Abraham”

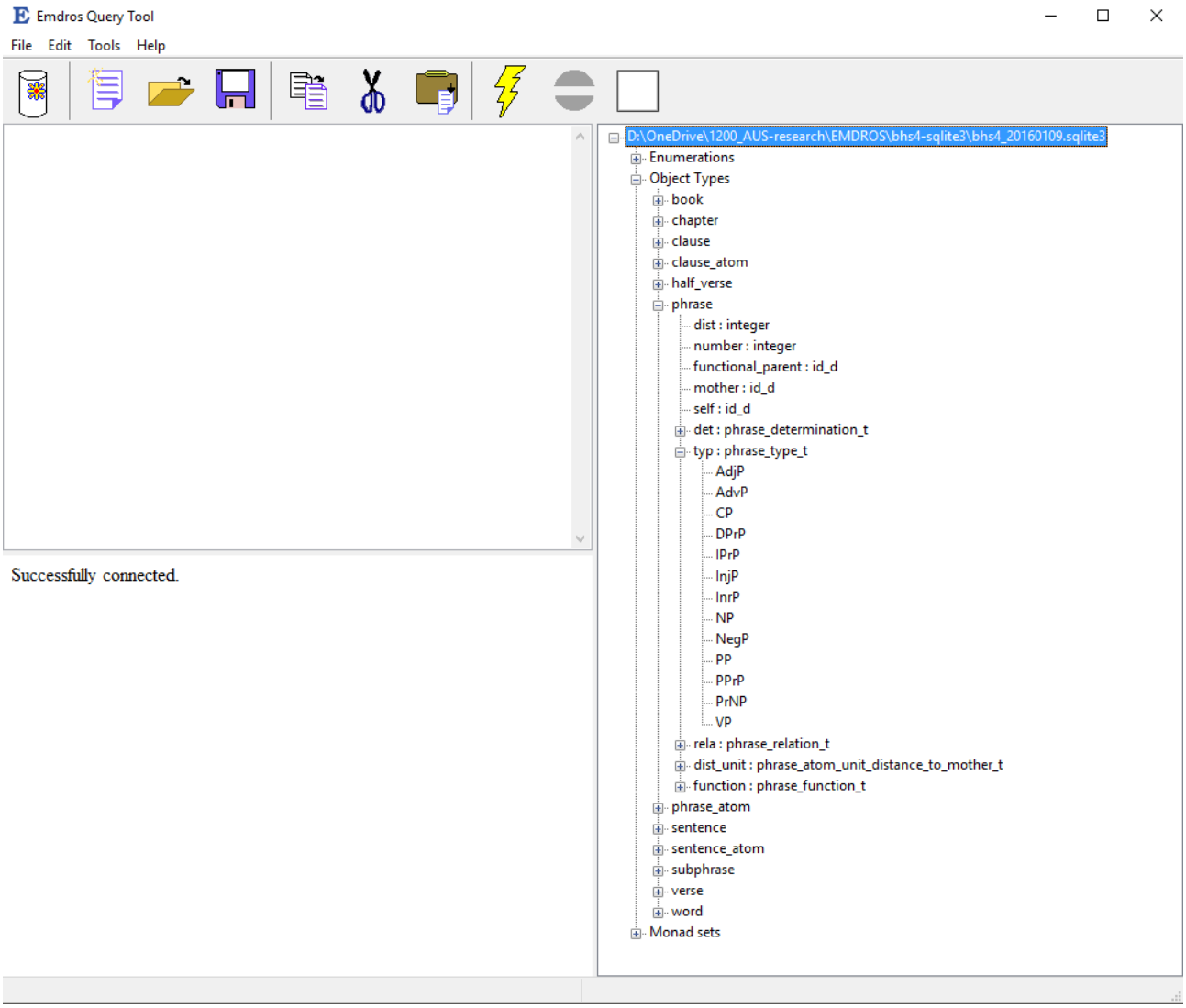
=> `[word lex_utf8 = "אברהם/"]`

Finding “Abraham” as subject of an attributive clause in Genesis chapter 25-35:

=>

```
[verse book IN (Genesis) AND chapter IN (25,26,27,29,30,31,32,33,34,35)
  [clause rela IN (Attr)
        [phrase function = Subj
              [word FOCUS lex = ">BRHM/"]
        ]
  ]
]
```

   b) find all available object types, features and values here
      i) SHEBANQ Documentation (Features by category):
         (1) Full documentation: https://shebanq.ancient-data.org/shebanq/static/docs/featuredoc/features/comments/0_overview.html
         (2) Quick reference: https://shebanq.ancient-data.org/shebanq/static/docs/MQL-QuickRef.pdf
      ii) EMDROS Query Tool: right pane



c) In case you want to use transcription instead of the Hebrew fonts you can find the transcription table here: http://shebanq.ancient-data.org/shebanq/static/docs/ETCBC4-transcription.pdf

3) Learning the MQL query language:

a) Read the Emdros Query Guide: https://shebanq.ancient-data.org/shebanq/static/docs/MQL-Query-Guide.pdf

b) Now you can build the most advanced queries. See: https://shebanq.ancient-data.org/hebrew/query?version=4b&id=491

This query, for example, finds all cases in which the same direct speech introduction (same subject [e.g. Abraham] speaks to the same complement [e.g. to Abimelech]) is repeated after the initial direct speech has been heard. The query finds the following pattern:

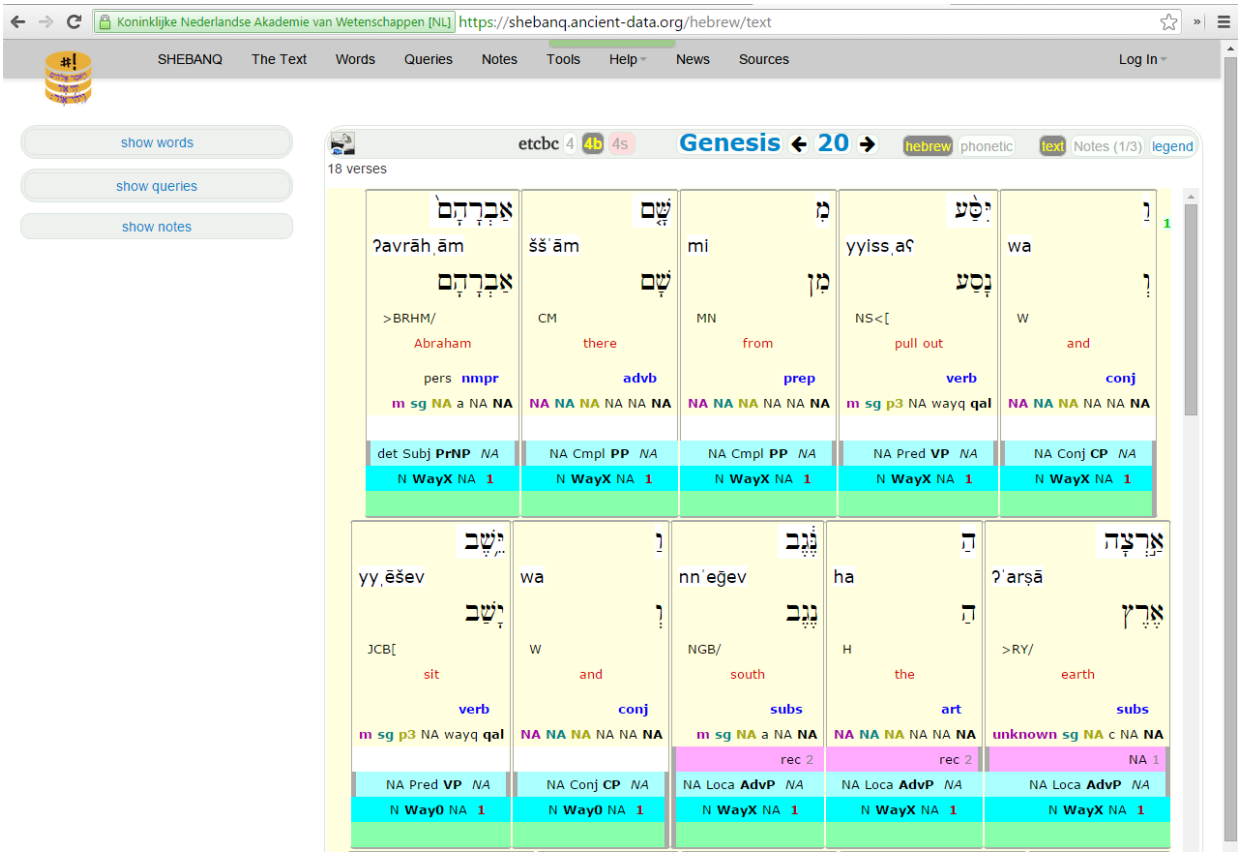
X speaks to Y: "bla bla bla"
X speaks to Y: "bla bla bla"

In the default Hebrew text-grammar one would expect after the initial

X speaks to Y: "bla bla bla"
that
Y speaks/answers to X: "bla bla bla"
is following.

We are therefore searching for a rather uncommon pattern. The query was inspired by Genesis 20:9-10 where Abimelech initiated a direct speech twice without Abraham responding to Abimelech's first speech.

4) Looking at the text in SHEBANQ: Visualizing syntactic structure



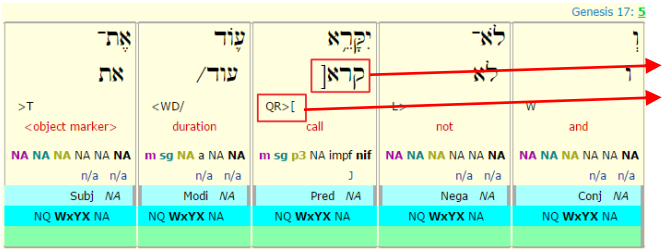
5) Relation between SHEBANQ and EMDROS Query Tool
   a) "userfriendly" Offline vs all-powerful Online
   b) Installing Emdros

2 Building Simple Queries

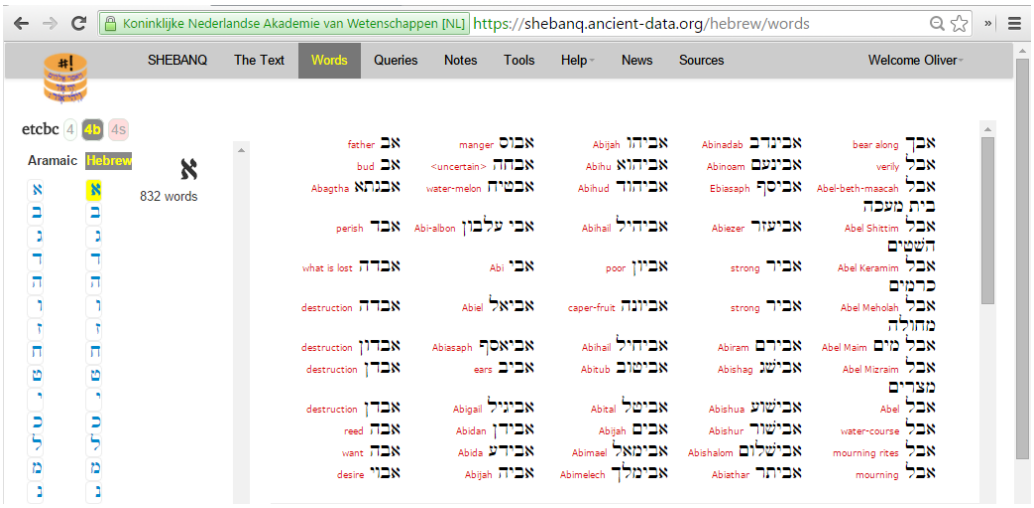
a) Searching on the word-level: Searching for the word "Abraham" in the book of Genesis in the chapter 17-22.

```
select all objects where
[chapter book = Genesis AND chapter IN (17,18,19,20,21,22)
       [word FOCUS lex = ">BRHM/"] //or write: [word FOCUS lex_utf8 = "אברהם/"]
]
```

=> When you search for nouns you have to add "/" behind the word: `"DBR/"` (word)
=> When you search for verbs you have to add "[" behind the word. `"DBR["` (to speak)
If you want to save time with typing Hebrew words or transliterated words, you can just copy/paste them from a concrete text. For example:



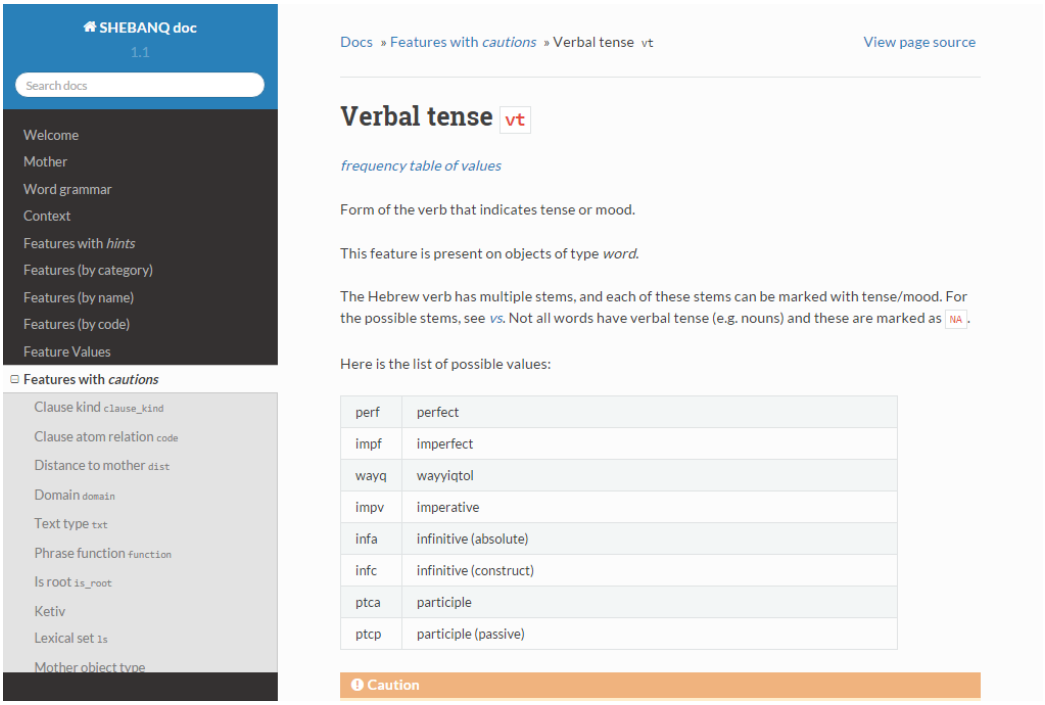
You can also go to the dictionary on SHEBANQ and copy past from there:



b) Word advanced: Searching “Abraham” in clauses that contain a predicate in Way tense in the book of Genesis.

```
select all objects where
[book book = Genesis
       [clause
              [word FOCUS vt = wayq]
              ..
              [word FOCUS lex_utf8 = "אברהם/"] //or write [word FOCUS lex = ">BRHM/"]
       ]
]
```

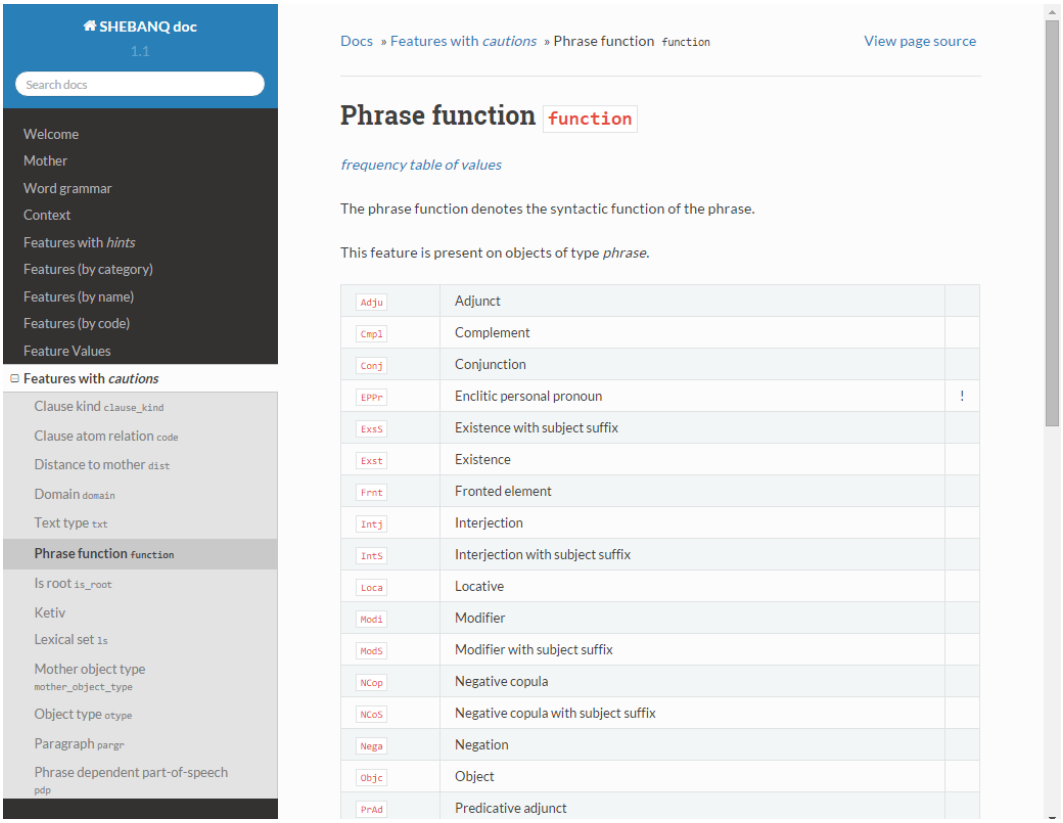
The full list of verbal tenses can be found in the ETCBC feature doc (go to “Help”):



c) Phrase: Searching “Abraham” as a subject

```
select all objects where
[book book = Genesis
       [clause
              [phrase FOCUS function = Subj
                     [word lex = ">BRHM/"]
              ]
       ]
]
```

The full list of phrase functions can be found in the ETCBC feature doc (go to “Help”):



d) Phrase advanced: Searching for the predicates that have Abraham as subject.

```
select all objects where
[book book = Genesis
       [clause
              [phrase FOCUS function = Subj
                     [word FOCUS lex_utf8 = "אברהם/"]
              ]
              ..
              [phrase FOCUS function = Pred]
       ]
       OR
       [clause
              [phrase FOCUS function = Pred]
              ..
              [phrase FOCUS function = Subj
                     [word FOCUS lex_utf8 = "אברהם/"]
              ]
       ]
]
```

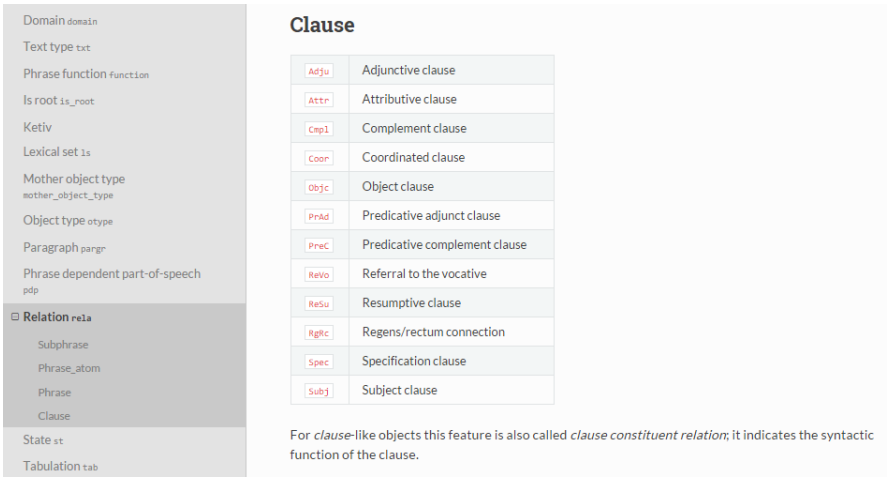
e) Complex Sentence: Searching for a sentence that contains two clauses in Genesis 20

```
select all objects where
[chapter book = Genesis AND chapter IN (20)
       [sentence
              [clause FOCUS]
              [clause FOCUS]
       ]
]
```

f) Complex Sentence advanced: Searching for a sentence that contains an independent clause and a dependent attributive/relative clause.

```
select all objects where
[chapter book = Genesis AND chapter IN (20)
       [sentence
              [clause FOCUS]
              [clause FOCUS rela = Attr]
       ]
]
```

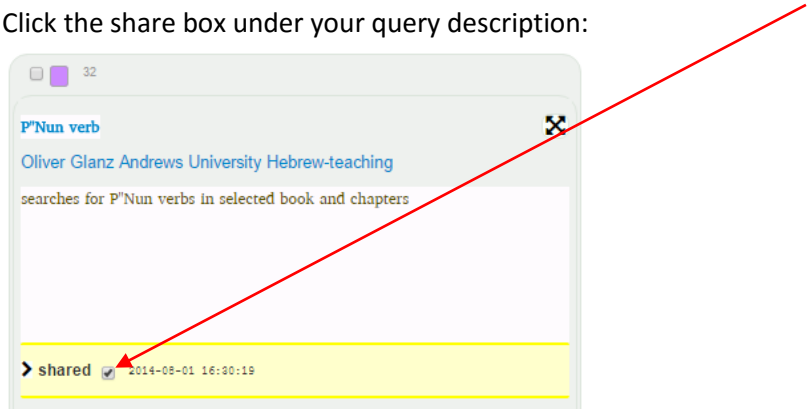
The full list of rela values can be found in the ETCBC feature doc (go to “Help”):



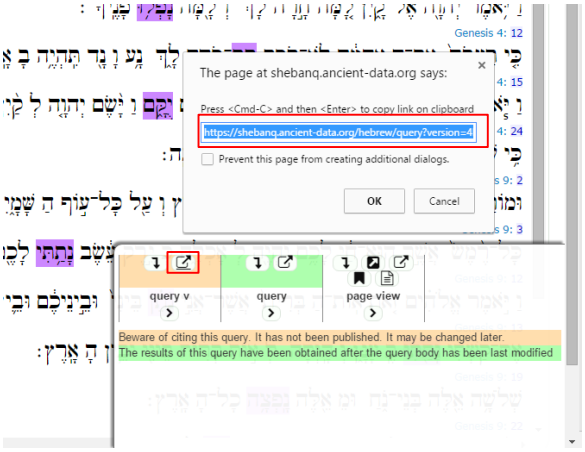
3 Publishing your query in an academic paper

a) Once you have run your query you can publish your query and use a PID for reference purposes in your paper/article/book/etc.

b) Click the share box under your query description:



c) In the bottom right corner click on “cite” and chose the right box over “query v”:



d) Now you can copy your PID and use it wherever you wish. I share my query no 491 with you here: https://shebanq.ancient-data.org/hebrew/query?version=4b&id=491

2) Going wild:
   a) Using operators: OR, AND, NOTEXIST, First AND Last, etc.
      i) Search P”Nun: https://shebanq.ancient-data.org/hebrew/query?version=4b&id=32
      ii) Search same lexeme in different clauses: https://shebanq.ancient-data.org/hebrew/query?version=4b&id=36
   b) Check MQL query guide: http://shebanq.ancient-data.org/shebanq/static/docs/MQL-Query-Guide.pdf

4 Advanced Queries

A couple of advanced queries can be found here. You can study them and learn from them how to translate your exegetical questions into electronic queries.

The concrete phenomenon triggering the exegetical question	The query	The result
A. **Word level** (Jer 1:11-12): Really a rhetoric device?  11 וַיְהִי דְבַר־יְהוָה אֵלַי לֵאמֹר מָה־אַתָּה רֹאֶה יִרְמְיָהוּ וָאֹמַר מַקֵּל שֹׁקֵד אֲנִי רֹאֶה׃ 12 וַיֹּאמֶר יְהוָה אֵלַי הֵיטַבְתָּ לִרְאוֹת כִּי שֹׁקֵד אֲנִי עַל־דְּבָרִי לַעֲשֹׂתוֹ׃	select all objects where [clause [word AS gc1 NOTEXIST [word sp IN (art,conj,inrg,prep)] [word AS samelex]]] [clause]*{1-2} //allows for a any clause to be repeated 3 times [clause [word FOCUS g_cons = gc1.g_cons NOTEXIST [word sp IN (art,conj,inrg,prep)] NOTEXIST [word lex = samelex.lex]]]	SHEBANQ query no1002
B. **Phrase level** (Gen 4:1): Did Eve bore YHWH? וַתֹּאמֶר קָנִיתִי אִישׁ אֶת־יְהוָה אֶת־יְהוָה as **complement**: "I gained a man **with** the LORD." אֶת־יְהוָה as **apposition** to אִישׁ: "I gained a man, **the** LORD."	select all objects where [clause [phrase function = Objc [phrase_atom FOCUS rela = NA] [phrase_atom FOCUS rela = Appo [word lex = ">T"]]]]	SHEBANQ queries no946 no947 no948 no1003
C. **Clause level**: To whom does YHWH speak? select all objects where [clause [phrase function = Subj [word lex_utf8 = "אלהים/"] OR [word lex_utf8 = "יהוה/"] OR [word lex_utf8 = "אל/"]] .. [phrase function = Pred [word lex = "דבר["] OR [word lex_utf8 = "אמר["] OR [word lex_utf8 = "ענה["]] .. [phrase FOCUS function = Cmpl]] OR [clause [phrase function = Pred [word lex = "דבר["] OR [word lex_utf8 = "אמר["] OR [word lex_utf8 = "ענה["]] .. [phrase function = Subj [word lex_utf8 = "אלהים/"] OR [word lex_utf8 = "יהוה/"] OR [word lex_utf8 = "אל/"]] .. [phrase FOCUS function = Cmpl]]	select all objects where [clause [phrase function = Subj [word lex_utf8 = "אלהים/"] OR [word lex_utf8 = "יהוה/"] OR [word lex_utf8 = "אל/"]] .. [phrase function = Pred [word lex = "דבר["] OR [word lex_utf8 = "אמר["] OR [word lex_utf8 = "ענה["] OR [word lex_utf8 = "קרא["]] .. [phrase function = Cmpl [[word lex_utf8 = "אל"] OR [word lex_utf8 = "ל"]] .. [word FOCUS sp = nmpr]]] OR [clause [phrase function = Pred [word lex = "דבר["] OR [word lex_utf8 = "אמר["] OR [word lex_utf8 = "ענה["] OR [word lex_utf8 = "קרא["]]	SHEBANQ query no448

	`` .. [phrase function = Subj [word lex_utf8 = "אלהים/"] OR [word lex_utf8 = "יהוה/"] OR [word lex_utf8 = "אל/"]] .. [phrase function = Cmpl [[word lex_utf8 = "אל"] OR [word lex_utf8 = "ל"]] .. [word FOCUS sp = nmpr]]] ```	
D. Level of text-linguistics (Gen 20:9-10): Is Abraham silent?  **Genesis 20:9–10 (NRSV)** **9** Then Abimelech called Abraham, and said to him, "What have you done to us? How have I sinned against you, that you have brought such great guilt on me and my kingdom? You have done things to me that ought not to be done." **10** And Abimelech said to Abraham, "What were you thinking of, that you did this thing?" **Genesis 20:9–10 (BHW 4.18)** 9 וַיִּקְרָא אֲבִימֶלֶךְ לְאַבְרָהָם וַיֹּאמֶר לוֹ מֶה־עָשִׂיתָ לָּנוּ וּמֶה־ חָטָאתִי לְךָ כִּי־הֵבֵאתָ עָלַי וְעַל־מַמְלַכְתִּי חֲטָאָה גְדֹלָה מַעֲשִׂים אֲשֶׁר לֹא־יֵעָשׂוּ עָשִׂיתָ עִמָּדִי׃ 10 וַיֹּאמֶר אֲבִימֶלֶךְ אֶל־אַבְרָהָם מָה רָאִיתָ כִּי עָשִׂיתָ אֶת־ הַדָּבָר הַזֶּה׃	``` select all objects where [[clause domain = "N" [phrase function = Pred [word [word lex = "DBR["] OR [word lex = ">MR["] OR [word lex = "QR>["]]] .. [phrase FOCUS function = Subj [word AS samesubject]] .. [phrase FOCUS function = Cmpl [word AS samecomplement]]] [clause domain = "N"]* {0-1} [clause domain = "Q"]* {1-50} [clause domain = "N" [phrase function = Pred [word [word lex = "DBR["] OR [word lex = ">MR["] OR [word lex = "QR>["]]] .. [phrase FOCUS function = Subj [word lex = samesubject.lex]] .. [phrase FOCUS function = Cmpl [word lex = samecomplement.lex]]]] OR [[clause domain = "N" [phrase function = Pred ```	SHEBANQ query no491

```
                        [word
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word AS samecomplement2]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word AS samesubject2]
                ]
        ]
        [clause domain = "N"]* {0-1}
        [clause domain = "Q"]* {1-50}
        [clause domain = "N"
                [phrase function = Pred
                        [word
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word lex = samecomplement2.lex]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word lex = samesubject2.lex]
                ]
        ]
]
OR
[
        [clause domain = "N"
                [phrase function = Pred
                        [word
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word AS samesubject3]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word AS samecomplement3]
                ]
        ]
        [clause domain = "N"]* {0-1}
        [clause domain = "Q"]* {1-50}
        [clause domain = "N"
                [phrase function = Pred
                        [word
```

```
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word lex = samecomplement3.lex]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word lex = samesubject3.lex]
                ]
        ]
]
OR
[
        [clause domain = "N"
                [phrase function = Pred
                        [word
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word AS samecomplement4]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word AS samesubject4]
                ]
        ]
        [clause domain = "N"]* {0-1}
        [clause domain = "Q"]* {1-50}
        [clause domain = "N"
                [phrase function = Pred
                        [word
                                [word lex = "DBR["]
                                OR
                                [word lex = ">MR["]
                                OR
                                [word lex = "QR>["]
                        ]
                ]
                ..
                [phrase FOCUS function = Subj
                        [word lex = samesubject4.lex]
                ]
                ..
                [phrase FOCUS function = Cmpl
                        [word lex = samecomplement4.lex]
                ]
        ]
]
```