

Welcome to SHEBANQ

User Guide



System for HEBrew text: ANnotations for Queries and markup



Wido van Peursen, leader of ETCBC. Initiator and strategic leader.



Oliver Glanz, Andrews University. ETCBC data expert, contributing numerous queries for teaching.

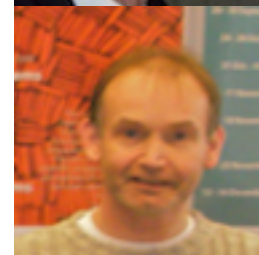


Dirk Roorda, DANS. Author of most of the code.

SHEBANQ relies on data
and tools created by



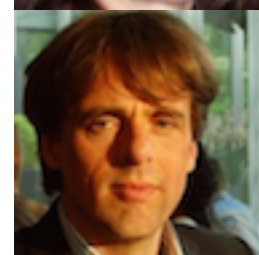
Eep Talstra, founder of ETCBC. Still computing (Pascal): participant data in the making.



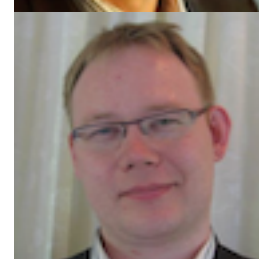
Constantijn Sikkel, data designer for ETCBC. Inventor of efficient data creation work flows.



Janet Dyk, linguist at ETCBC. Long-time data contributor, specialized in verbal valence and language variation.



Reinoud Oosting, data designer for Leiden University. Contributed ETCBC data, now key user.

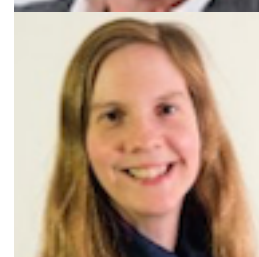


Ulrik Sandborg-Petersen, creator of Emdros. Without it, SHEBANQ would not exist!

contributors in the past



Henk van den Berg, DANS. Programmed the first versions.



Heleen van de Schraaf, then DANS. Programmed the first user interface.

Basic Usage

View and visualize

[*The Text*](#)

[*Context View*](#)

[*Data*](#)

[*Words*](#)

[*Queries*](#)

[*Charts*](#)

Export and share

[*Export Data*](#)

[*Citation*](#)

More about Words

[*Word Highlights*](#)

[*Single Word View*](#)

Working with Queries

[*Queries Advanced*](#)

[*Query Highlights*](#)

[*Single Query View*](#)

[*Executing Queries*](#)

Go your own way

[*Beyond: LAF-Fabric*](#)

Documentation and Support

Read the *Text*

you start with the passage where you left off (in this browser)

select a Bible book

show a dialog to go to other chapters - press **Esc** to dismiss

select **text** view or **data** view

show relevant words and queries

go directly to previous or next chapter

hint: click a verse number to show data for that verse only

students/teachers:

go to directly to this chapter in **Bible OL**.



Over there are links to carry you **back to SHEBANQ**

The screenshot shows the SHEBANQ website interface. At the top is a navigation bar with links: SHEBANQ, The Text, Words, Queries, Help, News, Sources, and Log In. Below the navigation bar, there are buttons for 'show words' and 'show queries'. The main content area displays the title 'Genesis' followed by a left arrow, the number '2', a right arrow, and tabs for 'text' and 'data'. The Hebrew text of Genesis 2 is shown in a large font. Below the text is a 'choose chapter' dialog box. At the bottom, there is a grid of verse numbers from 1 to 50. A yellow arrow points from the 'show relevant words and queries' box to the 'show words' button. Another yellow arrow points from the 'show relevant words and queries' box to the 'show queries' button. A yellow arrow points from the 'show relevant words and queries' box to the 'verses' label. A yellow arrow points from the 'show relevant words and queries' box to the 'choose chapter' dialog box. A yellow arrow points from the 'show relevant words and queries' box to the verse grid. A yellow arrow points from the 'show relevant words and queries' box to the 'text' tab. A yellow arrow points from the 'show relevant words and queries' box to the 'data' tab. A yellow arrow points from the 'show relevant words and queries' box to the 'Esc' key. A yellow arrow points from the 'show relevant words and queries' box to the 'previous or next chapter' box. A yellow arrow points from the 'show relevant words and queries' box to the 'hint' box. A yellow arrow points from the 'show relevant words and queries' box to the 'Bible OL' box.

Context items for this chapter

click **entry** to goto word and all occurrences

click **gloss** to toggle preview of word

click **any word** to toggle its highlight

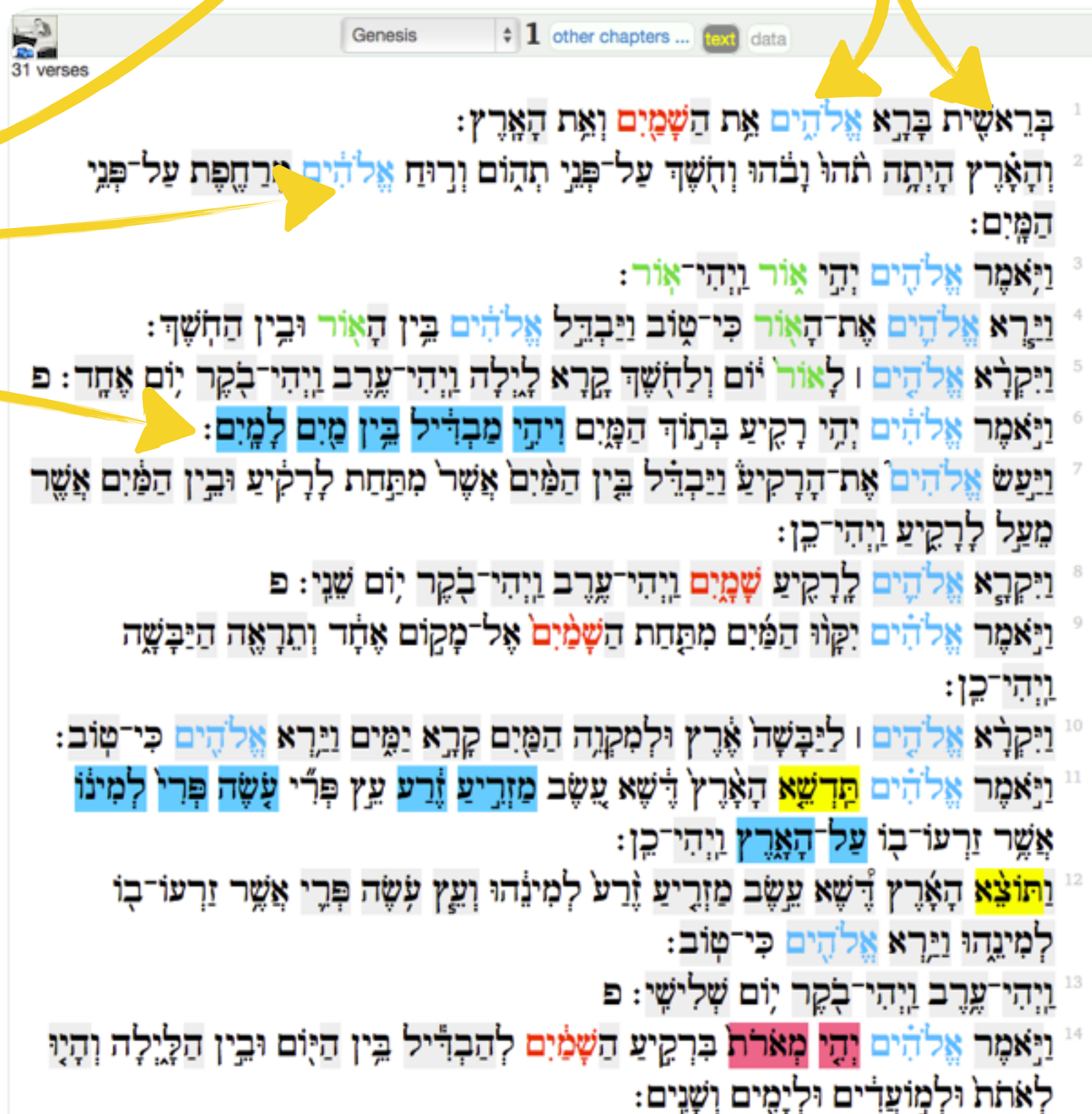
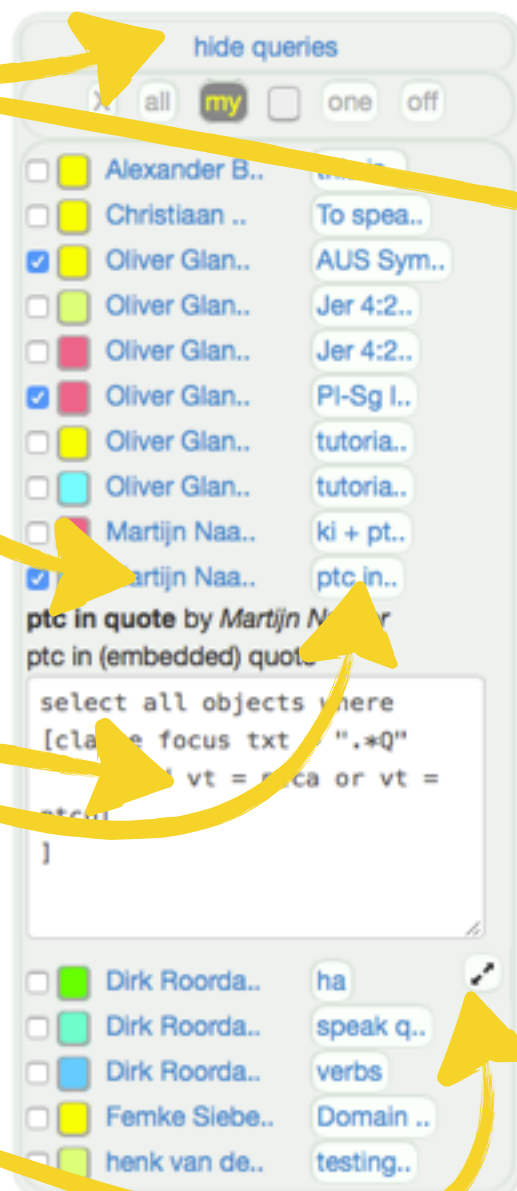
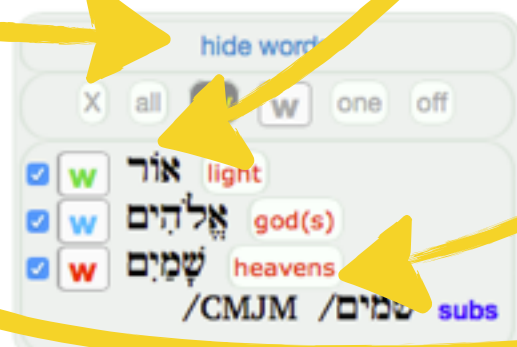
words with highlighted occurrences

queries with highlighted hits

click **author** to goto query and all hits

click **name** to toggle preview of query

enlarge preview of query in a pop-up



Show the *Data*

click **legend** to select features

show/hide a single *feature*

show/hide an entire row

click the **labels** to jump to *feature documentation*

hint: loading data for multiple verses is sluggish. Click a verse number to toggle data view for that verse only

Genesis 1 → text data legend

31 verses

אֱלֹהִים /אלהים/ >LHJM/ god(s) subs m pl NA a NA NA absent n/a	בָּרָא ברא BR>[create verb m sg p3 NA perf qal absent	רֵאשִׁית /ראשית/ R>CJT/ beginning subs f sg NA a NA NA absent n/a	בְּ ב B in prep NA NA NA NA NA NA absent n/a
אֶת את marker>	אֶת את marker>	אֶת את marker>	אֶת את marker>
W	W	W	W
NA NA NA N/	NA NA NA N/	NA NA NA N/	NA NA NA N/
n/a n/a	absent n/a	n/a n/a	absent n/a
Objc PP 4	Objc PP 4	Objc PP 4	Objc PP 4
xQtX 0 0 1	xQtX 0 0 1	xQtX 0 0 1	xQtX 0 0 1
1	1	1	1

Legend

☒ text ☐ lexeme-v ☒ lexeme-c

☒ gloss

☐ lexicon ☒ part-of-speech ☐ language ☐ monad#

☒ gender ☒ number ☒ person ☒ state ☒ tense ☒ verbal stem

☐ nme ☐ pfm ☒ prs ☐ uvf ☒ vbe ☐ vbs

☒ rela ☒ subphrase#

☒ determination ☒ function ☒ type ☐ rela ☐ rela_a ☐ phrase_a# ☒ phrase#

☐ txt ☒ type ☐ rela ☒ tab ☒ code ☒ clause_a# ☒ clause#

☒ sentence_a# ☒ sentence#

Show the *words*

click an **entry** to view more info, including the *occurrences* of this word

click the **gloss** to toggle between the *entry* and the *disambiguation*



SHEBANQ

The Text

Words

Queries

Help

News

Sources

Aramaic

Hebrew

602
words

שמי ??

desolation

שמע Shama

שמעת ??

Shimron

שמרון = /

שמידע ??

<uncertain>

שמע Shema

שמעתי ??

Shimron

שמרון = = /

שמידעי ??

horror

שממון

שמע hear

<uncertain>

שמרוני ??

שמץ

heavens

oil

שמן /

שמעא ??

<uncertain>

שמרי ??

שמצה

שמריה ??

שן ??

שנים two

stamping

שער measure

שעטה

שמריהו ??

שנא sleep

שנינה taunt

שעטנז cloth

שער burst

שמרים vigill

שנא shine

שנן repeat

שעל handful

שער estimate

שמרית ??

שנאב ??

שנן sharpen

שעלבים ??

שערור horrible

שמרני ??

highness

שנאן

שנס gird

שעלבין ??

horrible

שנאן

שנס

שעלבין

horrible

Queries and muting (simple)

click the **triangles** to expand and collapse

This is your dashboard for queries.
Find the queries ordered by organization, then project, then user.
Then act: preview, mute, generate a link, edit, go to the results page.

full text search
on organization,
project, people
and queries

use *checkboxes* to **mute**
queries, so that they do not
show up in the sidebar

go to the page of this query to edit and run it

quickly expand/
collapse the tree
to a specific level

your mutings are not
stored on the server but
on your browser

preview/edit the description of this query
right here by clicking the info icon

The screenshot shows the SHEBANQ web application interface. The top navigation bar includes links for Home, The Text, Words, Queries, Help, News, and Sources, along with a Log In button. On the left, there is a sidebar with a filter section (simple/advanced, Filter, dirk, filter applied, all with children (2), in my queries, clear filter) and a level section (Level, organizations (0 1), projects (0 2), users (2 0), queries (9), manual). The main content area displays a tree view of Public Queries, with a list of queries under the 'shebanq' project, including 'Double imperatives'. Annotations with yellow arrows point to various elements: 'Queries and muting (simple)' points to the sidebar; 'click the triangles to expand and collapse' points to the tree view; 'full text search on organization, project, people and queries' points to the filter input; 'quickly expand/collapse the tree to a specific level' points to the level section; 'use checkboxes to mute queries, so that they do not show up in the sidebar' points to the checkboxes in the query list; 'your mutings are not stored on the server but on your browser' points to the query list; 'This is your dashboard for queries. Find the queries ordered by organization, then project, then user. Then act: preview, mute, generate a link, edit, go to the results page.' points to the query list; 'go to the page of this query to edit and run it' points to the 'Double imperatives' query; 'preview/edit the description of this query right here by clicking the info icon' points to the info icon for 'Double imperatives'; 'generate a pretty hyperlink to this query to be used in the description of an other query' points to the link icon for 'Double imperatives'; and 'pretty means: mark-down. This description has been entered in mark-down.' points to the description of the 'Double imperatives' query.

Double imperatives
DANS shebanq

Finding the right contexts
This is a variation on Reinoud Oosting: Repetition of imperative in Isa 40:1 which provides the context **book** for two consecutive clauses.
This query takes **verse** instead.
N.B. Use *data* view to inspect the structural difference between Jesaia 40:1 and Jesaia 51:9
Done

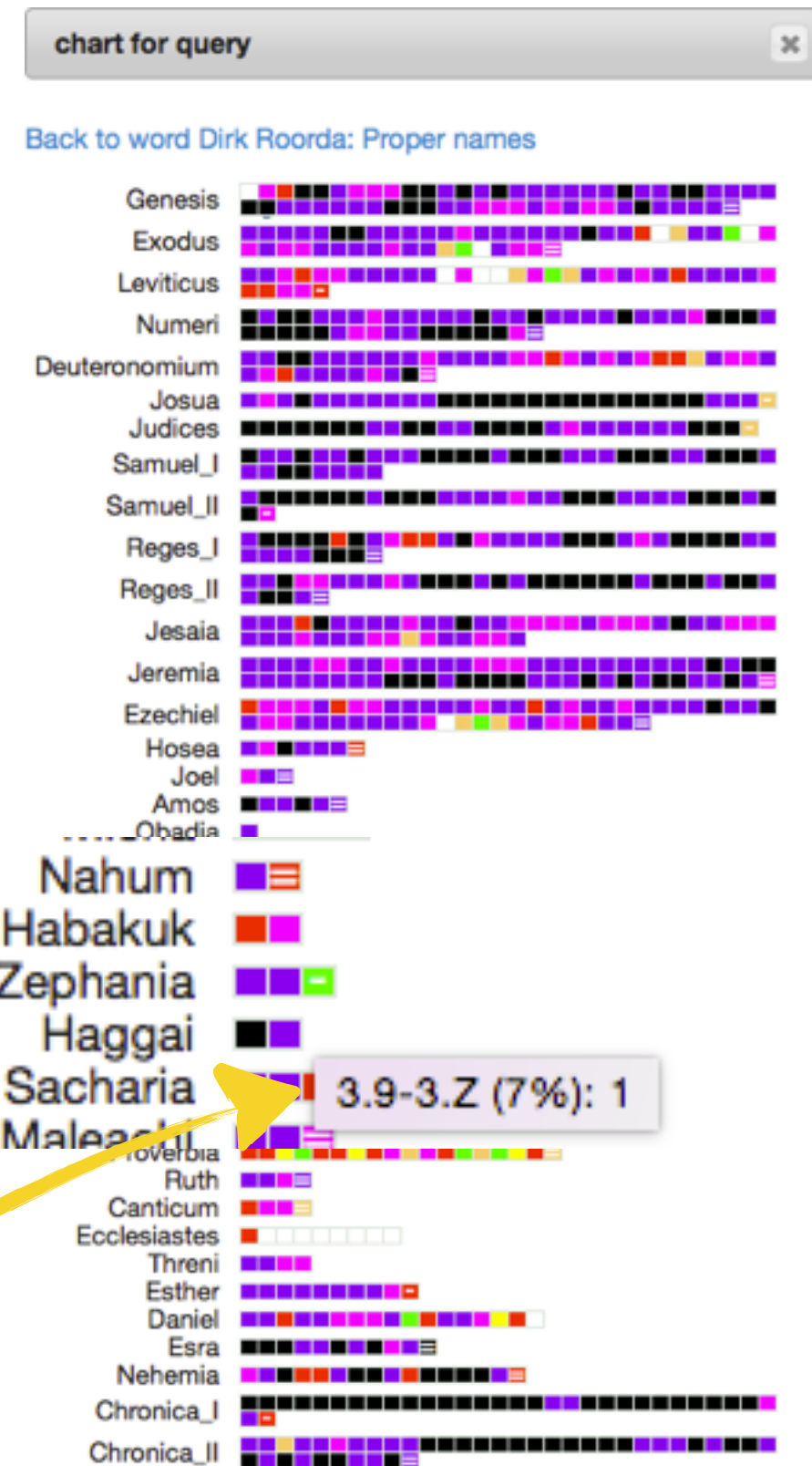
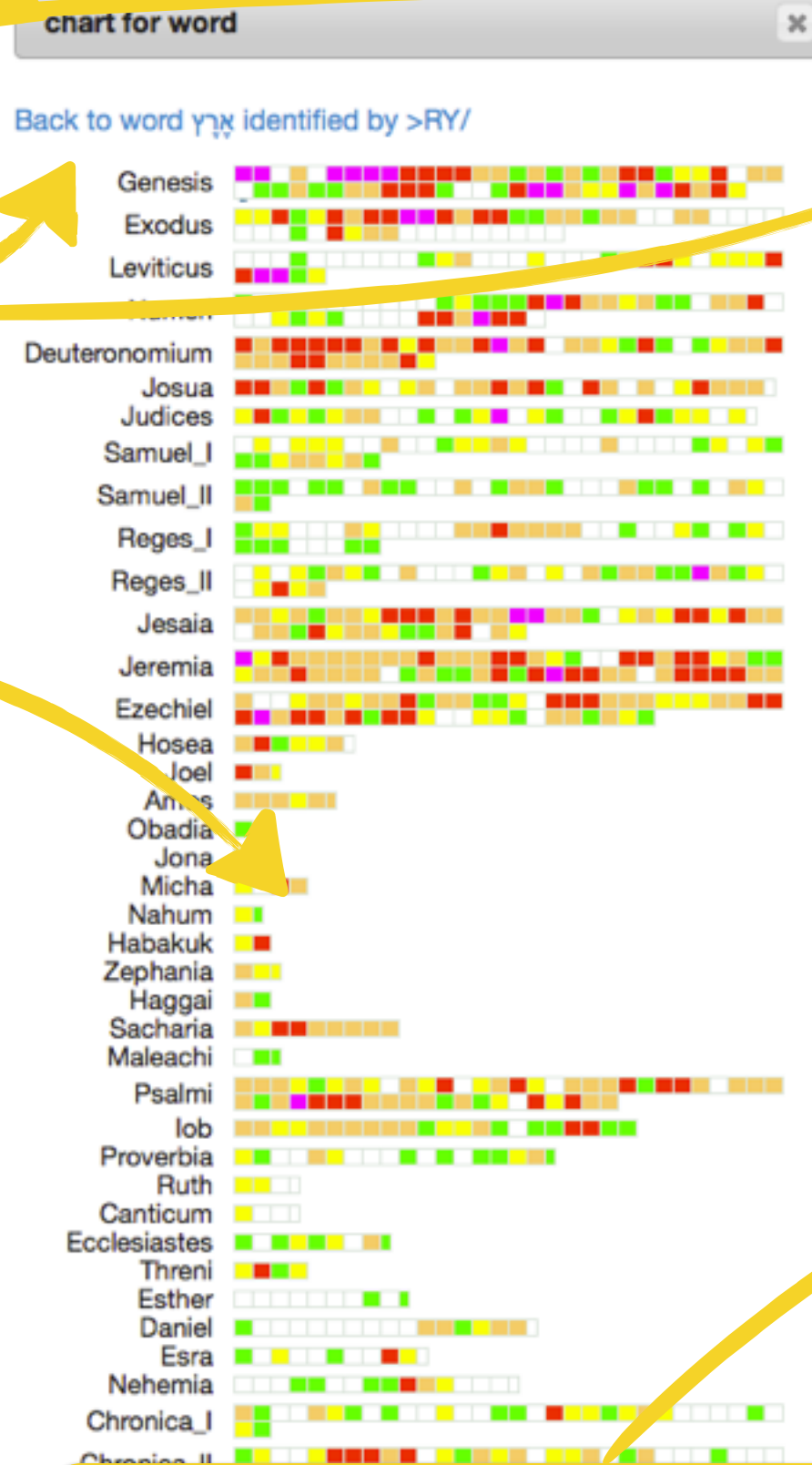
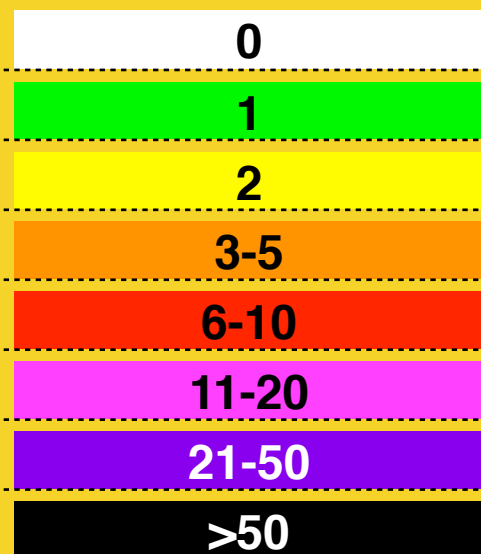
pretty means: mark-down. This description has been entered in mark-down.

Charts show you where in the Bible the occurrences and hits are

Back to the word or query you came from

Every **cell** corresponds to a block of 500 words. Clicking it leads you to it. **Hover** to see the chapter range and the amount of hits/occurrences

The **color** in the cell indicates the *absolute* number of hits/occurrences in that block



Last blocks of a book have lesser size. The size is indicated in a tooltip (%) and the block is marked with = (< 25%) or - (between 25% and 75%)

Chapter ranges:
 23.Z = chapter 23, last word
 23.z = chapter 23, at position >95%
 23.6 = chapter 23, at position 60%

q531.csv chart

Dirk Roorda: Double imperatives 1

107 hits in 49 verses on 3 pages

Exodus 17:5

אל אל	יהוה /יהוה	יאמר]אמר	ו
to	YHWH	say	and
none prep NA NA NA NA NA NA n/a n/a	none nmp m sg NA a NA NA n/a n/a	quot verb m sg p3 NA wayq qal J	none conj NA NA NA NA NA NA n/a n/a
det Cmpl PP NA 4 N WayX NA 3 200 1922 1 1486 19	det Subj PrNP NA 3 N WayX NA 3 200 1922 1 1486 19	NA Pred VP NA 2 N WayX NA 3 200 1922 1 1486 19	NA Conj CP NA 1 N WayX NA 3 200 1922 1 1486 19

Download hits or occurrences as spreadsheet

This file opens best in Open Office. Excel struggles with the Unicode/utf8. Numbers (Apple) works reasonably.

the *whole* list will be exported, not just this page

Every word occupies a separate row.
There are fixed columns for
book name, chapter #, verse #.
The rest depends on your *data view settings*:

text data

word number, hebrew text

data legend

as selected in legend

legend

☒ text ☒ דָּבָר lexeme

☐ text ☒ דָּבָר lexeme

☒ gloss

☐ lexical set ☒ part-of-speech ☐ language ☐ monad#

☒ gender ☒ number ☒ person ☒ state ☒ tense ☒ verbal stem

☐ nme ☐ pfm ☒ prs ☐ uvf ☒ vbe ☐ vbs

☒ rela ☒ subphrase#

☒ determination ☒ function ☒ type ☐ rela ☐ rela_a ☐ phrase_a# ☒ phrase#

☐ txt ☒ type ☐ rela ☒ tab ☒ code ☐ clause_a# ☒ clause#

☐ sentence_a# ☒ sentence#

Customize
highlighting of
words

show **all** words of the
chapter in the list

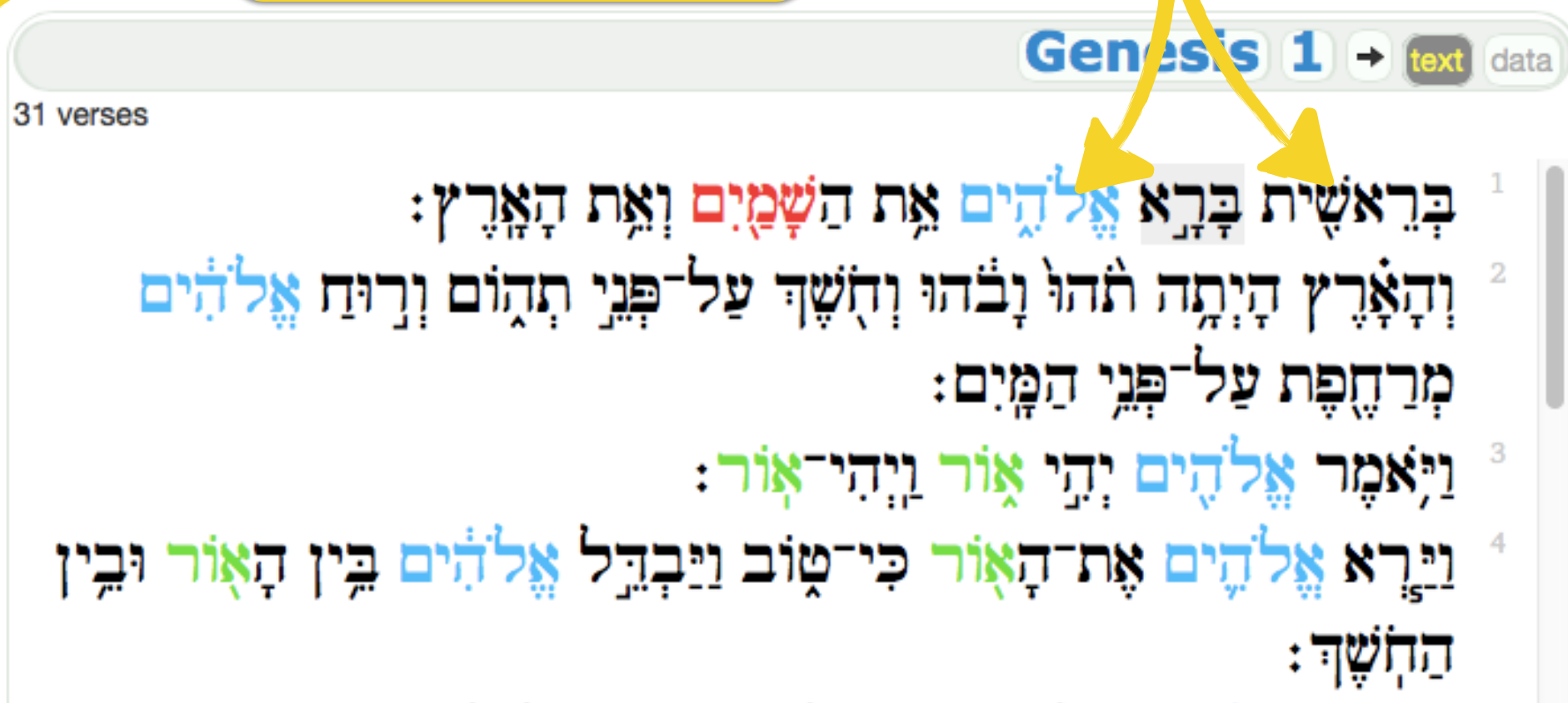
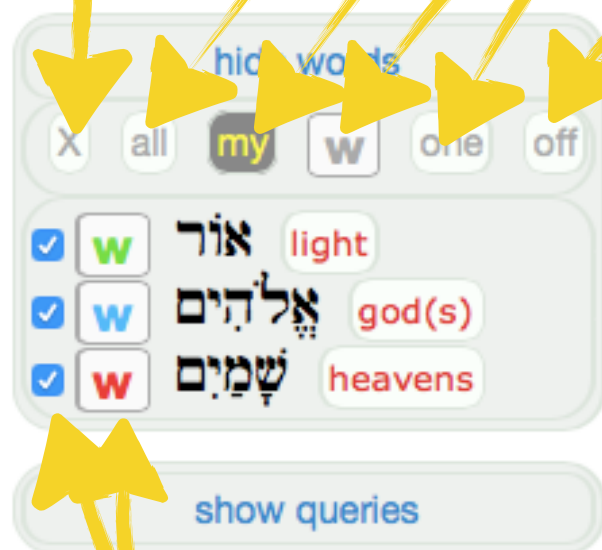
show word highlights
according to **my** settings

show word highlights in **one**
fixed, selectable color

switch **off** all word
highlighting

click **any word** to toggle its
highlight. Highlighted words
count as customized.

reset word
highlighting to
factory settings



customize the highlight
color of a single word.
Uncheck the box to
uncustomize.

Single word view

download csv file of all occurrences of this word, not just the ones shown on this page

click chapter labels to view whole chapter

visualize occurrences throughout the Bible on a clickable chart

show a dialog to go to other pages - press **Esc** to dismiss

customize the highlight color for this word also from here

find this word in the list of word entries

all available information about this word

occurrences in verse context

hint: Click a verse number to toggle data view for that verse only

The screenshot displays the SHEBANQ website interface for the word 'אֶרֶץ' (Earth). The top navigation bar includes a logo, the site name 'SHEBANQ', and tabs for 'The Text' and 'Words'. The main content area shows the word 'אֶרֶץ' in Hebrew, with its occurrences in the Bible visualized on a chart. A sidebar on the left provides detailed information about the word, including its vocalized and consonantal forms, disambiguated forms, and part of speech. A 'choose page' dialog box is open, allowing users to navigate to different pages of results. Annotations with arrows point to various features, such as the 'download csv file' button, the 'visualize occurrences' chart, the 'customize highlight color' option, and the 'occurrences in verse context' view.

Annotations:

- Single word view
- download csv file of all occurrences of this word, not just the ones shown on this page
- click chapter labels to view whole chapter
- visualize occurrences throughout the Bible on a clickable chart
- show a dialog to go to other pages - press **Esc** to dismiss
- customize the highlight color for this word also from here
- find this word in the list of word entries
- all available information about this word
- occurrences in verse context
- hint: Click a verse number to toggle data view for that verse only

Queries and muting (advanced)

full text search on organization, project, people and queries. The meaning of the numbers are explained in other boxes.

without a filter, you can quickly select your own queries and your unpublished queries

queries/matches in the levels. The **bold** number indicates real matches, the grey number indicates how many items there are with a match in its subtree

simple **advanced**

Filter

no filter applied

all matches

all with children

in all queries

in my queries

in private queries

Level

organizations (10)

projects (20)

users (41)

queries (338)

manual

total # queries in this sub tree

total # queries of this organization, project or user

of queries that are **up-to-date**, **have never run**, have **outdated results**

The screenshot shows a hierarchical tree of queries. Annotations with yellow arrows point to specific parts of the interface:

- An arrow points from the 'total # queries in this sub tree' box to the 'Public Queries' entry, which shows a calculation: $240 + 1 + 97 = 338$.
- An arrow points from the 'total # queries of this organization, project or user' box to the 'Public Queries' entry.
- An arrow points from the '# of queries that are up-to-date, have never run, have outdated results' box to the 'Public Queries' entry.
- An arrow points from the 'if logged in you can add/edit orgs, projects, queries here' box to the 'testOliver' entry, which has a gear icon and a lock icon.
- An arrow points from the 'my queries are bold, and if they are private they are italic too' box to the 'testOliver' entry.

The tree structure is as follows:

- Public Queries (240+1+97=338) +
 - Projects without Query (=0) +
 - DANS(13+1=14) +
 - Test Projects(2+1=3) +
 - shebanq(11+1=12 of 20) +
 - Dirk Roorda(11+1=12 of 14)
 - testOliver (bold, italic, gear, lock)
 - ha (gear, lock)
 - Elohim Jahweh (bold, gear, lock)
 - Jahweh Elohim (bold, gear, lock)
 - shibboleth (gear, lock)
 - Shibboleth only (bold, gear, lock)
 - test (gear, lock)
 - verbs (gear, lock)
 - proper names (bold, gear, lock)
 - Aramaic (bold, gear, lock)
 - test for Reinoud (bold, italic, gear, lock)
 - Double imperatives (bold, gear, lock)
- ETCBC(44+1+28=73) +
- VU Amsterdam(14+4=18) +
- OT department Andrews University(168+62=230) +

Customize highlighting of queries

highlight hits of **all** queries in the list

show query highlights according to **my** settings

show query highlights in **one** fixed, selectable color

switch **off** all query highlighting

reset query highlighting to factory settings

Why does my query not appear in the list?

1. it is not public
2. its results are outdated
3. it has no results in this chapter
4. I have *muted* this query

show words

X all **my** one off

<input type="checkbox"/>	Alexander B..	this is..
<input type="checkbox"/>	Christiaan ..	To spea..
<input checked="" type="checkbox"/>	Oliver Glan..	AUS Sym..
<input type="checkbox"/>	Oliver Glan..	Jer 4:2..
<input type="checkbox"/>	Oliver Glan..	Jer 4:2..
<input checked="" type="checkbox"/>	Oliver Glan..	PI-Sg l..
<input type="checkbox"/>	Oliver Glan..	tutoria..
<input type="checkbox"/>	Oliver Glan..	tutoria..
<input type="checkbox"/>	Martijn Naa..	ki + pt..
<input checked="" type="checkbox"/>	Martijn Naa..	ptc in..
<input type="checkbox"/>	Dirk Roorda..	na
<input type="checkbox"/>	Dirk Roorda..	speak q..
<input type="checkbox"/>	Dirk Roorda..	verbs
<input type="checkbox"/>	Femke Siebe..	Domain ..
<input type="checkbox"/>	henk van de..	testing..

Genesis 1 other chapters ... text data

31 verses

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ:

וְהָאָרֶץ הָיְתָה תֹהוּ וָבֹהוּ וְחָשֶׁךְ עַל־פְּנֵי תְהוֹם וּרוּחַ אֱלֹהִים מְרַחֶפֶת עַל־פְּנֵי הַמַּיִם:

וַיֹּאמֶר אֱלֹהִים יְהי אֹר וַיְהי־אֹר:

וַיֵּרָא אֱלֹהִים אֶת־הָאֹר כִּי־טוֹב וַיַּבְדֵּל אֱלֹהִים בֵּין הָאֹר וּבֵין הַחָשֶׁךְ:

וַיִּקְרָא אֱלֹהִים לְאֹר יוֹם וּלַחֹשֶׁךְ לַיְלָה וַיְהי־עֶרֶב וַיְהי־בֹקֶר יוֹם אֶחָד: פ

וַיֹּאמֶר אֱלֹהִים יְהי רָקִיעַ בְּתוֹךְ הַמַּיִם וַיְהי מַבְדִּיל בֵּין מַיִם לַמַּיִם:

וַיַּעַשׂ אֱלֹהִים אֶת־הָרָקִיעַ וַיַּבְדֵּל בֵּין הַמַּיִם אֲשֶׁר מִתַּחַת לָרָקִיעַ וּבֵין הַמַּיִם אֲשֶׁר מֵעַל לָרָקִיעַ וַיְהי־כֵן:

וַיִּקְרָא אֱלֹהִים לָרָקִיעַ שָׁמַיִם וַיְהי־עֶרֶב וַיְהי־בֹקֶר יוֹם שְ�נִי:

וַיֹּאמֶר אֱלֹהִים יִקְווּ הַמַּיִם מִתַּחַת הַשָּׁמַיִם אֶל־מָקוֹם וַיְהי־כֵן:

customize the highlight color of a single query. Uncheck the box to **uncustomize**.

Single *query* view

download csv file of *all* hits
of this query, not just the ones
shown on this page

CHART! see later on

show a dialog to go to **other pages** - press **Esc** to dismiss

click **chapter labels** to view whole chapter

customize the highlight color

jump to this query
in tree view

description in mark-down with pretty links to other queries

If a modified query is not executed, its hits are *outdated*.
Outdated queries are not shown in the sidebar.

all available
information about
this query and
links to
documentation

hits in verse context

enlarge preview of *query* in a pop-up

go to edit
and
execute
view

Publish if you are content with the query. Public queries show up in the sidebar, if the results are up-to-date.

The screenshot displays the QBC4 interface with a query titled "Dirk Roorda: Double imperatives". The query results show Hebrew text from the Bible, with specific words highlighted in pink. Annotations point to various features:

- hits in verse context**: Points to the highlighted words in the Hebrew text.
- enlarge preview of query in a pop-up**: Points to a pop-up window showing a larger view of the query results.
- go to edit and execute view**: Points to a button labeled "edit and execute view".
- Publish**: Points to a button labeled "Publish".

The interface also includes a sidebar with a search bar, a list of queries, and a status section showing the query's execution history.

Query developer view

Help others understand your query by writing in mark-down

after execution, results will be refreshed

Hint: if you want to link to an other query, you can get a valid mark-down link from the **Queries** page.

The screenshot shows the 'Query developer view' interface. At the top, there's a title bar with a tab labeled 'q531.csv chart'. Below it, the main content area is titled 'Double imperatives'. A yellow arrow points from the 'Help others understand your query by writing in mark-down' callout to the text area. The text area contains a markdown snippet: '# Finding the right contexts' followed by a paragraph explaining a variation on Reinoud Oosting's work. Below the text area is a code editor with a query body. A yellow arrow points from the 'Edit the query body' callout to the code editor. To the right of the code editor, there are three buttons: 'Done', 'Execute', and 'Save'. A yellow arrow points from the 'Back to normal layout' callout to the 'Done' button. Another yellow arrow points from the 'Save and execute' callout to the 'Execute' button. A third yellow arrow points from the 'Just save' callout to the 'Save' button. Below the buttons, there are two status bars: 'same query body' and 'Query executed'. A yellow arrow points from the 'Watch the messages from the query engine' callout to the 'Query executed' bar. At the bottom left, there's a status section with 'status results up to date', 'published' checkbox, 'modified 2015-02-26 21:07:45', and 'executed 2015-02-26 21:07:45'. A yellow arrow points from the 'clear messages' callout to the status section.

Double imperatives

Finding the right contexts

This is a variation on [Reinoud Oosting: Repetition of imperative in Isa 40:1] (<http://shebanq.ancient-data.org/hebrew/text?iid=530&mr=r&qw=q>) which provides the context ``book`` for two consecutive clauses.

```
select all objects where
[verse
[clause
[phrase function = Pred
[word AS w1 FOCUS sp = verb AND vt = impv ]
]
]
[clause
[phrase function = Pred
[word FOCUS sp = verb AND vt = impv AND ... ]
w1.lex ]
]
]
```

Done Execute Save

same query body

Query executed

status results up to date

published ☐

modified 2015-02-26 21:07:45

executed 2015-02-26 21:07:45

Dirk Roorda: Double imperatives 1

text data

107 hits in 49 verses on 3 pages

Exodus 17:5

וַיֹּאמֶר יְהוָה אֶל-מֹשֶׁה עֲבֹד לַפָּנִי הַעֲמֵם
וְקַח אֶתֶּךָ מִזִּקְנֵי יִשְׂרָאֵל וּמִטֶּף אֲשֶׁר
הִכִּיתָ בּוֹ אֶת-הַיָּאֵר קַח בְּיָדְךָ וְהִלַּכְתָּ:

Numeri 31:17

וַעֲתָה הֲרֵגוּ כָל-זָכָר בְּטָרַף וְכָל-אִשָּׁה
יָרַעַת אִישׁ לְמִשְׁכַּב זָכָר הֲרֵגוּ:

Judices 4:18

וַתֵּצֵא יָעֵל לִקְרֹאת סִיסְרָא וַתֹּאמֶר אֵלָיו
סוּרָה אֲדֹנָי סוּרָה אֵלַי אֶל-תִּירָא וַיָּסֶר
אֵלָיָהּ הָאֱהָלָה וַתִּכְסֶּהוּ בִּשְׂמִיכָה:

Judices 5:12

עוֹרֵי עוֹרֵי דְבוּלָה עוֹרֵי עוֹרֵי דְבָרֵי-שִׁיר
קוֹם בָּרֶק וְשִׁבְחָה שְׁבִיחָה בֶן-אֲבִינֵעָם:

Samuel I 24:12

וְאָבִי רָאָה נָם רָאָה אֶת-כִּנְף מַעִילָהּ בְּיָדִי
כִּי בִכְרַתִּי אֶת-כִּנְף מַעִילָהּ וְלֹא הִרְגַּתִּיָּהּ
דָּע וּרְאָה כִּי אֵין בְּיָדִי דָּעָה וְפָשַׁע



Familiar with Python? Feeling the urge to do more with this data?
LAF-Fabric offers an API by which you can master the data

nbviewer

תָּנַח and locatives

We try to mark all those occurrences of תָּנַח + object + complement. What we want to mark is whether the complement is a proper indirect object or a locative.

This is part of Janet's project of creating a valence dictionary and using a flowchart to arrive at the meaning of a verb in its context of complements.

First we use an MQL query to get all occurrences of תָּנַח with an object and a complement. Then we apply a few heuristics to detect those cases where the complement is a locative or an indirect object.

The query is also on SHEBANQ, a version by [Dirk](#) and a version by [Janet](#).

```
import sys
import collections
import subprocess

from lxml import etree

import laf
from laf.fabric import LafFabric
from etcbc.preprocess import prepare
from etcbc.mql import MQL
fabric = LafFabric()
```

0.00s This is LAF-Fabric 4.4.6
API reference: <http://laf-fabric.readthedocs.org/en/latest/texts/API-ref>

LAF-Fabric supports walking over the data.

You can fire MQL queries within LAF-Fabric as a starting point ...

and then use the full, detailed results programmatically

It is an off-line tool, open source, and you can download the ETCBC4 data, Open Access. Start with [readthedocs](#).

The notebooks you create with LAF-Fabric, you can share online

Documentation and Support

[MQL quick reference guide \(pdf\)](#)

[MQL Query Reference by Ulrik \(pdf\)](#)

[ETCBC4 feature doc](#)

[ETCBC4 transcription table \(pdf\)](#)

Please report issues to [Dirk Roorda](#).