

Introduction to NVivo: Qualitative Coding & Text Analysis

Digital Integration Teaching Initiative
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Qualitative Data Analysis
Professor Silvia Dominguez, Fall 2025

Qualitative Coding

Qualitative coding is when you create a list of themes, or a **schema**, that you want to highlight in a set of primary/secondary sources. Then, you go through all your sources and highlight particular moments from the text according to those themes.

Agenda

- What is qualitative coding?
- What is NVivo?
 - Important NVivo-specific vocabulary and functions
 - NVivo demonstration
 - Understand how to use NVivo as a research tool
 - Learn the differences between NVivo file types and why knowing this is important

Slides and handouts available at:

<https://bit.ly/fa25-dominguez-insh7102-multi>

Getting started: Qualitative Coding with NVivo

What is NVivo?

- NVivo is a **text analysis** and **research organization** software that is available through [Northeastern's Student Hub](#) > Resources > IT Services > Software Downloads.
- NVivo provides methods for you to annotate and code documents with user-created tags (codes), summarize and visualize these codes, and organize research materials.

What is NVivo Useful For?

NVivo is particularly helpful for organizing and annotating research materials such as:

- **Primary sources:** any primary sources you may be analyzing such as letters, field notes, or documents from an archive
- **Secondary sources:** scholarly articles, newspaper articles, book chapters.
- **Your own notes** about your project (you can even compose in NVivo!)

Other functions of NVivo

- Create projects that store, organize, and code documents/files
- Provide a method for you to code your documents with a user-created coding schema (codes)
- Query, summarize, organize, and visualize information about your coding
- Conduct forms of computational text analysis, like word counts, on the documents, themselves
- Conduct social network analysis with social media datasets

NVivo Vocabulary

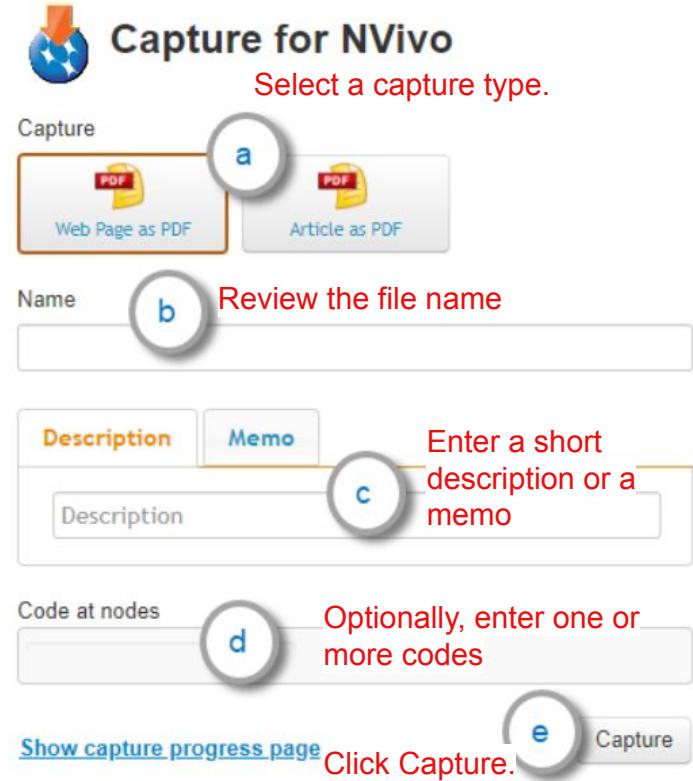
Full definitions available [on the NVivo handout](#)

- **Data:** your research documents & files
- **Codes:** the ways to annotate the themes/concepts in your research.
- **Nodes:** the themes/concepts that are user-created (NVivo 12 and older only)
- **Relationships:** coding connections between two data items
- **Cases:** units of analysis for your research.
- **Maps:** visualization tool to see connections between the cases and codes
- **Query:** a flexible way to explore and analyze your files, cases, and codes

Feel free to ask questions at any point during the presentation!

NCapture

- NCapture is a free Chrome extension to capture web pages, online articles, Facebook and Youtube content and add annotations, memos, and codes. The captured content is saved as an NCapture file (.nvcx) which you can import into your NVivo project.
- Please be mindful of obtaining consent for individual information you are capturing. Be aware of the current website terms and conditions when capturing data.



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Querying

Querying, or asking something from your data, in NVivo provides multiple ways to explore both your codes and your text.

- **Word Frequency:** Counts the number of times words (with stopwords removed) appear in one or more files. Stopwords have non-significant meaning and appear frequently, like “the”, “a,” “is,” etc. They can inflate word frequencies without adding meaning, and are typically removed.
- **Coding:** Shows the number of codes, text that was coded, and the files.
- **Crosstab:** cross reference codes and case classifications. For example, you might want to know how often a particular code appears in both scholarly articles and your primary texts.

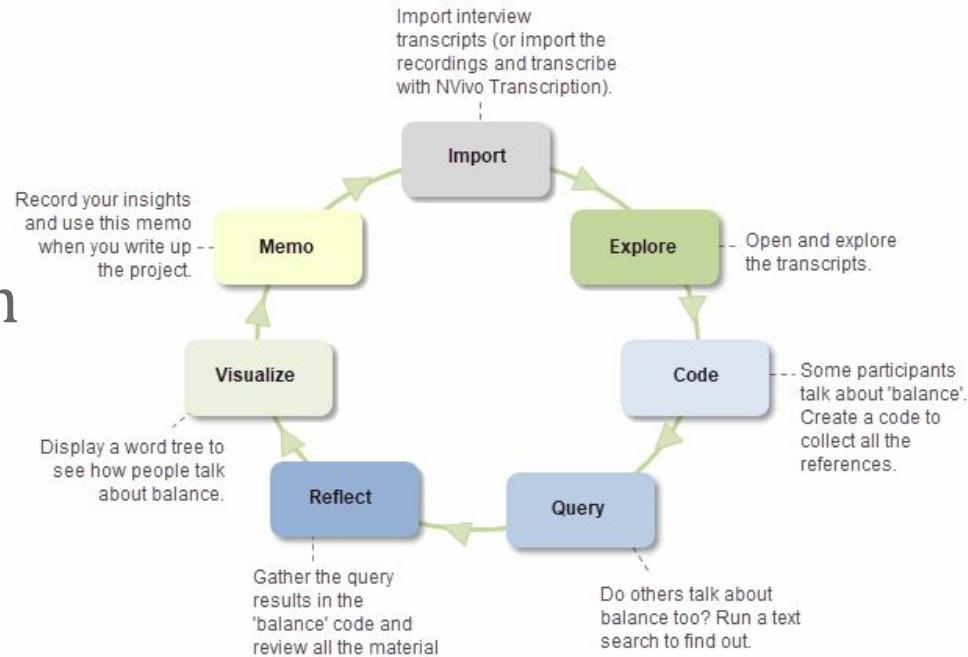
Coding & Organizing Literature Reviews

You can import reference files from EndNote, Zotero, and other citation management tools to organize a literature review. In your citation management tool, export the library as an XML (EndNote) or RIS file (Zotero).

1. Select the XML or RIS file from your directory.
2. Choose to display references by Author and Year, or Title.
3. Select the option to assign data to the Reference classification, or to other classifications (book, journal article, etc).
4. Select the option to replace attributes or memos with file notes, abstract, and keywords.
5. Click Import.

Making effective codes

The codes you create are themselves **arguments**; you are choosing what information you value and want to extract from the transcripts. This is often an iterative process.



Source: Lumivero - Workflow Overview

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Codes

The list of themes or codes you will use to code your files. The “codes” folder will be empty until you add your own! You can add codes and sub-codes.

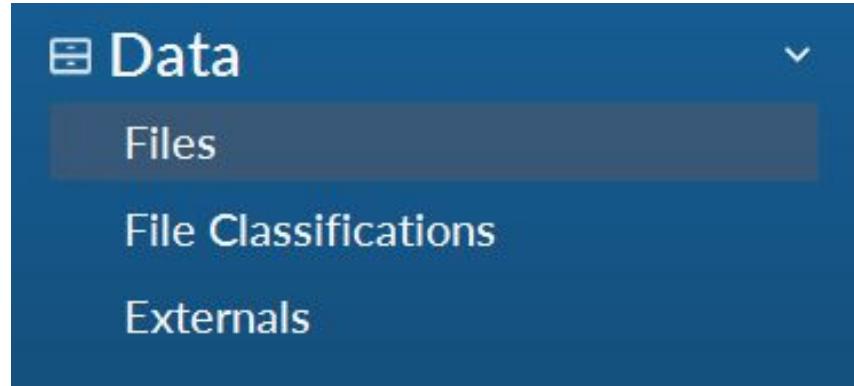
The screenshot shows a software interface for managing data and codes. On the left, a sidebar has 'Data' expanded, showing 'Files', 'File Classifications', and 'Externals'. Under 'ORGANIZE', 'Coding' is expanded, showing 'Codes' (which is further expanded to show 'Auto codes', 'Melaleuca 2017 survey', 'Melaleuca 2018 survey', 'Sub-Codes', 'Sentiment', 'Relationships', and 'Relationship Types'). To the right, a main panel displays a list of codes with their counts:

Code	Count	Count
mental-emotional wellb	13	54
OWN involvement	19	97
personal-individual facto	1	1
physical health	17	36
social connection	24	232
societal context	0	0
talking about ...	0	0

At the bottom of the main panel, there is a placeholder text: "Drag selection here to code to a new code".

Data

The “Data” in NVivo are all the research materials you are using (scholarly articles, transcriptions, newspapers, research notes, etc.).



“Files” will be where you can access all the research materials you have imported into this project.

Feel free to ask questions at any point during the presentation!

Important Reminders

- NVivo can import all types of files, including .docx, .pdf, .doc, .csv, .png, .jpeg, .txt, video/audio files, and more.
- You should always **save** your original documents on your local computer or in cloud storage, even if these documents are imported into NVivo. NVivo can store documents, but it is more of an organization and analysis tool, rather than a storage option.

NVivo is NOT crossplatform friendly

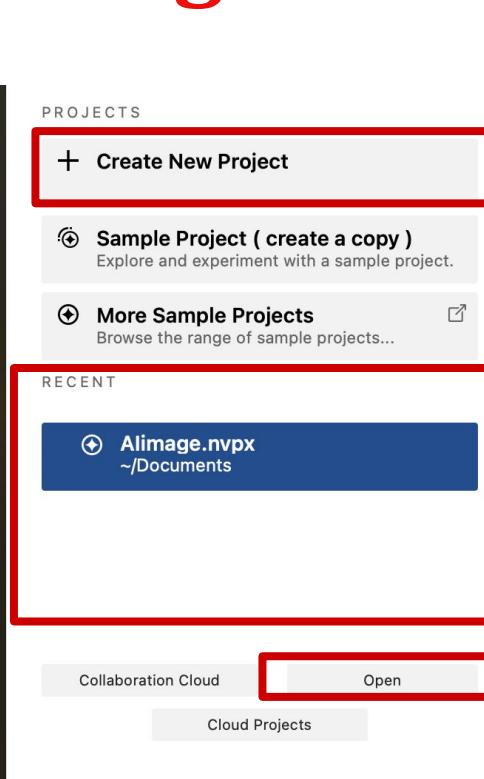
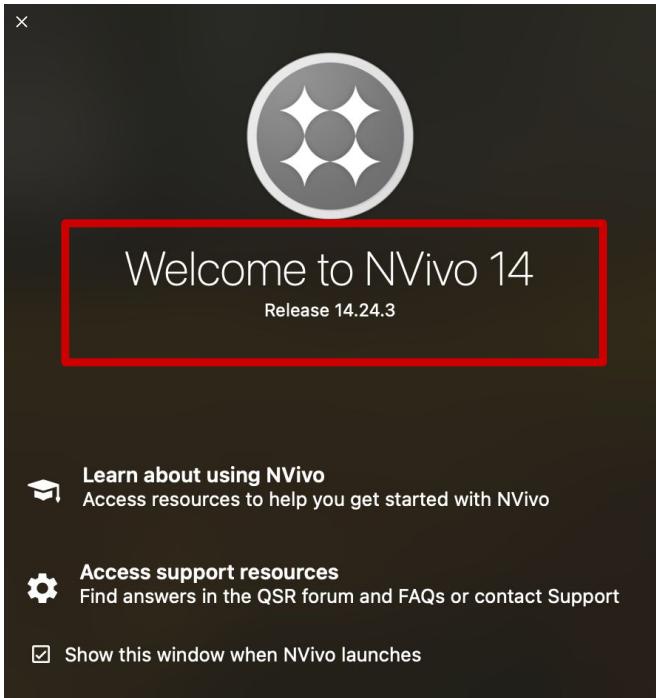
The Mac and PC versions of Nvivo—as well as the version numbers—are different and have different file types.

- Mac NVivo projects end in .npvx and can only open that file project type
- Windows NVivo projects end in .npv, but can open both .npv and .npvx
- Version numbers (11, 12, 14) also impact which projects can be opened on which platform

Anatomy of Nvivo: Mac

Anatomy of NVivo: Opening on Macs

Your version number (you should have version **12 or 14**)

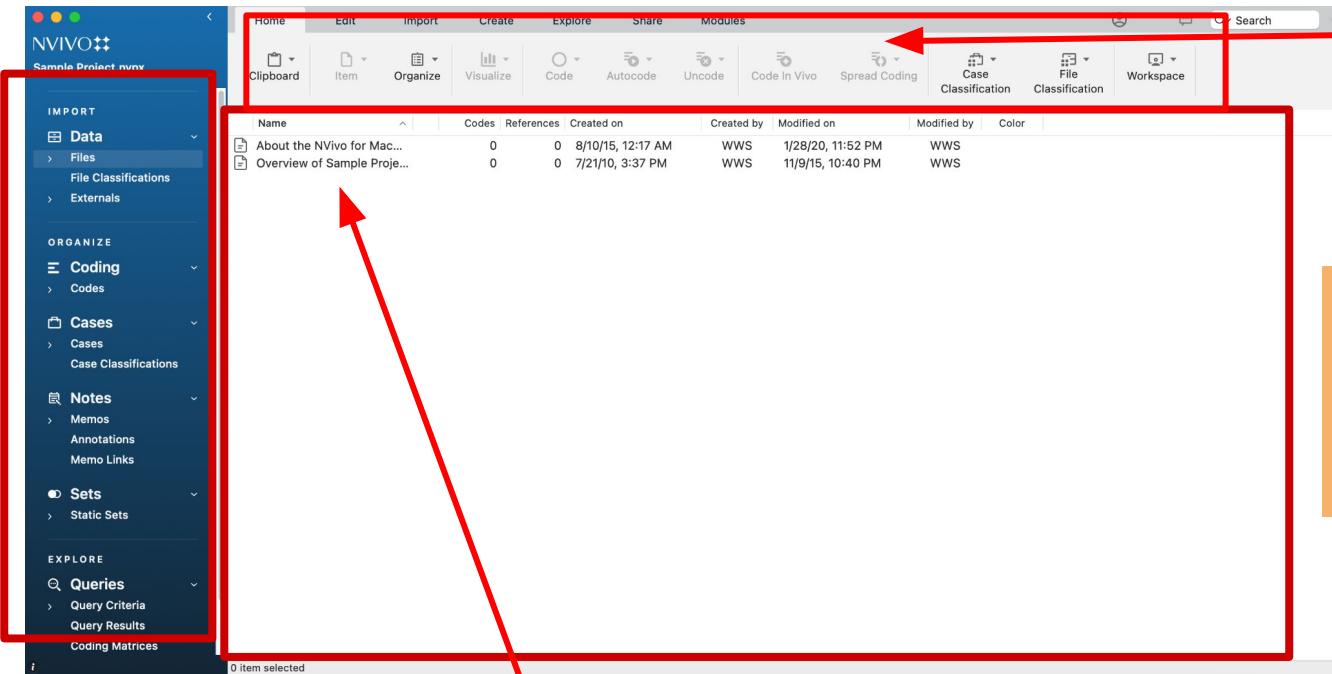


Create a new **project** (stores all your documents, codes, etc)

The recent projects you opened

Open another project that is not recent

Anatomy of NVivo: Projects on Macs



Menu to access files, codes, cases, notes, etc.

Toolbar to access functions

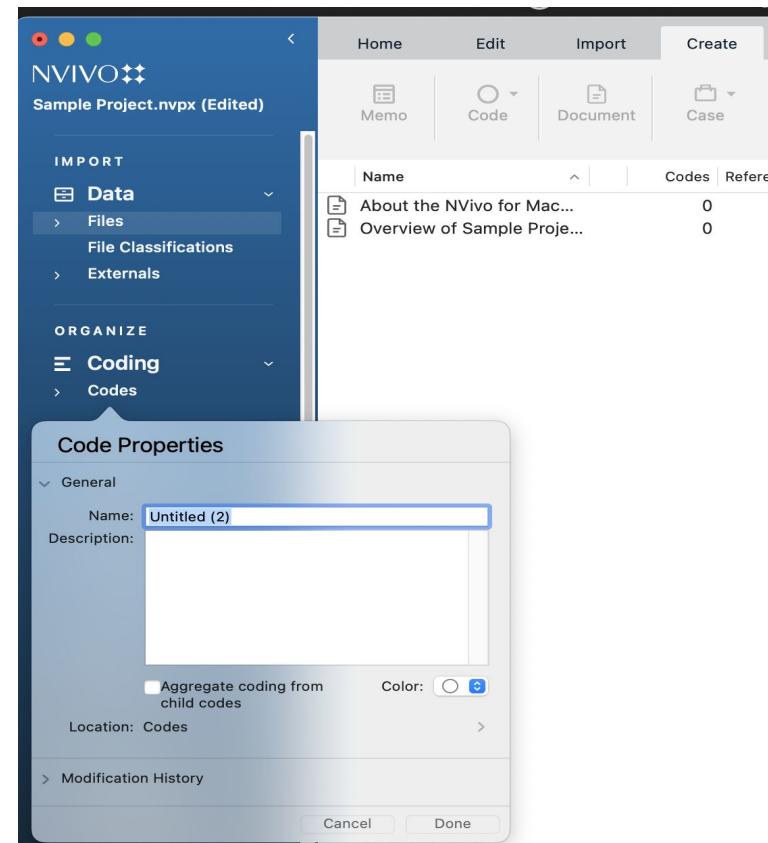
The window that will open the files, queries, etc. You can annotate documents here.

List of codes, files, etc.

Feel free to ask questions at any point during the presentation!

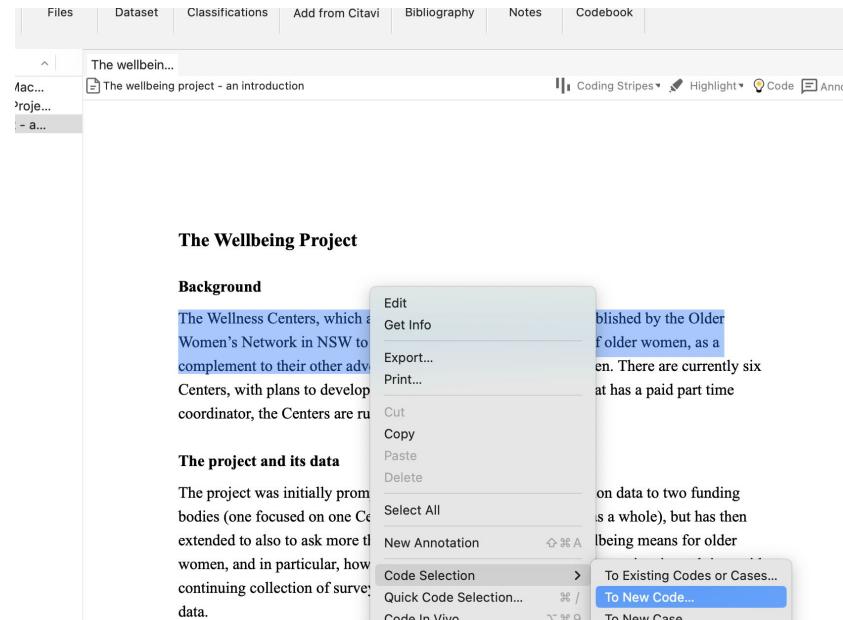
Creating Codes (Macs)

1. Go to “Create” in the toolbar
2. Click “Code”
3. Your new code will pop up and ask for a name and description
 - a. To add a *subcode*, follow the same steps, but click on the original code where you want to add the subcode



Coding Files/Documents (Macs)

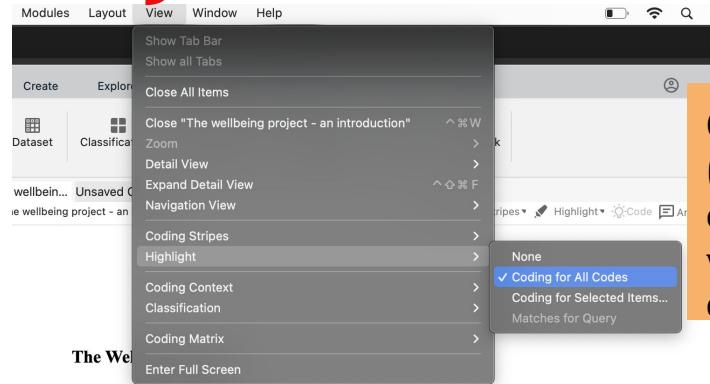
1. Open the file you would like to annotate.
2. Highlight the text you want to code.
3. Control-click and go to “Code Selection.”
4. Click “At Existing Codes or Cases”
 - a. Once you use codes, the codes will show up when you click “Code Selection.”
 - b. You can also add new codes/cases as you annotate.



Feel free to ask questions at any point during the presentation!

View Your Codes (Macs)

1. Go to “View” in the toolbar
2. Click “Highlight” then “Coding for All Codes”
3. Click “Coding Stripes” and “All Coding” to see the code names and where they appear in the document.
 - a. If you have tagged an entire file as a “case,” everything will be highlighted. Choose “Coding for Selected Items” to select the codes you’d like to view.



Coding stripes
(shows what
codes appear
where in the
doc)

The Wellness Centers, which are the focus of this study, were established by the Older Women's Network in NSW to enhance the health and wellbeing of older women, as a complement to their other advocacy work on behalf of older women. There are currently six Centers, with plans to develop more. With the exception of one that has a paid part time coordinator, the Centers are run by volunteers.

The project and its data

The project was initially prompted by the need to provide evaluation data to two funding bodies (one focused on one Center, the other on the organization as a whole), but has then extended to also to ask more theoretical questions about what wellbeing means for older women, and in particular, how wellbeing intersects with continuing collection of survey data, and occasionally data.

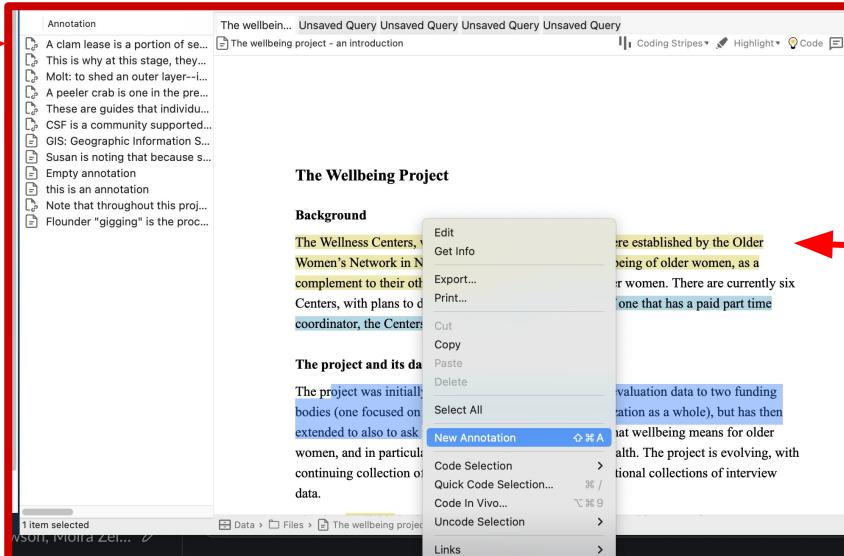
Your document you are coding
and annotation (yellow =
codes, blue = annotations)

*Feel free to ask questions at any point
during the presentation!*

Annotating Files (Macs)

To annotate (comment), follow the same steps as coding except instead click “New Annotation” after you highlight and control-click to reach the pop-up shortcut menu. Find all your annotations in the “Notes/Annotations” section in the left menu

List of annotations



The text from the document you highlighted and are annotating

Feel free to ask questions at any point during the presentation!

Cases (Macs)

The screenshot shows the Macs software interface. At the top, there's a toolbar with icons for Case, Classification, File, Static Set, and Folder. Below the toolbar is a navigation bar with the text "The wellbeing... Unsaved Query" and a link "The wellbeing project - an introduction". On the right side of the navigation bar are buttons for Coding Stripes, Highlight, Code, Annotations, and Code Panel. The main content area displays a document titled "The Wellbeing Project". The first section is "Background", which contains text about the Wellness Centers and their role in enhancing health. A portion of this text is highlighted in yellow. The second section is "The project and its data", which discusses the project's initial prompt and its evolution. A portion of this text is also highlighted in yellow. A context menu is open over the text in the "Background" section. The menu includes options like Edit, Get Info, Export..., Print..., Cut, Copy, Paste, Delete, Select All, New Annotation, and Code Selection. The "Code Selection" option is highlighted, and a submenu is open titled "To Existing Codes or Cases..." with options To New Code..., To New Case..., and To Current Codes.

To add a “case” to a file, it’s the same method as adding a code, except you choose the “Cases” folder and the proper case.

Word Frequency Example (Mac)

Click the word frequency tab, then select the items you would like to query in the “Selected Items” tab and then click “Run Query.”

The screenshot shows the NULab Word Frequency tool interface. At the top, there are four tabs: "The wellbein...", "Saved Query", "Unsaved Query", and "Unsaved Query". Below the tabs is a search bar with the placeholder "Untitled Query". Underneath the search bar, there is a section titled "Word Frequency Criteria" with the following options:

- "Search in:" dropdown set to "Selected Items" (highlighted with a red box).
- "Finding matches:" radio buttons for "Exact match only (e.g. "talk")" (selected) and "Include stemmed words (e.g. "talking")".
- "With minimum length:" input field set to "3".
- "Display words:" radio buttons for "All" and "1000 most frequent" (selected).

Below these criteria, a note states: "Query results exclude project stop words. Add or remove stop words in project properties." The main area is a table titled "Summary" showing word frequency data:

Word	Length	Count	Weighted Percentage
older	5	2,874	1.31%
health	6	2,745	1.25%
people	6	2,356	1.08%
care	4	1,746	0.80%
doi	3	1,162	0.53%
physical	8	1,076	0.49%
age	3	1,056	0.48%
ageing	6	1,029	0.47%
activity	8	945	0.43%
http	4	860	0.39%
social	6	853	0.39%
life	4	728	0.33%
well	4	722	0.33%
org	3	700	0.32%
may	3	679	0.31%
...

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Crosstab Example (Mac)

Hit Explore,
Queries, then
Crosstab, and
Select the codes
you would like to
cross reference
with the cases or
attributes, then
click “Run Query.”

The screenshot shows the NULab interface with the following elements:

- Top Bar:** Home, Edit, Import, Create, Explore, Share, Modules, Log In, Search.
- Explore Tab:** Last Run Query, Text Search, Word Frequency, Matrix Coding Query, Queries, Chart, Hierarchy Chart, Maps, Diagrams.
- Left Sidebar:** A list of queries, with "Crosstab of economic iss..." highlighted.
- Central Area:** A modal window titled "Crosstab..." with a dropdown menu "Coding Comparison..." showing gender distribution across age groups. A red arrow points from the "Selected codes" box to the "Codes" section of this window.
- Bottom Left:** A box labeled "Your results" containing a table of counts for various categories.
- Bottom Right:** A sidebar titled "Query" with sections for "Codes" (listing Agriculture, Fishing or aquaculture, Jobs and cost of living, Tourism), "Show code against" (Attributes selected), and "Attributes" (Person, Age Group, Gender).
- Annotations:** Three orange boxes with text:
 - "Selected codes" (points to the "Codes" section of the Crosstab window).
 - "Selected cases (click the plus sign)" (points to the "Show code against" section of the sidebar).
 - "Selected codes (click the plus sign)" (points to the "Codes" section of the sidebar).

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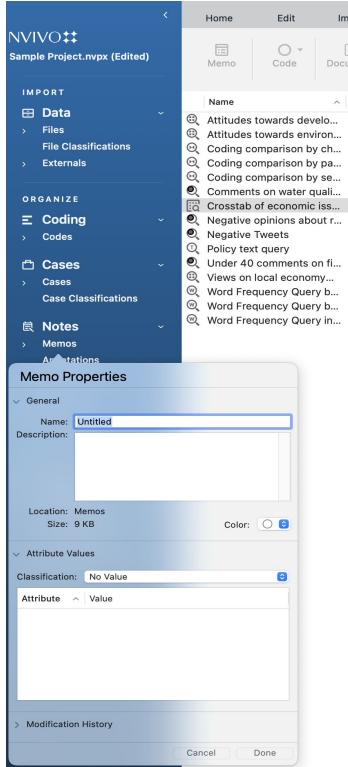
Exploring Codes (Macs)

Comparison diagram example

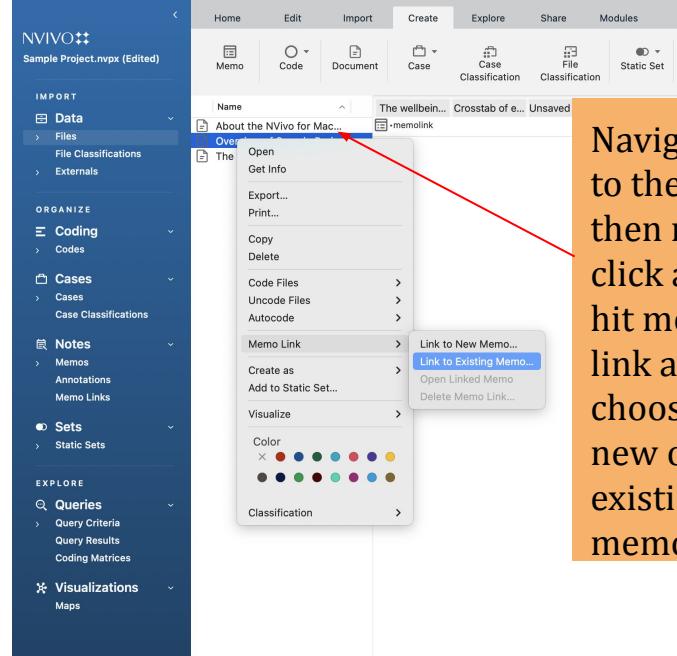
The screenshot shows the NVivo software interface with the 'Explore' tab selected in the top navigation bar. The left sidebar contains categories like Files, CODES, CASES, NOTES, and SEARCH. The main area displays a 'Comparison Diagram' showing relationships between nodes and files. A file named 'draftDSG' is connected to two nodes: 'Node One' and 'Sub Node'. 'Node One' is connected to a PDF file named 'Gregorio_UsingNVivoForYourLitReview'. 'Node Two' is also connected to the same PDF file. All connections are labeled 'Codes'.

Memos and Memo Links (Macs)

Menu where
memos are
located



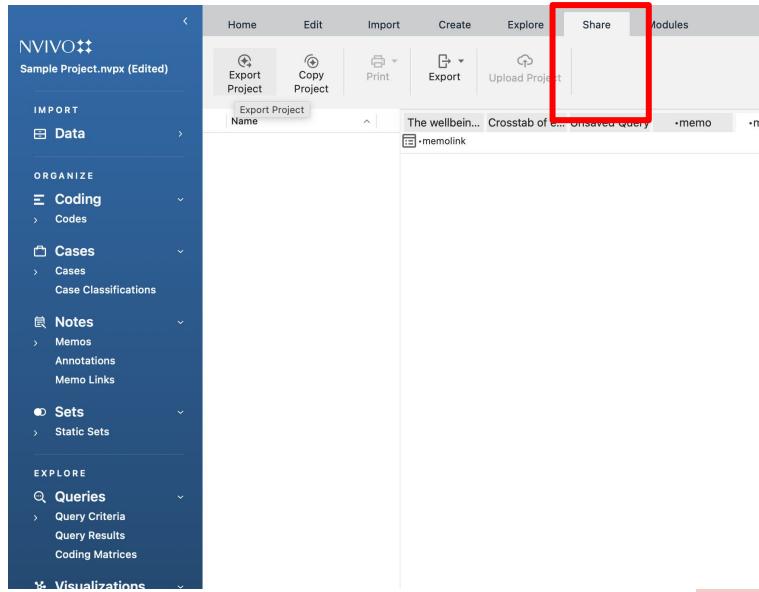
Navigating
memo
creation (hit
create,then
memo)



Navigate
to the file,
then right
click and
choose a
new or
existing
memo

Exporting Your Project (Macs)

Since there is a cross-platform problem, save and export your projects as **.qdp** files when submitting assignments so they can be opened on both Macs and Windows!



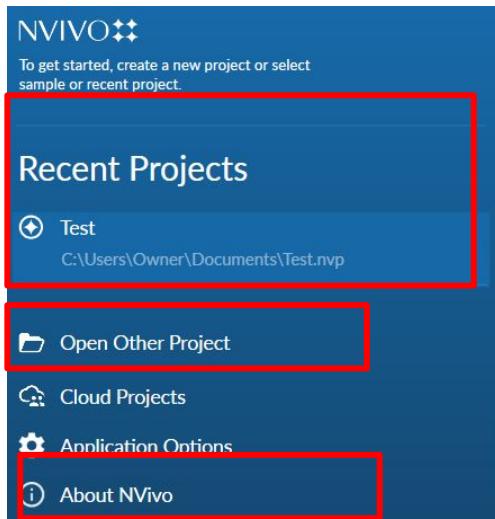
Anatomy of Nvivo: Windows

Anatomy of NVivo: Opening on Windows

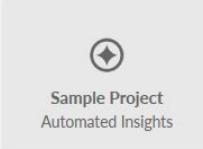
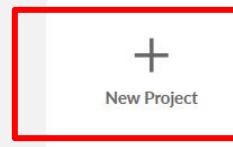
The recent projects you opened

Open another project that is not recent

Your version number (you should have version **12 or 14**)



Create a new **project** (stores all your documents, codes, etc)



Account

Logged in as:

Getting Started

For a quick overview of NVivo click the tutorial below...

Anatomy of NVivo: Projects on Windows

The screenshot displays the NVivo interface on a Windows system. At the top is a toolbar with various functions like Annotations, Autocode, Chart, and Compare With Cloud. Below the toolbar is a menu bar with File, Home, Import, Create, Explore, Share, Modules, Document, and Help. The main window is divided into several sections: a left sidebar with 'Quick Access' (Data, Cases, Notes, Sets), 'IMPORT' (Data, External), 'ORGANIZE' (Coding, Sentiment, Relationships, Relationship Types), 'EXPLORE' (Queries, Visualizations, Reports), and a central area for 'The Wellbeing Project'. The central area shows a 'Background' section with text about the project's purpose and participants, and a 'The project and its data' section with a detailed description of the data sources. A 'List of codes, files, etc.' box is overlaid at the bottom left of the central area.

Menu to access files, codes, cases, notes, etc.

Toolbar to access functions

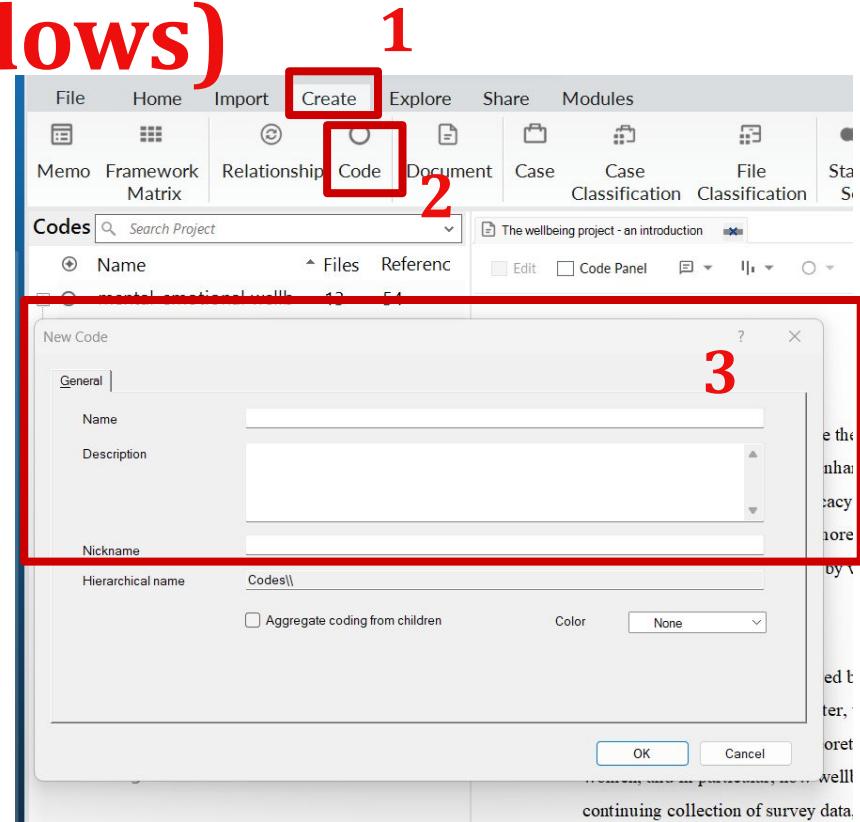
List of codes, files, etc.

The window that will open the files, queries, etc. You can annotate documents here.

Feel free to ask questions at any point during the presentation!

Creating Codes (Windows)

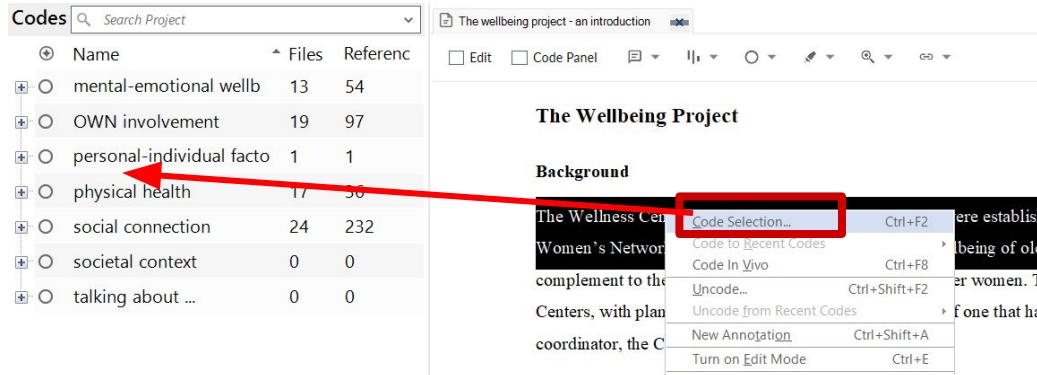
1. Go to “Create” in the toolbar
2. Click “Code”
3. Your new code will pop up and ask for a name and description
 - a. To add a *subcode*, follow the same steps, but click on the original code where you want to add the subcode



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Coding Files/Documents (Windows)

1. Open the file you would like to annotate.
2. Highlight the text you want to code.
3. Drag and drop the selection onto a code.
4. Alternatively, you can right-click and select “Code.”
5. You can also add new codes/cases as you annotate.



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View Your Codes (Windows)

1. Go to “Document” in the toolbar
2. Click “Highlight” then “All Coding”
3. Click “Coding Stripes” and “All Coding” to see the code names and where they appear in the document.
 - a. If you have tagged an entire file as a “case,” everything will be highlighted. Choose “Coding for Selected Items” to select which codes you’d like to view.

View Your Codes (Windows)

The screenshot shows the NULab interface for Windows. At the top, there's a ribbon menu with tabs like File, Home, Import, Create, Explore, Share, Modules, and Code. The 'Code' tab is selected, indicated by a red box labeled '1'. Below the ribbon, there's a toolbar with various icons. On the left, there's a sidebar titled 'Codes' with a search bar. A dropdown menu is open under 'Show Coding Stripes', with several options: 'None', 'All' (which is selected and highlighted with a red box labeled '2'), 'Selected Items...', 'Coding Density Only', 'Number of Stripes...', 'Items Last Selected', 'Select Colors', 'Automatic Colors' (which is also selected and highlighted with a red box labeled '3'), 'Item Colors', 'Group by Color', and 'Shadow Coding'. The main workspace shows a document with some text and annotations. To the right, there's a 'CODE STRIPES' panel with a summary table showing categories like 'Interrelation H & Wb', 'OWN involvement', 'Physical Health', and 'Widowhood'. The entire interface is framed by a red border.

Coding stripes
(shows what codes appear where in the doc)

The document you are coding and annotations

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Annotating Files (Windows)

To annotate (comment), follow the same steps as coding except instead click “New Annotation” after you highlight and right click. Find all your annotations in the “Notes/Annotations” section in the left menu

The screenshot shows the NULab interface for Windows. On the left, there's a sidebar with sections like Quick Access, File Classifications, Externals, Organize, Coding (Codes, Auto codes, Melaleuca 2017 survey, Melaleuca 2018 survey, Sub-Codes, Sentiment, Relationships, Relationship Types), Cases, Notes (highlighted with a red box), Memos, Framework Matrices, Annotations (highlighted with a red box), and See-Also Links.

In the main area, there's a "Annotations" section with a search bar and a list of annotations:

File Name	Number
Acacia L	1
Melaleuca 2017 survey	1
Melaleuca 2017 survey	2
Stathi et al AVONet-report	1
Waratah G - Pre	1
Ward et al Well Being in	1

A specific annotation is highlighted with a red box and labeled "List of annotations". The annotation details are shown in a callout box:

L: Particular experience – there's so many capable women in the community, in the society. They are all very, how do you put it, dedicated. Like this **Wellness**, in the committee, people are so dedicated, you know, moneywise as well timewise especially. We are all volunteers, so I really admire women, especially older women, for what they do.
P: And making use of what they've got
L: Yes exactly, exactly, really you know. Really I'm happy, you know, about this Wellness. We should really, you know, continue on for the younger women, Yes.

At the bottom, there's a table titled "Annotations" with one item listed:

Item	Content
1	This (and the next) paragraph are referring to the centre rather than the concept

A red box highlights this table, and a callout box labeled "Your annotation" points to it.

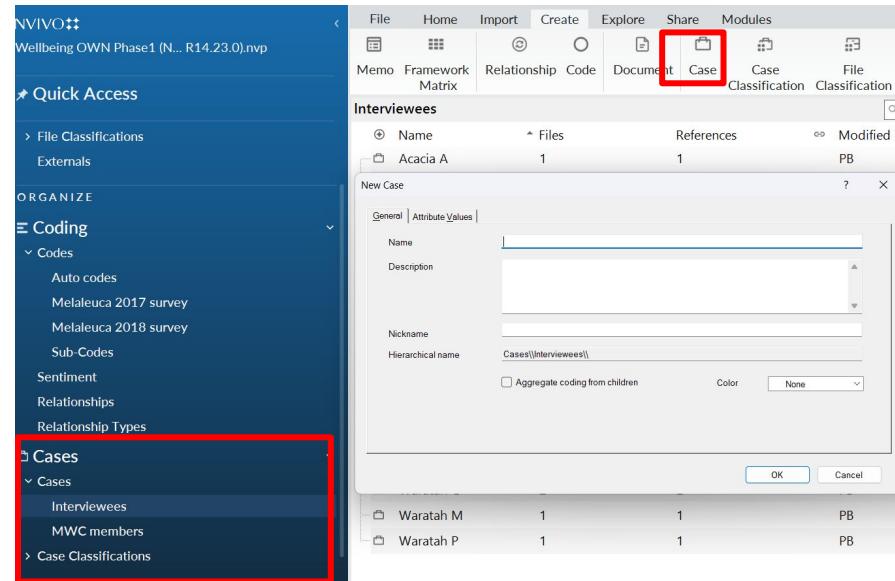


Cases (Windows)

Cases are the types of research texts in your project and can be organized based on the user's choice. **"They might represent people, places, events, organizations or other entities that you want to analyze and compare."** For example, if you have several transcripts from different trials, but want to categorize the type of trial for each text, you would use cases to do so.

"About Cases", NVivo

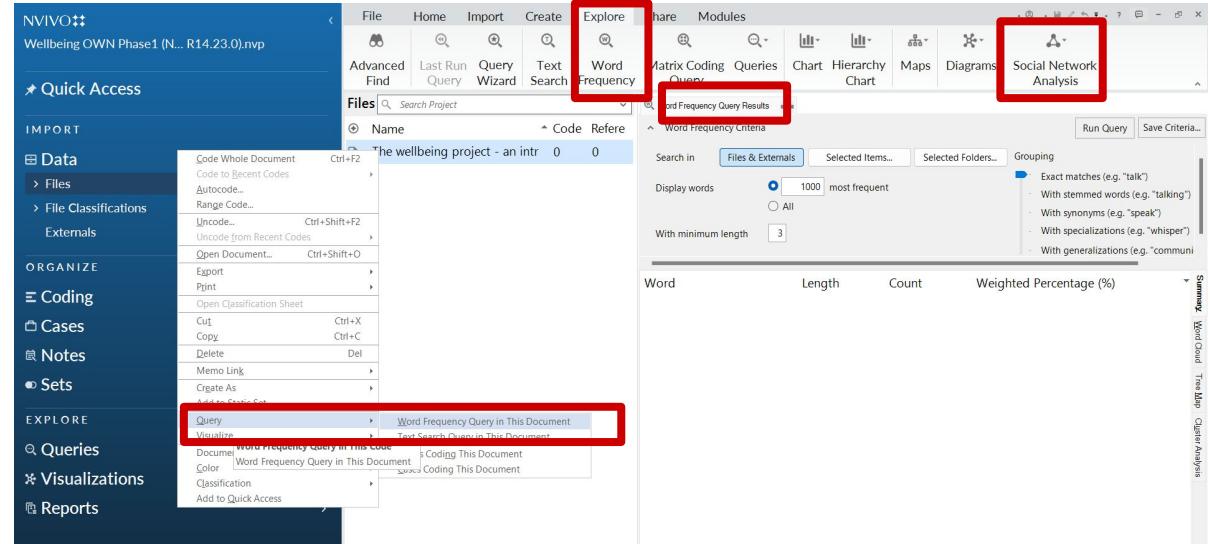
To add a “case” to a file, it’s the same method as adding a code, except you choose the “Cases” folder and the proper case.



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Word Frequency Example (Windows)

- “Query” can be found in the “Explore” Tab
- Alternatively, you can right click on a file and select Query
- To query multiple items, select the items you would like to query in the “Selected Items” tab and then click “Run Query”



Feel free to ask questions at any point during the presentation!

Crosstab Example (Windows)

Select the codes you would like to cross reference with the cases or attributes, then click “Run Query.”

The screenshot shows the Crosstab software interface. At the top, the 'Crosstab' tab is selected. Below it, the 'Queries' button is highlighted with a red box. On the left, under 'Crosstab codes against', there is a section titled 'Codes' with a single item: 'Codes\\mental-emotional wellbeing'. To its right, a large orange box contains the text 'Selected codes (click the plus sign)'. On the right, under 'Search in', there is a section titled 'Cases' listing several interviewees: 'Cases\\Interviewees\\Acacia A', 'Cases\\Interviewees\\Acacia B', 'Cases\\Interviewees\\Acacia L', 'Cases\\Interviewees\\Acacia V', 'Cases\\Interviewees\\Correa C', and 'Cases\\Interviewees\\Correa P'. This section is also enclosed in a large orange box with the text 'Selected cases (click the plus sign)'. At the bottom, a red box encloses a crosstab table titled 'mental-emotional wellbeing'. The table has columns for 'mental-emotional wellbeing' and 'Total'. The data is as follows:

	mental-emotional wellbeing	Total
Acacia A	2	2
Acacia B	0	0
Acacia L	1	1
Acacia V	0	0
Correa C	2	2
Correa P	0	0
Total	5	5

A large orange box at the bottom center contains the text 'Your results'.

Exploring Codes (Windows)

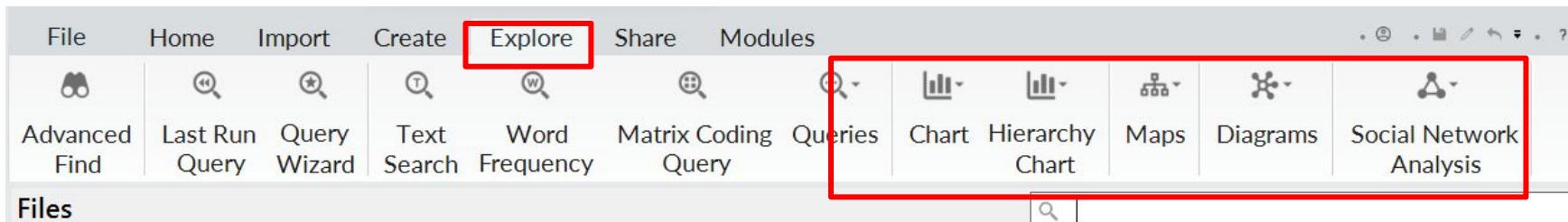
Chart: bar chart of the number of times codes were used in a file

Hierarchy chart: visualizes number of codes used in a file

Explore Diagram: explore the codes used in a file

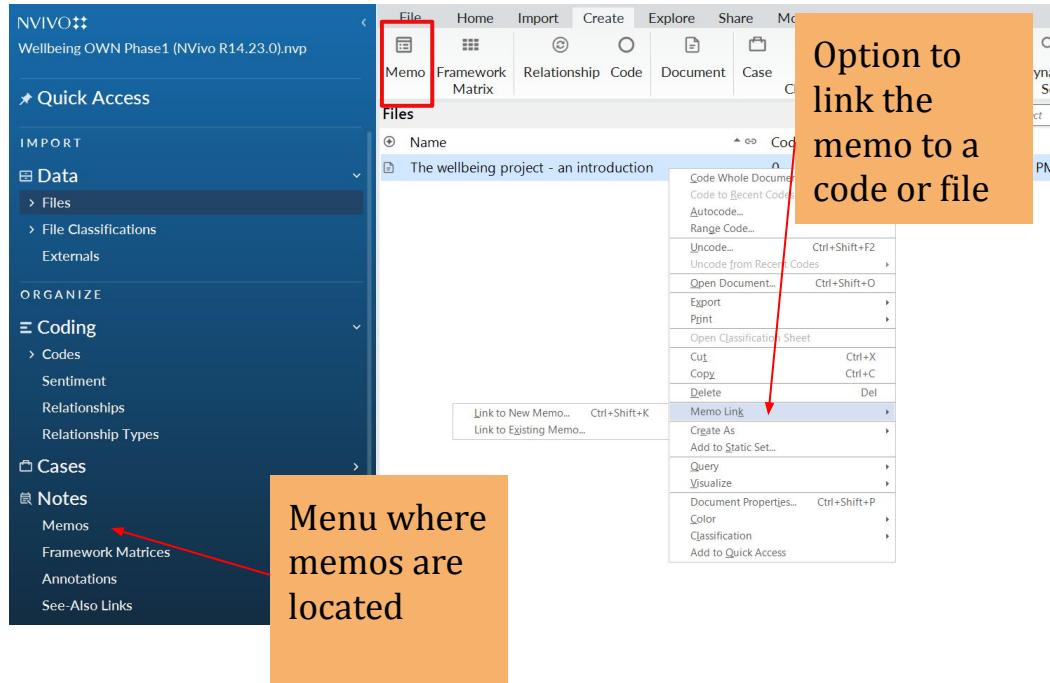
Comparison Diagram: compare the codes used in multiple files

Social Network Analysis: visualize relationships within networks



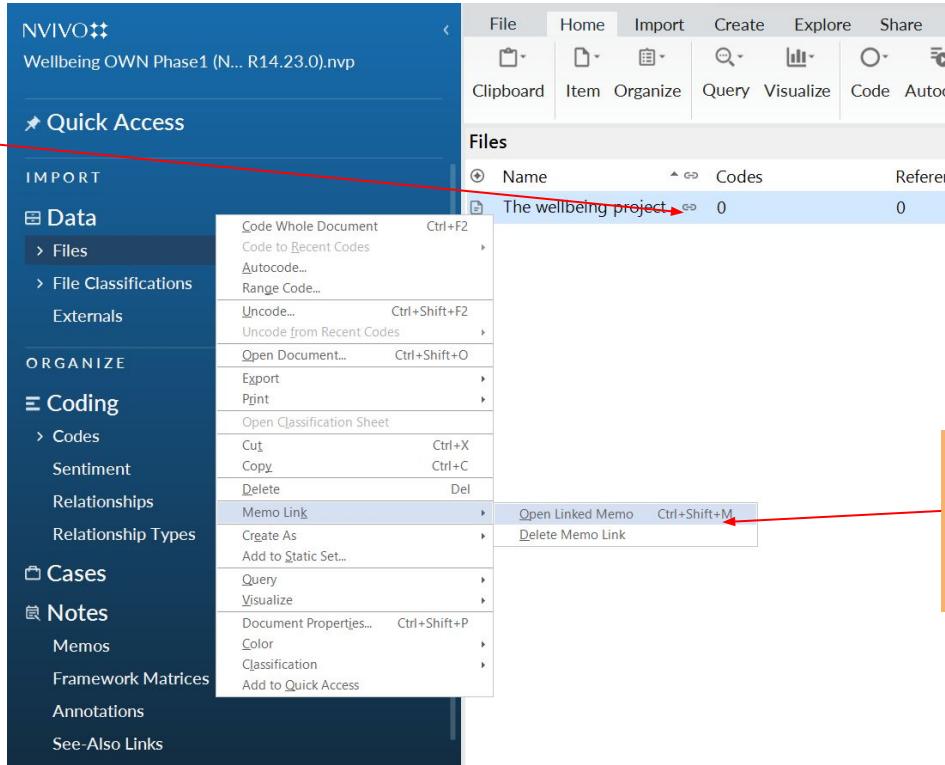
Memos (Windows)

- Memos are more extended write-ups of your analytical insights
- They can stand alone, but also be linked
- “Memo link”: linking memo to a particular file, case, or code



Memo Links (Windows)

Showing the link between the file and the memo

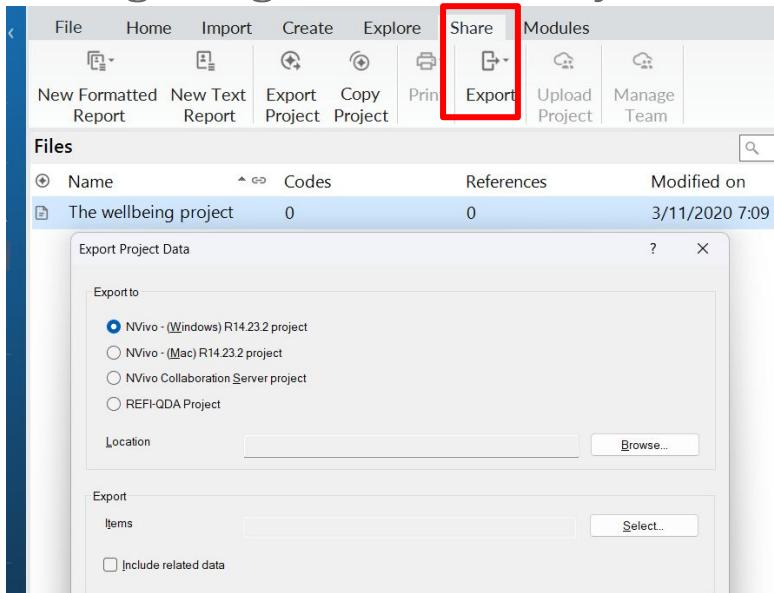


Accessing the memo from the file

Feel free to ask questions at any point during the presentation!

Exporting Your Project (Windows)

Since there is a cross-platform problem, save and export your projects as **.qdpx** files when submitting assignments so they can be opened on both Macs and Windows!



Further Learning & Practice

Qualitative Coding Practice

Read "Men and healthy eating' dataset" or "Childfree"

- Come up with three themes you might want to highlight from this text; these themes should be about 1-3 words (ex: "health impacts")
- Underline the moments in the passage that reflect these themes.
- Try to recreate this schema in NVivo!
- How do you think the code schema would differ if applying in vivo or process coding styles?

Ethical Considerations

- **Contextual Privacy**

- When we think about privacy online we want to think of it as contextual. What someone might be comfortable saying in one context might not be something they're okay saying to a researcher.

- **Keeping People Safe**

- It is risky to publicize the username, profile picture, or exact text of a social media post or profile.
 - To show example posts etc, you can make up your own or heavily redact them.

What information would you be comfortable sharing?

Learning Resources

- [Handout: Installing NVivo](#)
- [Handout: NVivo](#)
- [Handout: Accessibility in Digital Content](#)
- [Handout: Copyright and Fair Use](#)
- [Handout: Data Privacy](#)
- [Handout: Data Ethics](#)

Thank you!

—Developed by: Zhen Guo, Dipa Desai, Sean P. Rogers, Garrett Morrow, Cara Marta Messina, Yana Mommadova, Tieanna Graphenreed, and Emre Tapan

- Course materials:
<https://bit.ly/fa25-dominguez-insh7102-multi>
- For more information on DITI, please see:
<https://bit.ly/diti-about>
- Schedule an appointment with us! <https://bit.ly/diti-meeting>
- If you have any questions, contact us at: nulab.info@gmail.com