

Introduction to NVivo: Qualitative Coding for Text Analysis

Presented by: Chris McNulty & Juniper Johnson
ENGL 4710 Capstone Seminar
Fall 2022
Prof. Mya Poe



Northeastern University
NULab for Texts, Maps, and Networks

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

Workshop Agenda

- Workshop objectives
- Qualitative Coding: annotating and highlighting sources
- What is NVivo?
- Important vocabulary and functions
- NVivo demonstration

Slides & handouts at: <https://bit.ly/fa22-poe-engl4710-nvivo>



Qualitative Coding is about *Interpretation and Arguments*

The nodes you create are **arguments** themselves; you are choosing what information you value and want to extract from the transcripts



Coding in practice

key, at that point.

M: Sure sure, so I did not understand, what was the comparison with other five, with other locals, did they have more issues or less, or did they also have that similar experiences like you, across all those different locals [26]

R1: They had, you know, similar experiences that I did. Very strong, present, you know, walking. I didnt see hear, early on, anyways for the initial, when we pulled them that day, the Thursday, that anyone was saying "i'm not going". Didnt hear that from anybody. Didnt hear it from my local, didnt hear it, you know because all the locals have facebook pages too. You know, they have, social pages, so you can also keep in touch that way, and, you know, between reading and [unclear], you know talking to [unclear] and stuff like that, we were hearing nothing but positive feedback, on on, people walking. People were ready. They were angry, with the contract that was being presented, and they were ready, they were ready to take it, to go to the sidewalk [27] so to speak. And then, and to state their point, yep.

M: Can I maybe ask you yes, related to that anger, like, how did people, hm how to say, how did they precisely rationalize their anger, or, how did they justify their anger. What did they say, who, or how did they understand, why that injustice was being done to them. How did they understand why the managers at all decided to offer them such a bad contract, how did they think about that anger?

R1: Sure. So, with that, when we, when we, with the organizer, we met earlier, weeks earlier to, so, we met up in [unclear], the organizer brought as many - you know, every, its open invitation, to any local member of the store, to come to this, rather large gathering of people [28] where he broke down the contract. So, not only if you couldn't make, these contract breakdowns came back to the store, and were handed out to, individuals to read, and were posted on the union board. So, the people had time to see, what the contract, you know, here



What can NVivo do?

NVivo is designed for qualitative coding research materials, such as survey results, interviews, audio recording, text documents, articles, and other data formats. It also has other functions:

- create projects that store, organize, and code documents/files
- provide a method for you to code your documents with a user-created coding schema (nodes)
- query, summarize, organize, and visualize information about your coding
- conduct forms of computational text analysis, like word counts, on the documents themselves



NVivo is NOT cross-platform 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 (10, 11, 12) also impact which projects can be opened on which platform

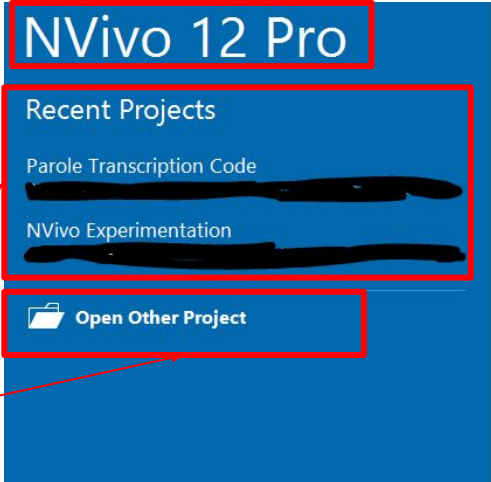


Anatomy of NVivo: Opening on Windows


Your version number (you should have version **11** or **12**)

The recent projects you opened

Open another project that is not recent




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




Learn and Connect

Research Ready




Get your research ready for NVivo

Getting Started



NVivo quick steps tutorial

Customer Success Center

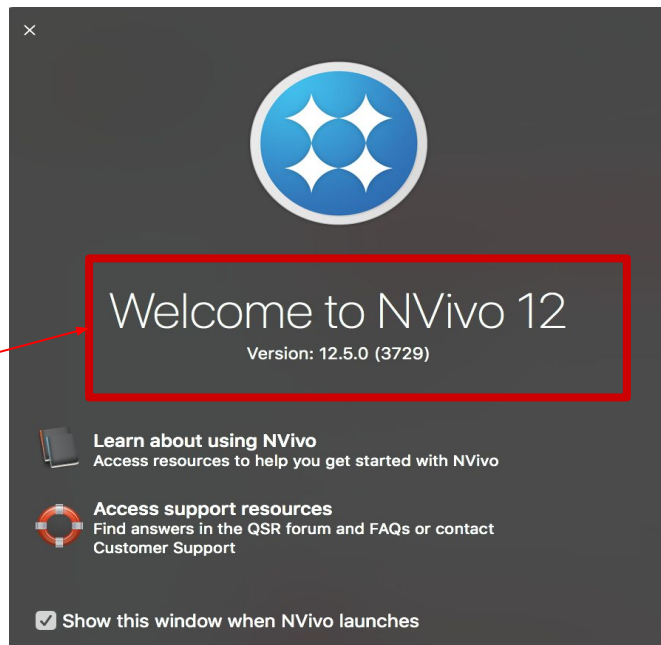


Courses, resources & support



Anatomy of NVivo: Opening on Macs

Your version number (you should have version 11 or 12)



Create new project
Create a new project

Create a copy of the sample project
Explore and experiment with NVivo using the sample project

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

Parole Trans Code_...sion (NVivo 12).nvp
~/Downloads

TEST.nvp
~/Documents

Untitled.nvp
~/Documents

Sample Project.nvp.nvp
~/Downloads

The recent projects you opened

Open Another Project...

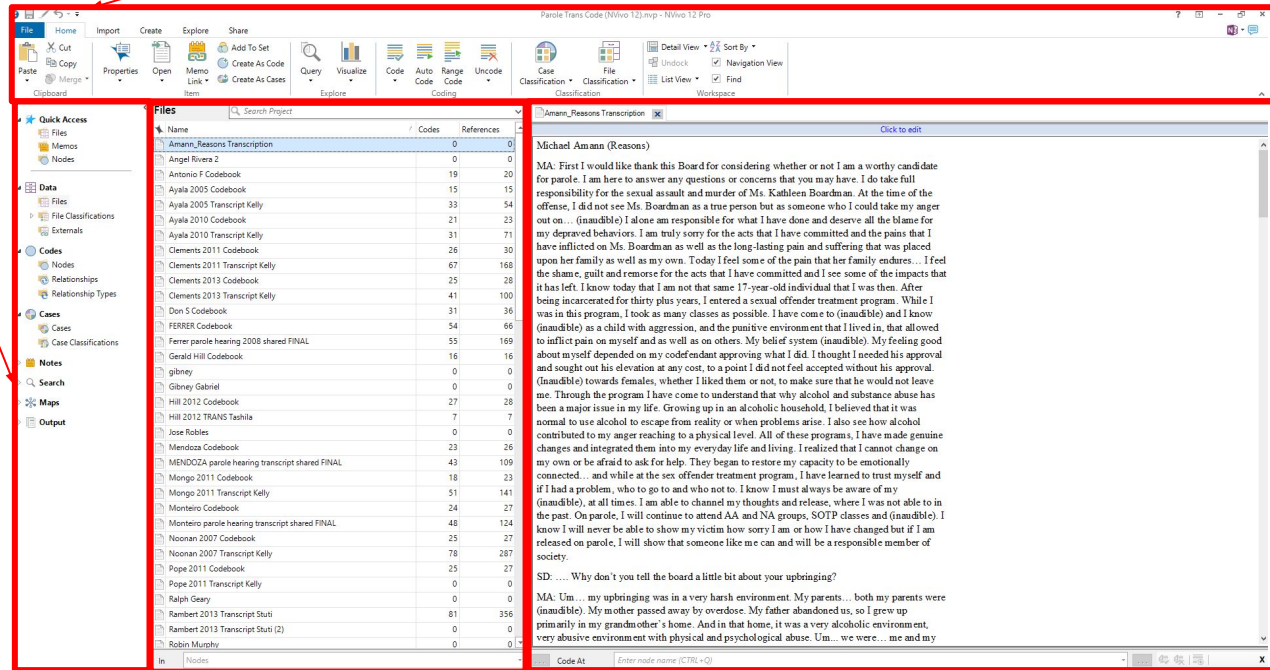
Open

Open another project that is not recent



Anatomy of NVivo: Projects on Windows

Toolbar to access functions



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

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

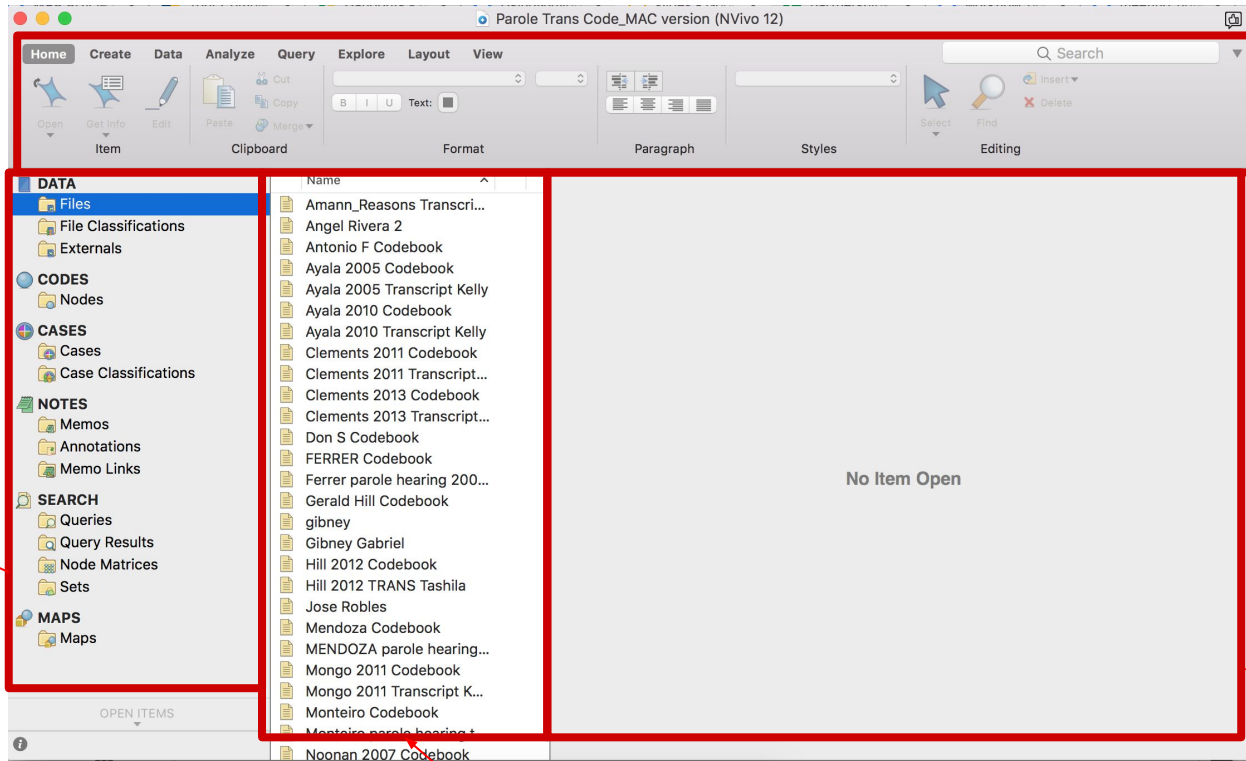
List of nodes, files, etc.



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Anatomy of NVivo: Projects on Macs



Toolbar to access functions

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

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

List of nodes, files, etc.

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NVivo Vocabulary

Full definitions available on the handout

- **Data:** your research documents & files
- **Codes:** the method to annotate the themes/concepts (same as Nodes)
- **Nodes:** the actual themes/concepts that you create
- **Relationships:** coding connections between two data items
- **Cases:** units of analysis for your research.
- **Maps:** visualization tool to see connections between the cases and nodes
- **Query:** a flexible way to explore and analyze your files, cases, and nodes



Important Reminders

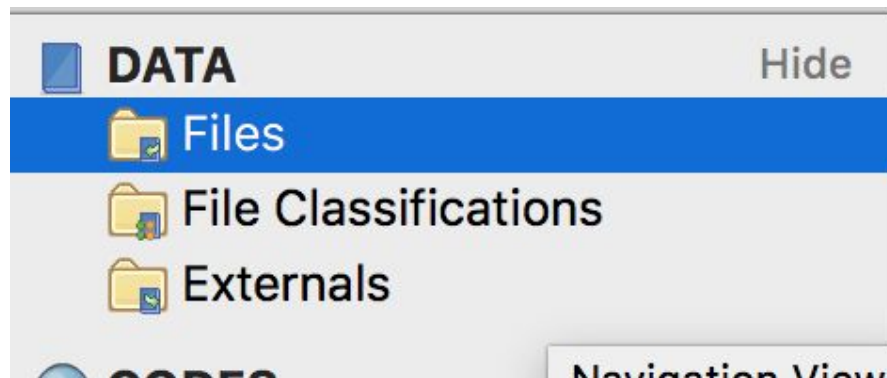
NVivo can import all types of files, including .docx, .pdf, .doc, .csv, .png, .jpeg, .txt, video/audio files, and more.

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.



Data

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

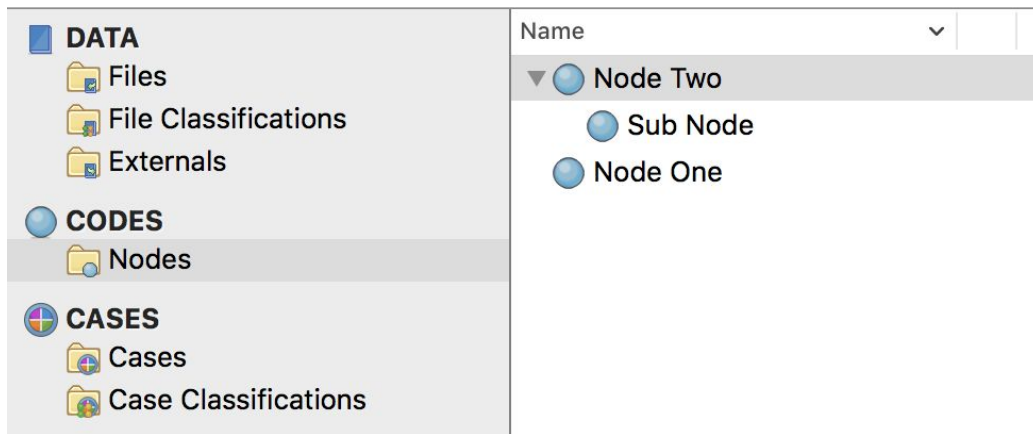


“Files” will be where you can access all the research materials you have imported into this project.



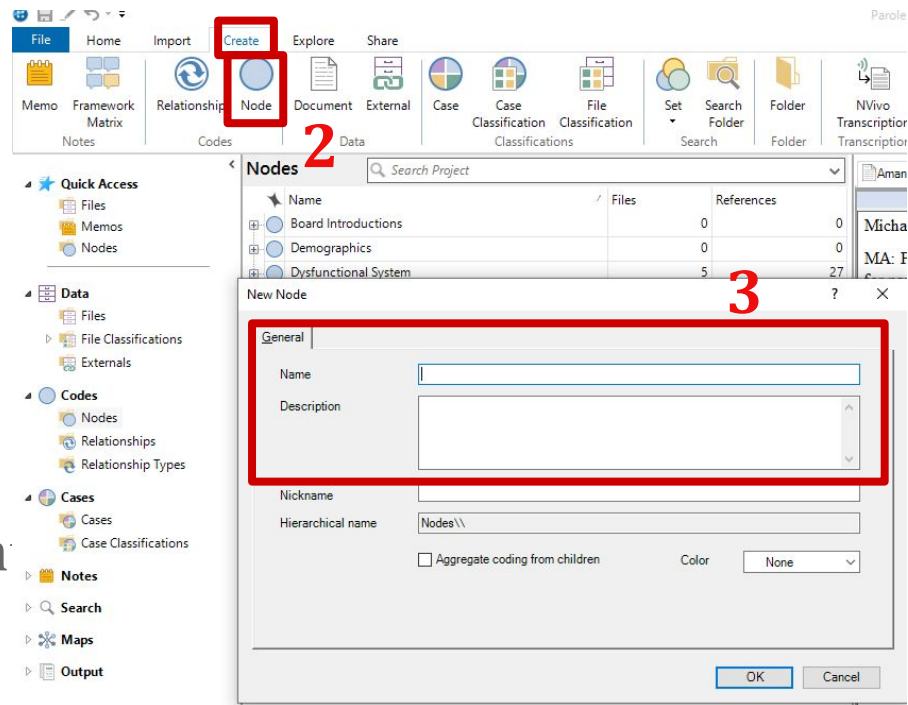
Codes and Nodes

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



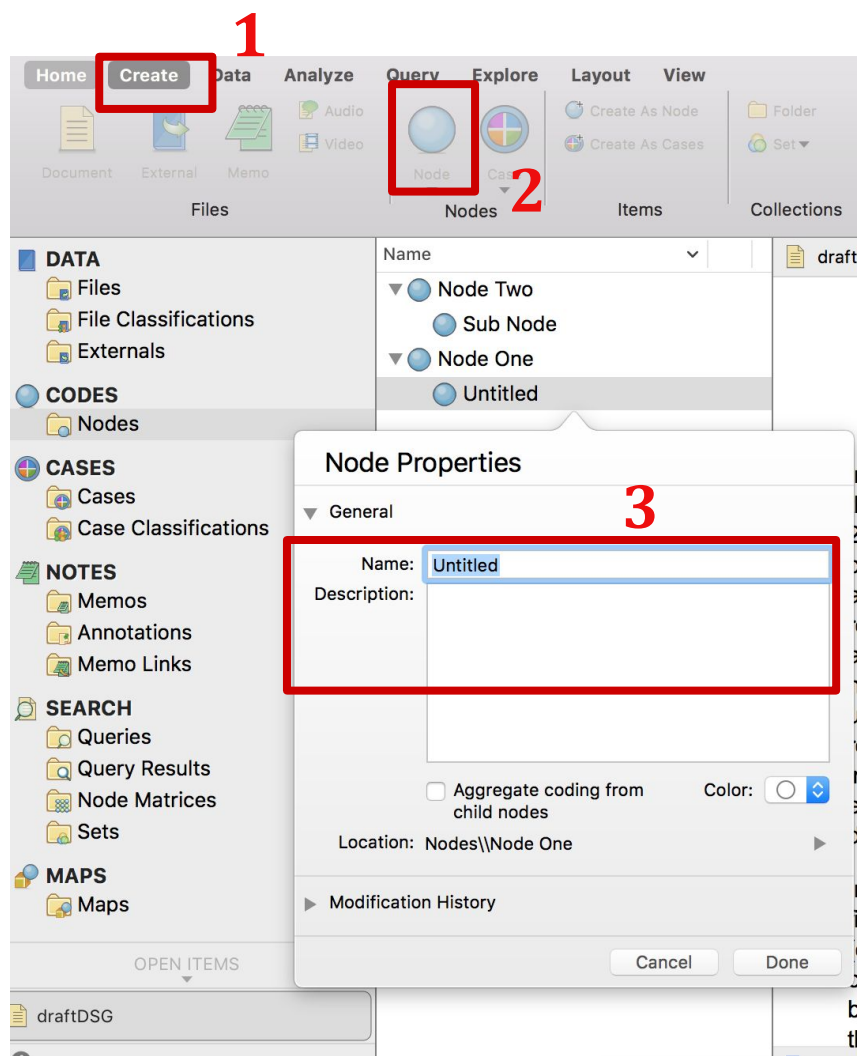
Creating Nodes (Windows) 1

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



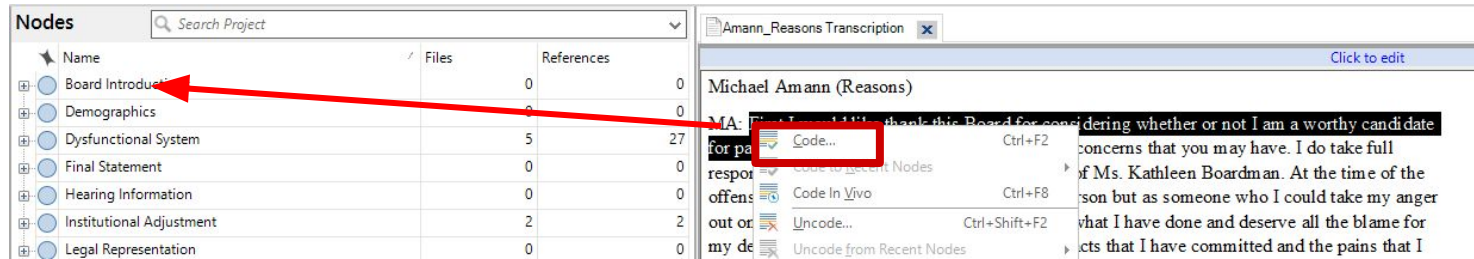
Creating Nodes (Macs)

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



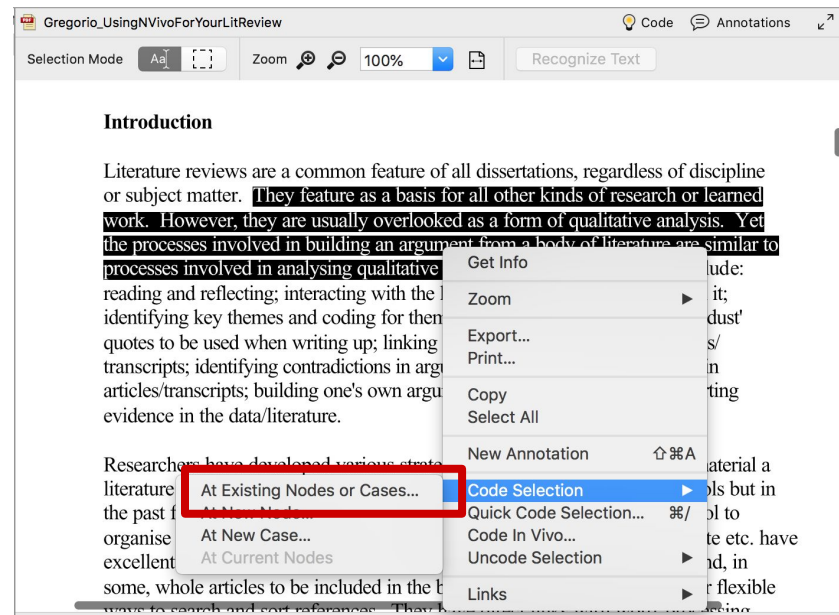
Coding Files/Documents (Windows)

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 node
4. Alternatively, you can Command/Control+click and select “Code”
5. You can also add new nodes/cases as you annotate



Coding Files/Documents (Macs)

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



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. You can simply choose “Coding for Selected Items”

The screenshot shows the NVivo 12 Pro interface. A red box labeled '1' points to the 'Document' button in the top toolbar. Another red box labeled '2' points to the 'Highlight' button in the 'Document Tools' dropdown menu. A third red box labeled '3' points to the 'Coding Stripes' button in the same dropdown. Below the 'Highlight' button, a dropdown menu is open, showing 'All Coding' selected. The 'Coding Stripes' sidebar on the right is also visible, showing a list of codes. The main document window displays a transcript with several lines of text highlighted in yellow, corresponding to the selected 'All Coding' filter.

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

The document you are coding and annotations

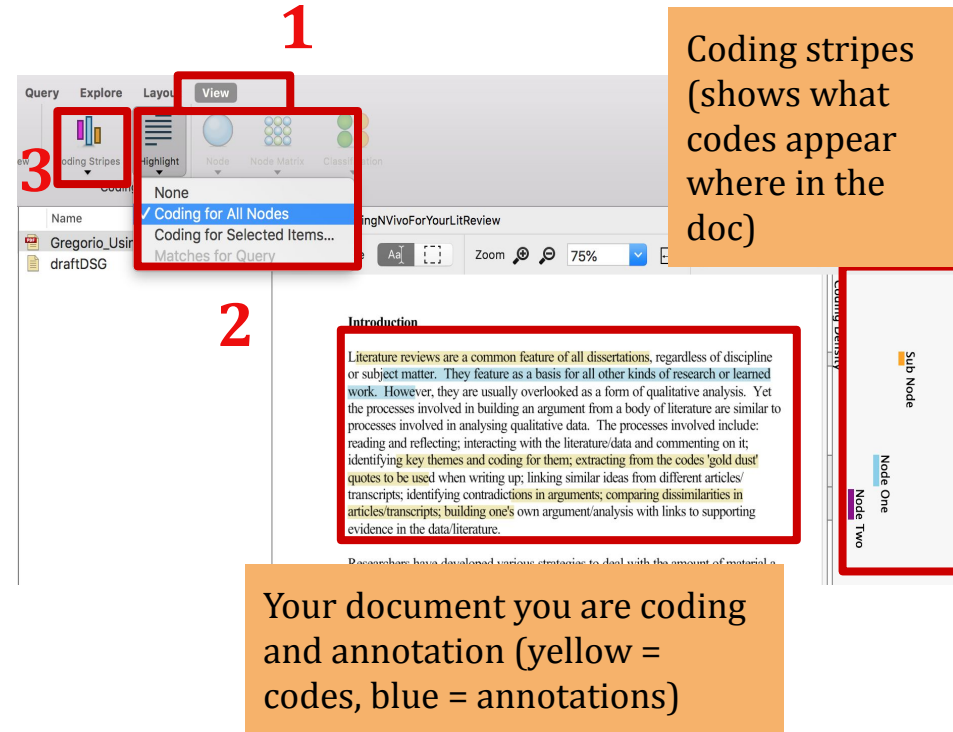


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View Your Codes (Macs)

1. Go to “View” in the toolbar
2. Click “Highlight” then “Coding for All Nodes”
3. Click “Coding Stripes” and “All Nodes 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. You can simply choose “Coding for Selected Items”



The screenshot shows the NVivo software interface. A red box labeled '1' highlights the 'View' menu in the top toolbar. A second red box labeled '2' highlights the 'Highlight' submenu, which is open, showing options like 'None', 'Coding for All Nodes' (selected), 'Coding for Selected Items...', and 'Matches for Query'. A third red box labeled '3' highlights the 'Coding Stripes' button in the bottom left. To the right, a document titled 'Introduction' is shown with yellow highlights (codes) and blue highlights (annotations). A red box labeled '2' highlights a paragraph in the document. On the far right, a sidebar shows a tree view of nodes: 'Sub Node', 'Node One', and 'Node Two'. An orange text box on the right says 'Coding stripes (shows what codes appear where in the doc)'. Another orange text box at the bottom right says 'Your document you are coding and annotation (yellow = codes, blue = annotations)'.

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

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



Annotating Files (Windows)

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

The screenshot shows the software interface with the following components:

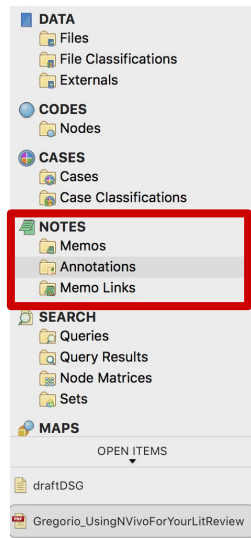
- Left Menu:** A sidebar with a 'Notes' section containing 'Annotations'. A red box highlights this section, with an arrow pointing to the text: "Where you can find all your annotations listed".
- Annotations List:** A table titled 'Annotations' with columns 'File Name' and 'Number'. It lists 'Amann_Reasons Transcription' with the number '1'. A red box highlights this table, with an arrow pointing to the text: "List of annotations".
- Document View:** A text document titled 'Amann_Reasons Transcription' with a 'Click to edit' button. A red box highlights a paragraph of text, with an arrow pointing to the text: "The text from the document you highlighted and are annotating".
- Annotations Table:** A table at the bottom of the document view with columns 'Item' and 'Content'. It shows one item with the content 'This is an annotation'. A red box highlights this table, with an arrow pointing to the text: "Your annotation".



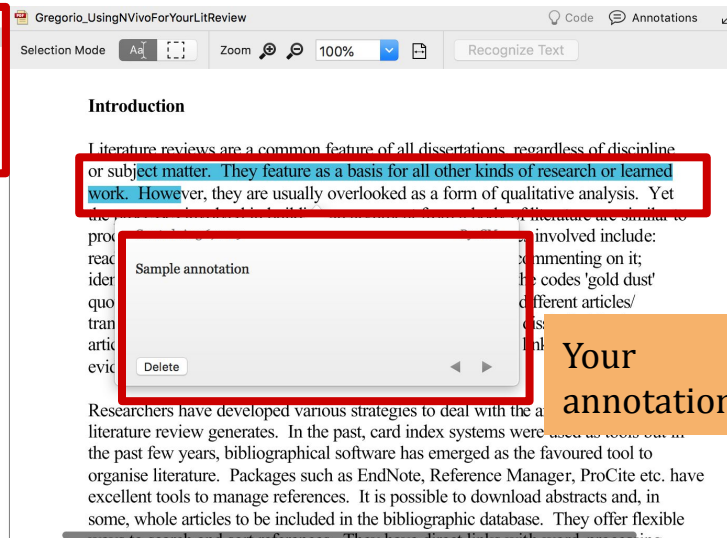
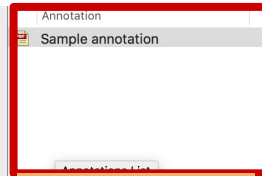
Annotating Files (Macs)

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

Where you can find all your annotations listed



List of annotations



The text from the document you highlighted and are annotating

Your annotation



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 node

The screenshot displays the NVivo software interface. On the left, the 'Notes' section is expanded, showing 'Memos', 'Framework Matrices', 'Annotations', and 'See Also Links'. A red box highlights the 'Memos' folder. In the center, a context menu is open for a selected node, with 'Memo Link' highlighted. A red arrow points from an orange callout box to this option. Another orange callout box points to the 'Memo Link' option in the left sidebar. The main window shows a list of nodes under '1st cycle' with columns for Name, Files, and References. A table of references is visible on the right, showing links to 'effects and memory' and 'effects and memory r1'. At the bottom, a status bar indicates 'MS 31 Items'.

Option to link the memo to a node

Menu where memos are located



Memo links (Windows)

Showing the link between the file and the memo

Accessing the memo from the file



Memos and memo links (Mac)

This screenshot shows the 'Create' menu in the software interface. The 'Memo' option is highlighted with a red box. An orange callout box labeled 'Menu where memos are located' points to this menu. Another orange callout box labeled 'Option to link the memo to a node' points to the 'Memo Link' option in the 'Memo' submenu. A third orange callout box labeled 'Navigating memo creation' points to the 'Create' menu itself.

Menu where memos are located

Navigating memo creation

Option to link the memo to a node

This screenshot shows the 'Memo Link' option in the 'Memo' submenu. An orange callout box labeled 'Showing the link between the file and the memo' points to the 'Memo Link' option. Another orange callout box labeled 'Accessing the memo from the file' points to the 'Open Linked Memo' option in the 'Memo Link' submenu. A third orange callout box labeled 'Accessing the memo from the file' points to the 'Open Linked Memo' option in the 'Memo Link' submenu.

Showing the link between the file and the memo

Accessing the memo from the file

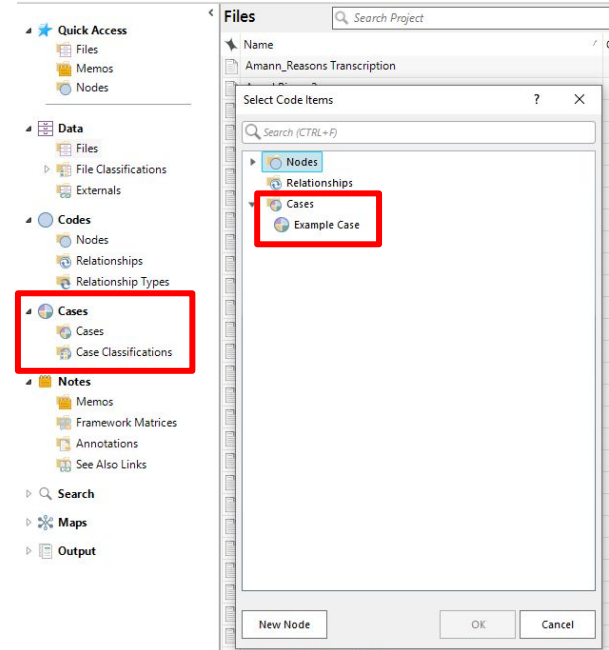


Cases (Windows)

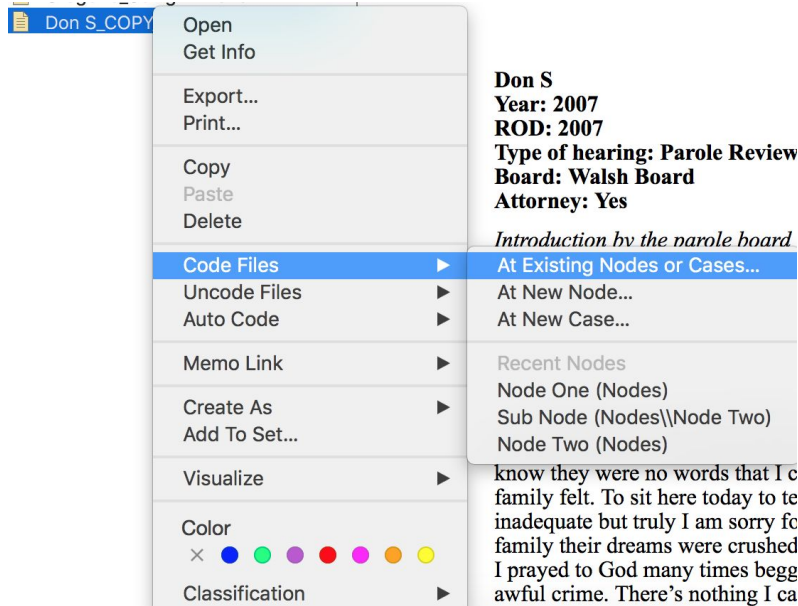
Cases are the types of research texts in your project; they can be organized based on your selections. **“They might represent people, places, events, organizations or other entities that you want to analyze and compare.”** For example, if you have several transcripts from different trials, but want 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 node, except you choose the “Cases” folder and the proper case.



Cases (Macs)



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



Querying

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

- **Word Frequency:** Counts the number of times words (with stopwords removed) appear in one or more files
- **Coding:** Shows the number of codes, the text that was coded, and the files
- **Crosstab:** cross-references nodes and case classifications. For example, you might want to know how often a particular node appears in both scholarly articles and your primary texts.



Word Frequency Example (Windows)

“Query” can be found in the “Explore” Tab

Alternatively, you can Command/Control+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”

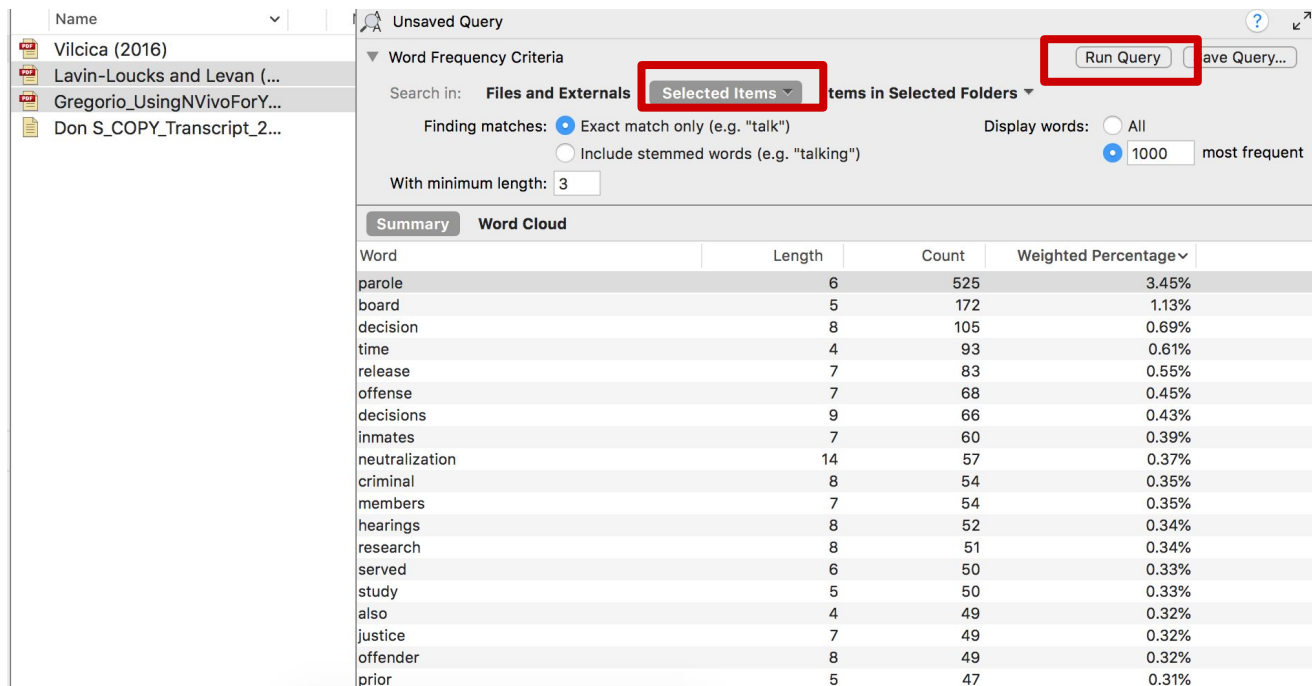
The screenshot displays the NVivo 12 Pro software interface. The top toolbar includes the 'Explore' tab, which is highlighted with a red box. Below the toolbar, the 'Files' pane on the left lists various project files, including 'Amann_Reasons Transcript', 'Angel Rivera 2', and 'Hill 2012 TRANS Tashila'. The 'Query' option is highlighted in the 'Files' pane with a red box. The main window shows the 'Word Frequency Query Results' dialog. The 'Selected Items...' tab is active, and the 'Run Query' button is highlighted with a red box. The 'Word Frequency Criteria' section shows 'Search in' set to 'Files & Externals', 'Display words' set to '1000 most frequent', and 'With minimum length' set to '3'. The 'Grouping' section shows 'Exact matches (e.g. "talk")' selected. The 'Word Frequency Query Results' table is visible, showing columns for Word, Length, Count, and Weighted Percentage (%). The table lists words such as 'time', 'inaudible', 'know', 'mean', 'assault', 'feel', 'care', 'codependant', 'around', and 'independent'.

Word	Length	Count	Weighted Percentage (%)
time	4	13	1.40
inaudible	9	12	1.29
know	4	11	0.86
mean	4	10	1.08
assault	7	8	0.86
feel	4	8	0.86
care	4	6	0.65
codependant	11	6	0.65
around	5	6	0.65
independent	10	6	0.65



Word Frequency Example (Mac)

Select the items you would like to query in the “Selected Items” tab and then click “Run Query”



Word	Length	Count	Weighted Percentage
parole	6	525	3.45%
board	5	172	1.13%
decision	8	105	0.69%
time	4	93	0.61%
release	7	83	0.55%
offense	7	68	0.45%
decisions	9	66	0.43%
inmates	7	60	0.39%
neutralization	14	57	0.37%
criminal	8	54	0.35%
members	7	54	0.35%
hearings	8	52	0.34%
research	8	51	0.34%
served	6	50	0.33%
study	5	50	0.33%
also	4	49	0.32%
justice	7	49	0.32%
offender	8	49	0.32%
prior	5	47	0.31%



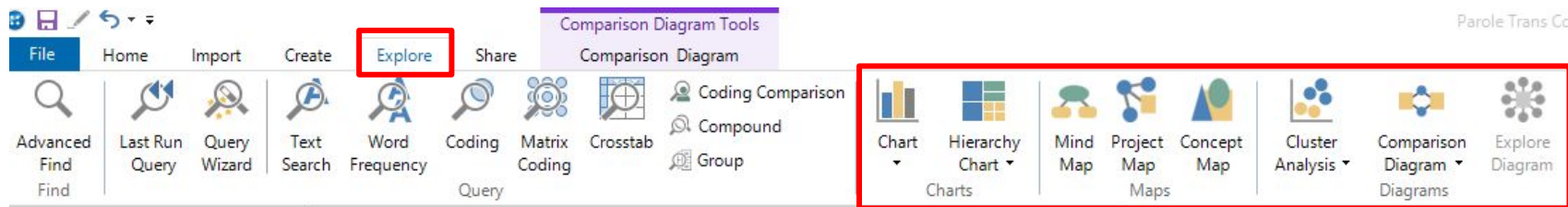
Exploring Codes (Windows)

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 nodes used in multiple files



Thank you!

If you have any questions, contact DITI at nulab.info@gmail.com

Sign up for DITI office hours! <https://calendly.com/diti-nu>

Developed by: Yana Mommadova, Tieanna Graphenreed, Dipa Desai, and Emre Tapan
DITI/NULab Fellows

Slides, handouts, and data available at:
<https://bit.ly/fa22-poe-engl4710-nvivo>

We'd love your feedback! Please fill out a short survey here:
<https://bit.ly/diti-feedback>

