

Introduction to Nvivo: Qualitative Coding for Text Analysis

Developed for Ineke Marshall
Spring 2022



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
- Hands-on activity

Slides & handouts at: <https://bit.ly/diti-sp22-marshall-nvivo>



Coding in practice

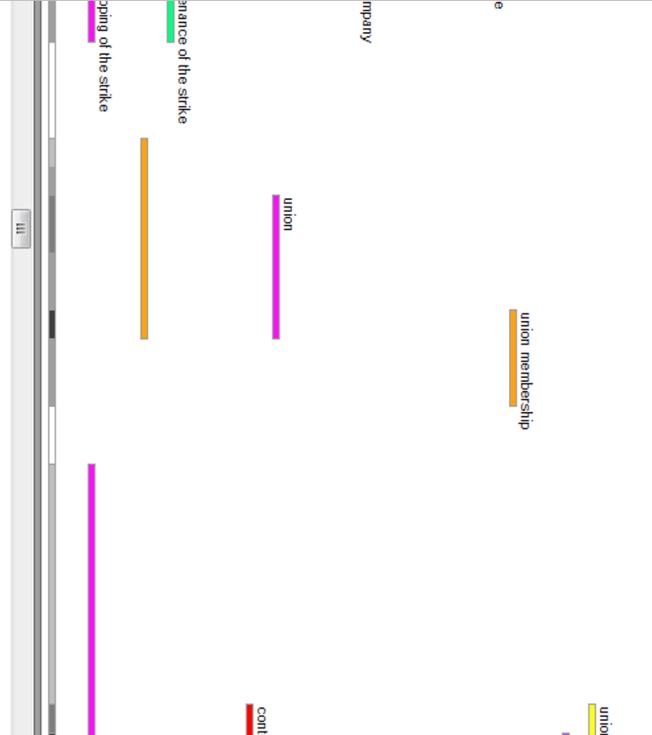
key, at that point.

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



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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

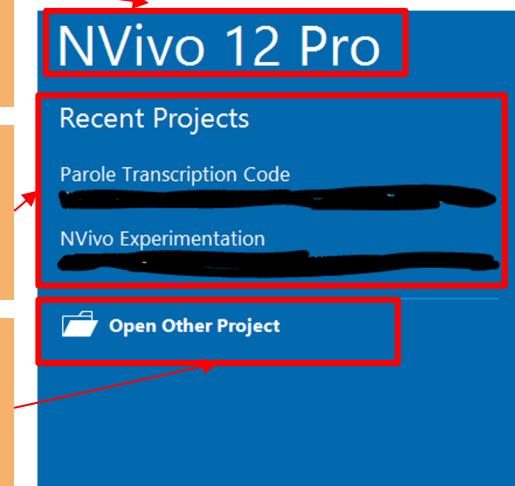


Anatomy of NVivo: Opening on Windows

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)

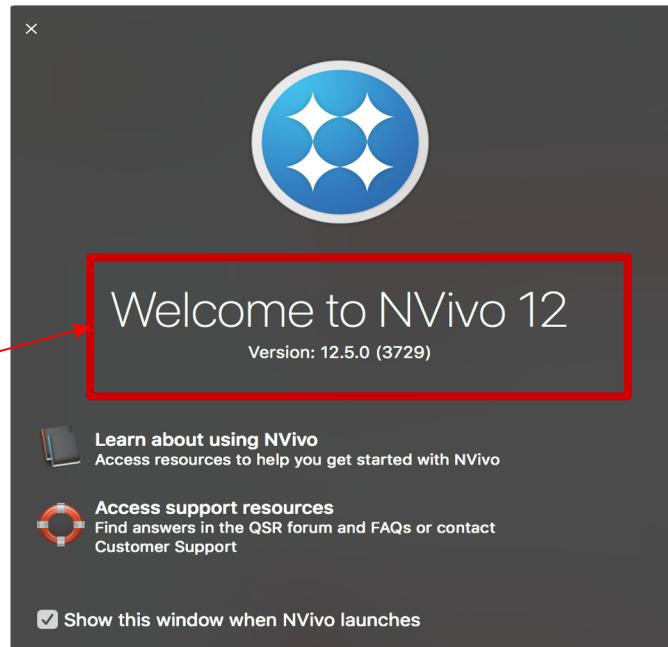


Learn and Connect



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

- Parole Trans Code...sion (NVivo 12).nvpix
~/Downloads
- TEST.nvpix
~/Documents
- Untitled.nvpix
~/Documents
- Sample Project.nvp.nvpix
~/Downloads

Open Another Project...

Open

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

The recent projects you opened

Open another project that is not recent



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Anatomy of NVivo: Projects on Windows

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

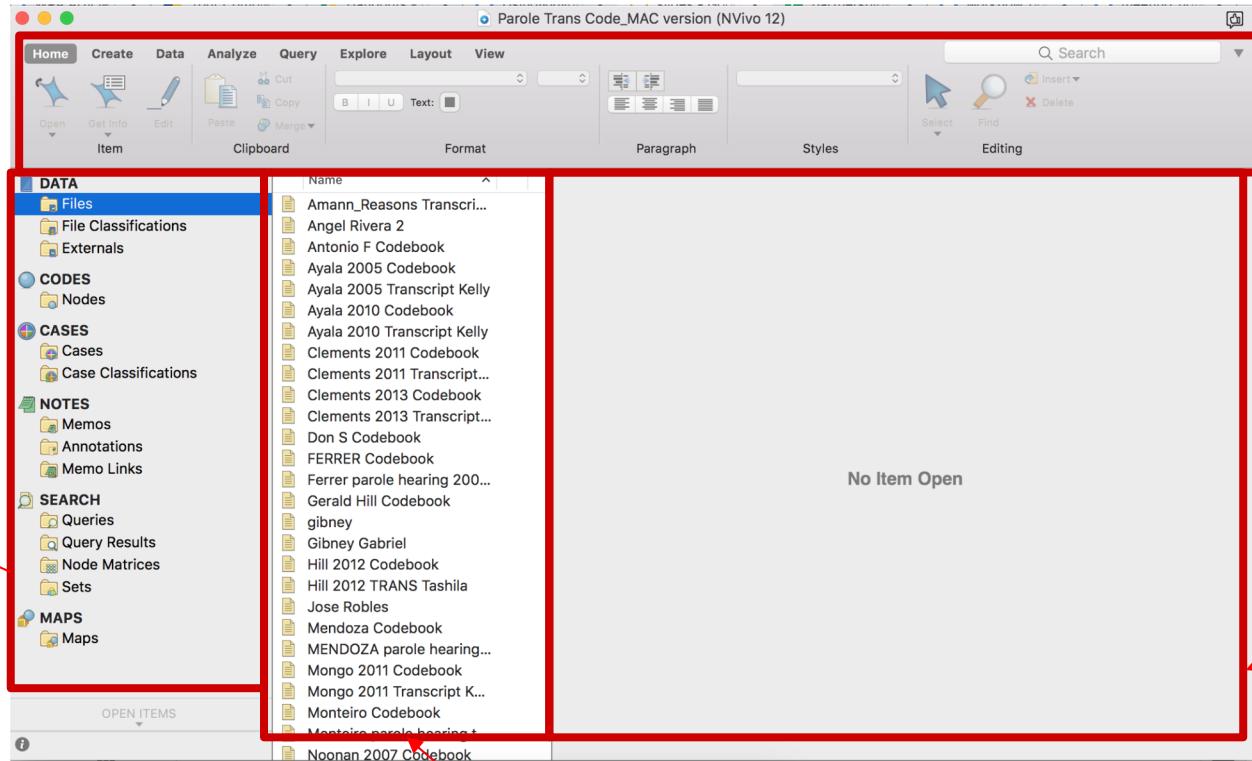
Toolbar to access functions

List of nodes, files, etc.

The screenshot shows the NVivo 12 Pro application window. At the top is the menu bar with File, Home, Import, Create, Explore, Share, and various toolbars for Properties, Open, Merge, Create As Code, Query, Visualize, Code, Auto Range, Uncode, Case Classification, File Classification, Detail View, Sort By, List View, Find, and Workspace. The left sidebar contains a Quick Access section with icons for Files, Memos, and Nodes; a Data section with Files, File Classifications, and External; a Codes section with Nodes, Relationships, and Relationship Types; a Cases section with Cases, Case Classifications; a Notes section; a Search section; a Maps section; and an Output section. The main workspace displays a list of files under 'Files' with columns for Name, Codes, and References. A specific file, 'Amann_Reasons Transcription', is selected. Below the list is a large text area showing a transcription of a conversation. At the bottom of the workspace are buttons for Code At and Enter node name (CTRL + Q).

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

Anatomy of NVivo: Projects on Macs



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

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NVivo Vocabulary

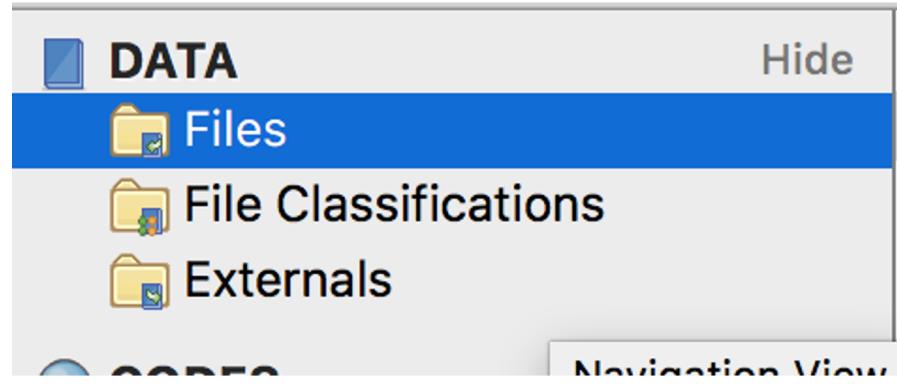
Full definitions available on the handout

- **Data:** your research documents & files
- **Codes:** the method to annotate the themes/concepts
- **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



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.



Important Reminders

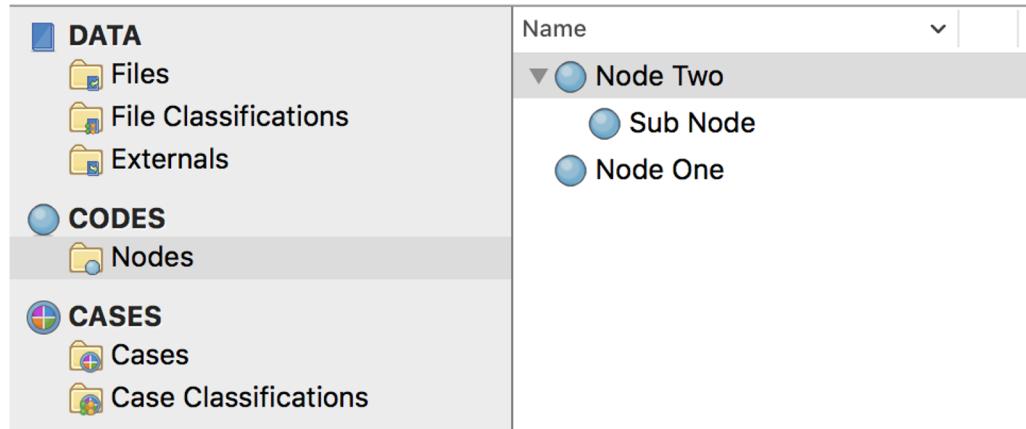
NVivo can import all types of files, including .docx, .pdf, .doc, .csv, .png, .jpeg, .txt, video/audio files, and more.

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.



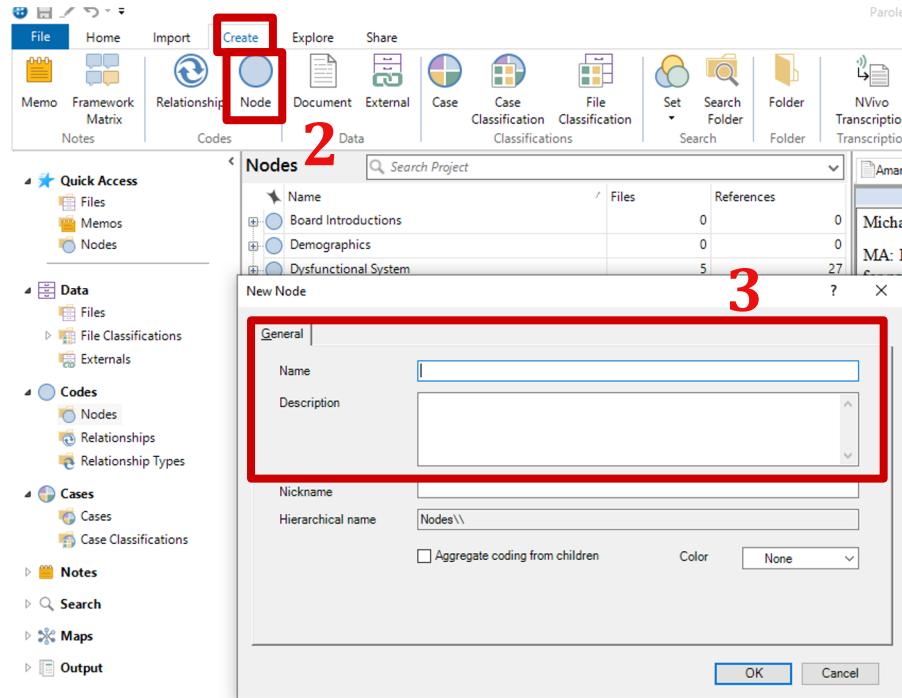
Codes and Nodes

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



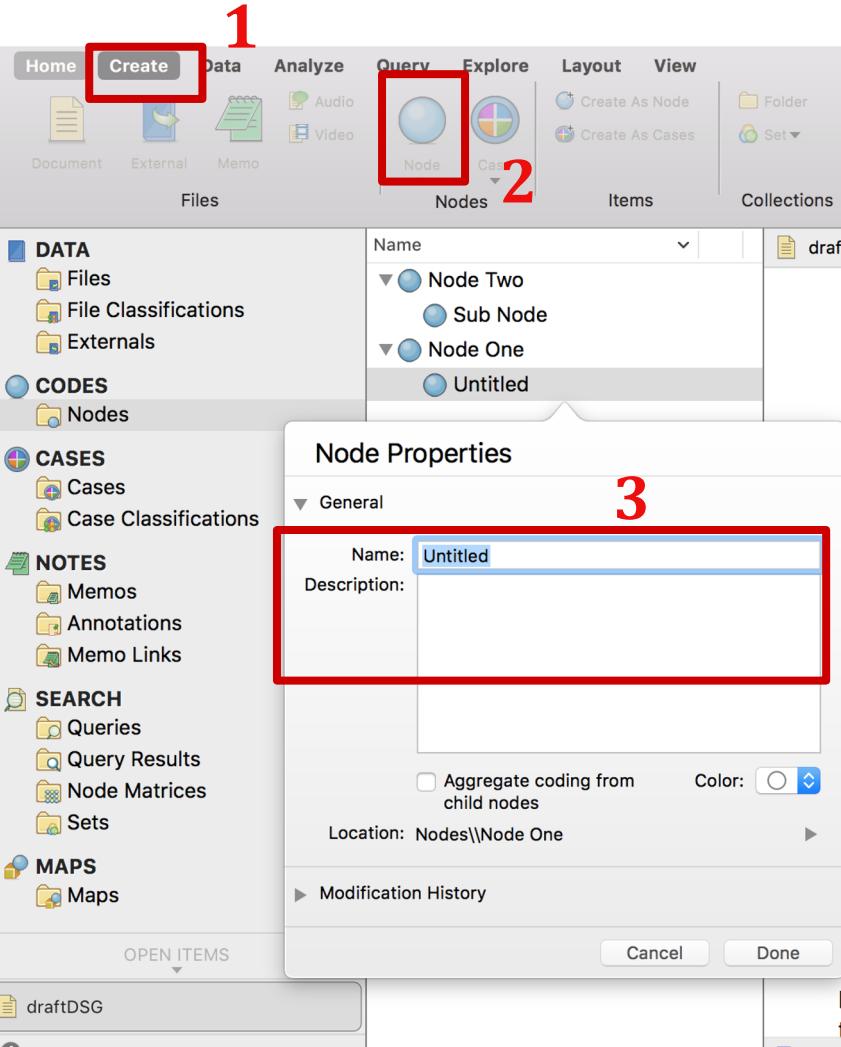
Creating Nodes (Windows) 1

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
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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

The screenshot shows the NULab interface. On the left, the 'Nodes' panel lists several nodes with their names, file counts, and reference counts. A red arrow points from the 'Board Introductions' node in this list to the 'Code...' option in a context menu. On the right, a transcription window for 'Amann_Reasons Transcription' displays a text excerpt from Michael Amann. A context menu is open over the text, with the 'Code...' option highlighted by a red box.

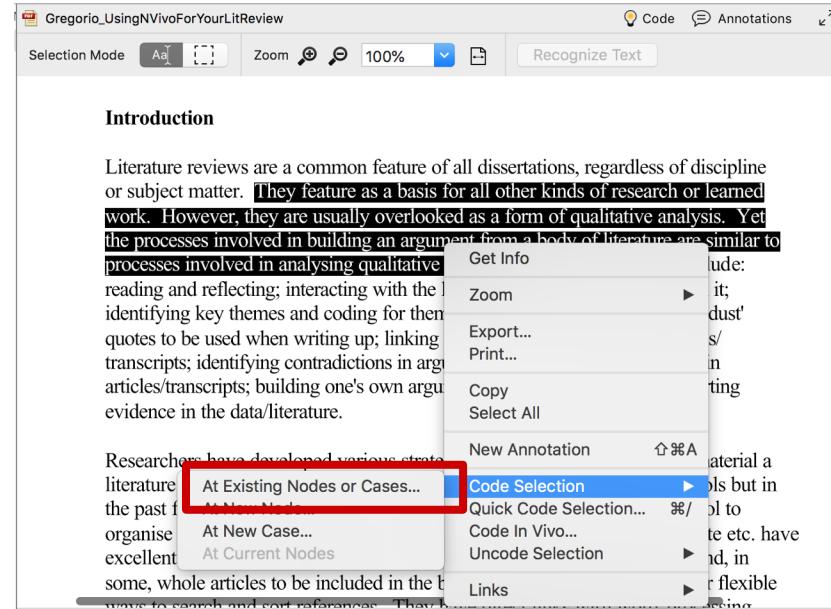
Name	Files	References
Board Introductions	0	0
Demographics	0	0
Dysfunctional System	5	27
Final Statement	0	0
Hearing Information	0	0
Institutional Adjustment	2	2
Legal Representation	0	0

Michael Amann (Reasons)
MA: I am here today to thank this Board for considering whether or not I am a worthy candidate
for pa [redacted] Code... Ctrl+F2
responses [redacted] Code to Select Nodes
offenses [redacted] Code In Vivo Ctrl+F8
out or [redacted] Uncode... Ctrl+Shift+F2
my da [redacted] Uncode from Recent Nodes



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. Simply choose “Coding for Selected Items”

The screenshot shows the NVivo 12 Pro interface. The top menu bar includes "File", "Edit", "View", "Tools", "Document Tools", "Share", and "Document". The "Document Tools" tab is selected. The "Coding Stripes" button is highlighted with a red box labeled '1'. The "Highlight" dropdown menu is open, with "All Coding" highlighted with a red box labeled '2'. The "Annotations" pane on the left shows a list of codes and their counts. The main document area displays a transcript with several yellow annotations. A sidebar on the right titled "Coding Density" lists categories like Mitigation, Gang Membership, Strong Direction, and Board Opinion of Crime, each with a progress bar.

The document you are coding and annotations

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



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. Simply choose “Coding for Selected Items”

1

2

3

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

Introduction

Literature reviews are a common feature of all dissertations, regardless of discipline or subject matter. They feature as a basis for all other kinds of research or learned work. However, they are usually overlooked as a form of qualitative analysis. Yet the processes involved in building an argument from a body of literature are similar to processes involved in analysing qualitative data. The processes involved include: reading and reflecting; interacting with the literature/data and commenting on it; identifying key themes and coding for them; extracting from the codes 'gold dust' quotes to be used when writing up; linking similar ideas from different articles/transcripts; identifying contradictions in arguments; comparing dissimilarities in articles/transcripts; building one's own argument/analysis with links to supporting evidence in the data/literature.

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 Command/Control click. Find all your annotations in the “Notes/Annotations” section in the left margin.

The screenshot shows the NULab interface with the 'Annotations' section highlighted. On the left, there's a sidebar with 'Annotations' selected under 'Notes'. A red box highlights the 'Annotations' tab in the top navigation bar. Below it, a red box highlights the 'Annotations' section in the main pane, which lists 'File Name' and 'Amann_Reasons Transcription'. A red arrow points from the text 'List of annotations' to this section. Another red arrow points from the text 'Where you can find all your annotations listed' to the 'Annotations' tab in the sidebar.

List of annotations

Where you can find all your annotations listed

Item	Content
1	This is an annotation

The text from the document you highlighted and are annotating

Your annotation

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 Command/Control+click. Find all your annotations in the “Notes/Annotations” section in the left menu

Where you can find all your annotations listed

The screenshot shows the NVivo software interface. On the left, there is a sidebar with several categories: DATA (Files, File Classifications, Externals), CODES (Nodes), CASES (Cases, Case Classifications), NOTES (Memos, Annotations, Memo Links), SEARCH (Queries, Query Results, Node Matrices, Sets), and MAPS (OPEN ITEMS). Below the sidebar is a file named "Gregorio_UseNVivoForYourLitReview". In the main area, there is a list titled "List of annotations" which contains one item: "Sample annotation". A red box highlights this list. To the right, there is a document titled "Gregorio_UseNVivoForYourLitReview" with the following text:

Introduction
Literature reviews are a common feature of all dissertations, regardless of discipline or subject matter. They feature as a basis for all other kinds of research or learned work. However, they are usually overlooked as a form of qualitative analysis. Yet the process of writing a literature review is similar to that of qualitative analysis. The procedures involved include: reading, identifying, quoting, translating, articulating, and evidencing.

A portion of the text is highlighted in blue, and a red box surrounds it. Below this, another "Sample annotation" box is shown with a red border. At the bottom of the document, there is more text about literature reviews and strategies to deal with them.

The text from the document you highlighted and are annotating

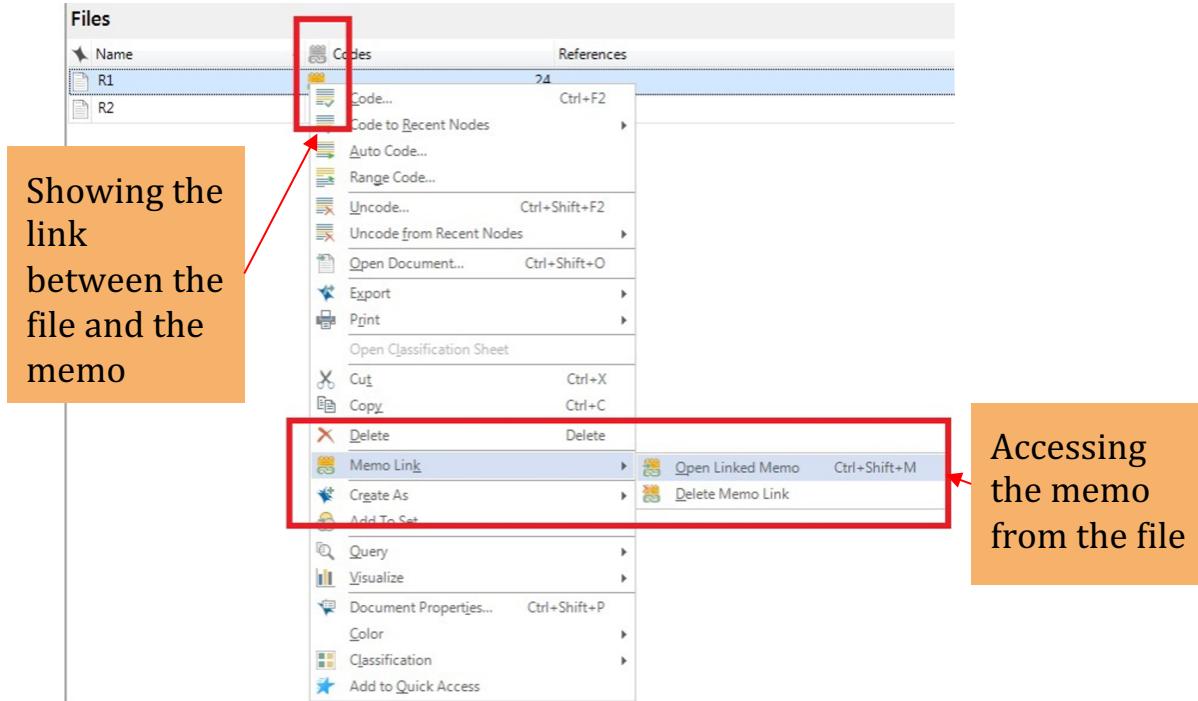
Your annotation

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 shows the NULab software interface with the 'File' tab selected. On the left, there's a sidebar with sections like 'Quick Access', 'Data', 'Codes', 'Cases', and 'Notes'. The 'Notes' section is highlighted with a red box and contains a 'Memos' folder. A red arrow points from this 'Memos' folder to a context menu that is open over a list of nodes. The context menu has an option 'Memo Link' highlighted with a red box. To the right of the menu, a callout box says 'Option to link the memo to a node'. Another callout box below the menu says 'Menu where memos are located'.

Memo links (Windows)



Memos and memo links (Macs)

Menu where memos are located

Navigating memo creation

Option to link the memo to a node

This screenshot shows the NVivo interface. The top navigation bar has tabs: Home, Create (highlighted with a red box), Data, Analyze, Query, and Explore. Below the tabs are icons for Document, External, and Memo. The 'Memo' icon is also highlighted with a red box. The main workspace shows a list of nodes under the 'DATA' tab. A context menu is open over a node, with the 'Memo Link' option highlighted with a red box.

Showing the link between the file and the memo

Accessing the memo from the file

This screenshot shows the NVivo interface with the 'Nodes' tab selected. A context menu is open over a file node, with the 'Memo Link' option highlighted with a red box. Another context menu is open over a memo node, with the 'Open Linked Memo' option highlighted with a red box.

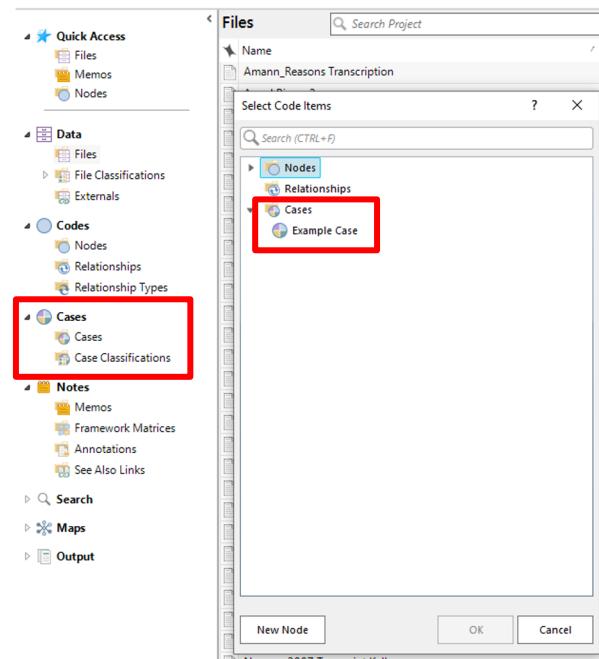


Cases (Windows)

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](#)

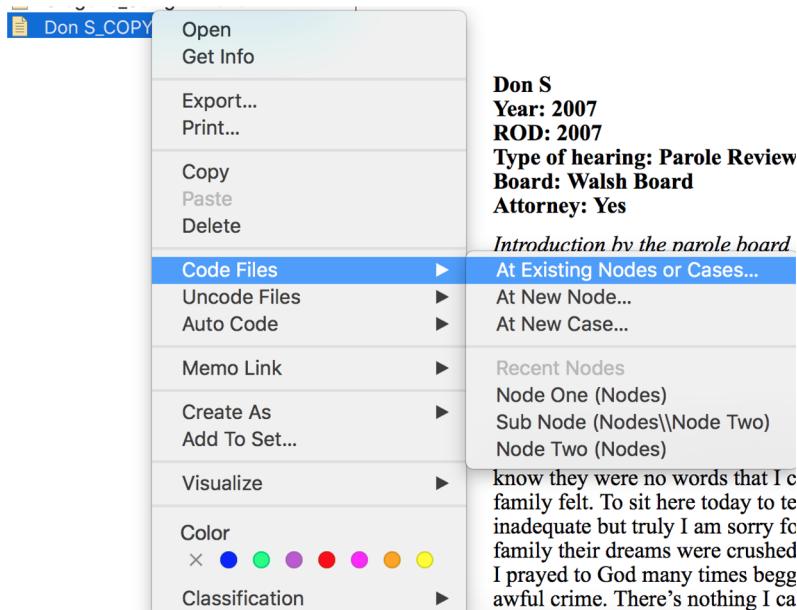
To add a “case” to a file, it’s the same method as adding a node, except you choose the “Cases” folder and the proper case.



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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)



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 shows the NVivo interface with the 'Explore' tab selected. A 'Word Frequency Query Results' dialog is open, displaying a table of words and their frequencies. The 'Selected Items...' tab in the dialog is highlighted with a red box. Other tabs include 'Selected Folders...', 'Grouping', and 'Display words' (set to '1000 most frequent'). The main NVivo window shows a list of projects and files, with several items selected (highlighted with a red box) and a context menu open over them. The 'Query' option in the menu is also highlighted with a red box. The menu options include 'Word Frequency Query in This Document', 'Document Properties...', 'Color', 'Classification', and 'Add to Quick Access'. The bottom status bar shows project statistics: 43 nodes, 109 cases, and 18 around 1000 words.

Word Frequency Example (Mac)

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

The screenshot shows the NVivo Word Frequency Criteria dialog box. On the left, a sidebar lists project files: Vilcica (2016), Lavin-Loucks and Levan (...), Gregorio_UsingNVivoForY..., and Don S_COPY_Transcript_2... The main area is titled "Unsaved Query" and contains "Word Frequency Criteria". Under "Search in:", the "Selected Items" tab is selected, indicated by a red box. Other tabs include "Files and Externals" and "Items in Selected Folders". Below this, "Finding matches:" has "Exact match only (e.g. "talk")" selected. "Display words:" has "1000 most frequent" selected. A "With minimum length:" input field shows the value "3". At the bottom right are two buttons: "Run Query" and "Save Query...", both of which are also highlighted with red boxes.

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%



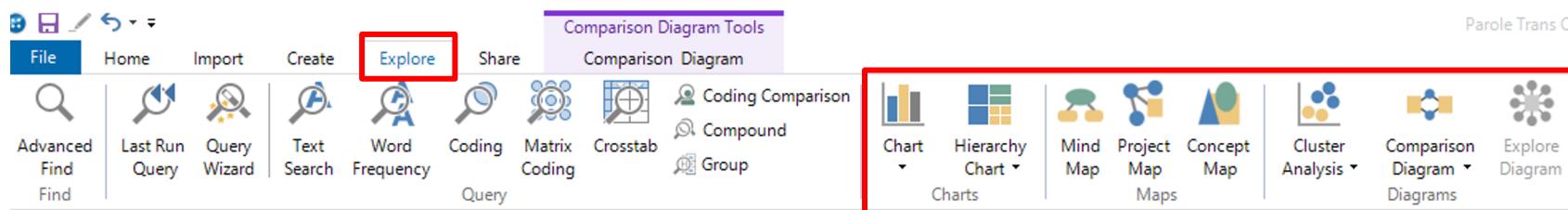
Exploring Codes (Windows)

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



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



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>

Taught by

Yana Mommadova and Tieanna Graphenreed

DITI/NULab Fellows

Slides, handouts, and data available at: <https://bit.ly/diti-sp22-marshall-nvivo>



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