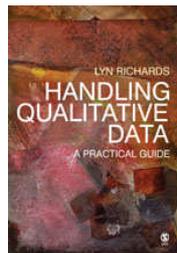


Teach-yourself NVivo 7: the introductory tutorials

Lyn Richards

Welcome to these “do-it-yourself” tutorials for researchers and students who wish to learn NVivo 7. The ten tutorials are designed as exercises to take you through all the basic functions of the NVivo 7 software, with guidance to its interface and processes, as you set up and commence your own project.

There is symmetry between these tutorials and the chapters of my most recent book, but of course they can be independently used. Each Tutorial explores in software the techniques and processes described in a chapter of *Handling Qualitative Data: a practical guide*, London, Sage, 2005. Those chapters give advice and help with the research processes the software supports. I wrote the book to help researchers who need research advice and skills in ways of handling data that have become available through qualitative software. These tutorials are on the Resources page for that book on the Sage website: <http://www.sagepub.co.uk/richards/>.



If you need further help in moving from learning software to getting going in your own project, a free 24pp handbook, *Up and Running in NVivo7* is available for download at www.lynrichards.org.

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I have prepared these materials for websites to provide widest possible access to detailed help for qualitative software self-teaching, a cause I strongly support, and to allow revision of them as the software changes, (as software does!) with service packs and new releases. They have been very thoroughly checked by colleagues and testers at the time of publishing them, and will be revised when further changes in the software require this.

I particularly wish to thank Daniel Buffett, QSR's Test Manager, for his very detailed professional review and comments. Many other colleagues have given me valued feedback – and more is always gratefully received!

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More information about NVivo

The software taught in these tutorials is NVivo for two reasons: it is the most used software for qualitative analysis, so the package most normally available for students and researchers. And it is the software I helped create, design, develop, document and teach through three revisions. The following links will take you to more information.

For more about the software, resources and information:

www.qsrinternational.com.

For the story of the company, and stages in the software:

http://www.qsrinternational.com/aboutus/company/company_history.htm.

For information about all qualitative software packages:

<http://caqdas.soc.surrey.ac.uk>.

For my own work, and other writing, and for qualitative research resources:

www.lynrichards.org.

The software used in these tutorials is the latest version of NVivo, NVivo 7.0. QSR NVivo 1 was released in 2001. The version described in these tutorials was named NVivo 7 because it is an upgrade path for both NVivo and its sister software, N6, the current version of the NUD*IST software. NVivo 7 was released end of February 2006. If you are using the previous version, NVivo 2, you will find tutorials for that version at <http://www.sagepub.co.uk/richards/>. For those who wish to compare NVivo 2 and NVivo 7, the topics of the two groups of tutorials have been kept as similar as possible, given new functions in NVivo 7.

If you began work on these tutorials in NVivo 2 and wish to continue in NVivo 7, this will not be a problem. You can import into NVivo 7 any project from N6 or NVivo 1 or 2 – or, indeed, NVivo 7.

You will need to have a copy of the software to build your own project, using these tutorials. If you or your institution has no access to a license for NVivo 7, you can still find how it feels to work in the software by using the free (time-limited) demonstration version available from the QSR website, www.qsrinternational.com.



Since that demonstration version is time-limited, don't download it until you are ready to commence the tutorials. Note that once its free time expires, you will not be able to load the free demo again on the same machine, unless QSR provides special permission.

Data for your project

The exercises for each Tutorial assume that you have data records available to you. There are many ways of making that data.

The Volunteering data

NVivo 7 ships with a copy of a project called Volunteering, which I created for the software's online documentation. Also on the CD are the data sources for that project. This "project" is about the motivations of those who do volunteer work, images of volunteers, problems of attracting volunteers to assist organizations. The interviews are not "real" data – participants were colleagues, and names are not real. But the ideas and discussions are contributed by real people, many really interested in the topic, and collated by myself and Kristi Jackson in the US, whose own real research in the area is documented in the memos in the sample data provided. These give you the background to what for us became an absorbing project.

You can work with this sample project, if you wish. The files include interviews and focus groups as well as memos about the project, and you can use them to start your own project. You might conduct an interview of your own to explore attitudes to volunteer work amongst your family or friends. Now use the data to answer questions of your own. The volunteering data will be used in illustrations during these tutorials.

Using your own data

Alternatively, you might make a very small exploratory project with your own data. For these tutorials you need only a first research question and a few documents – five hour-long interviews or field note reports would be fine.

You can import existing data from any Word files. Or, if you wish to invent a small project for these exercises, go to *Handling Qualitative Data*, Chapter 2 for brief discussions of some of the many ways of making qualitative data, with references to other texts for detailed advice. In Chapter 3 is advice on making data records that will be rich and useful for your project.

Help for Teachers

Teachers using *Handling Qualitative Data* and these tutorials in their courses are welcome to contact me to discuss course content and others' experiences:

info@lynrichards.org.

For NVivo software access and issues of licensing, a Teachers' Handbook is available from QSR International, free in a .pdf format. Email info@qsrinternational.com to request a copy, or for further advice.

Supporting materials and sources of help

In the following exercises, you will learn very basic use of the software. If you want to go further with software learning, you will find information, workshops and personal consultancy in the software are available world-wide.

Like all users of the software, you can find help from many sources.

- The **written and on-line documentation of the software** – NVivo comes with a Getting Started booklet. **Online Help** is available in the software. Guidance to using Online Help are in Tutorial 1.
- The **QSR website**, <http://www.qsrinternational.com/> has a page on Resources pointing to readings and materials, and contact details of trainers and consultants around the world who, like me, use the software and in work in different contexts and different ways to help others to use it;
- The **QSR Forum** offers helpful web-based discussion forums answering questions and providing ideas and research strategies. Go to <http://forums.qsrinternational.com/> to view discussions and register. Click **Calendar** to see upcoming workshops and events;

Using these tutorials

The ten tutorials can be followed by individual users working alone, or they can be incorporated in class laboratory sessions alongside the book chapters. They don't explain the purposes of the processes they teach, but refer to the explanations of each in the chapter of the same number in *Handling Qualitative Data*.

The topics of the following tutorials are as follows:

Tutorial 1 **Setting Up Your Project**

Tutorial 2 **Creating and Importing Sources**

Tutorial 3 **Managing data: Cases, Attributes and Sets**

Tutorial 4 **Editing and Linking: Getting "Up From The Data"**

Tutorial 5 **Coding, and Working With Coded Data**

Tutorial 6 **Relationships and Other Nodes: Handling Ideas**

Tutorial 7 **Seeing It In Models**

Tutorial 8 **Finding Items and Querying The Data**

Tutorial 9 **Exploring Patterns in Matrices**

Tutorial 10 **Reporting and Showing Your Project**

I hope the tutorials work for your purposes, and that you enjoy working with them as much as I've enjoyed the challenges of writing them and of developing software to help researchers do justice to qualitative data.

*Lyn Richards,
Melbourne, July 2006.
info@lynrichards.org.*

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NVivo 7 Tutorial 1:

Setting Up your Project

This tutorial is about starting out in software.

Starting out is not a very predictable experience, since many factors affect confidence and success. These include obvious variables like experience and competence with computers, familiarity with the purposes of qualitative research and resources of time and assistance. But none of these is an overwhelming requirement! Success will be most directly a result of your own efforts to see the purpose of each exercise and to do it yourself.

The exercises in this tutorial have two purposes: setting up your own **project** (and getting familiar with the software) and ensuring you can **save**, close and open it.

They start with ways of meeting the software through the online resources that come with it. There are Getting Started self-running tutorials provided, which will help you to learn how to use the menus, and the uses of the different folders in the **Navigation View**.

Following this introduction, there are instructions to set up your own project, and to familiarize yourself with where your data and reflections will be stored. An introduction is provided on using Help and customizing the software to suit your style.

As you work through this first tutorial, take notes of any processes you don't understand or want to explore further.

For advice on the early processes of a project, logging the plans and the journey, entering the field, declaring the assumptions you bring with you, and learning the software tools you will use on the way, go to Chapter 1 of *Handling Qualitative Data*.

For assistance with the basic software processes, use the online Help. A section of this tutorial introduces it.

Note: if you want more advice on the ways of getting into your own project in NVivo, there is a free handbook, *Up and Running in NVivo*, available on www.lynrichards.org.

1. Meeting the software

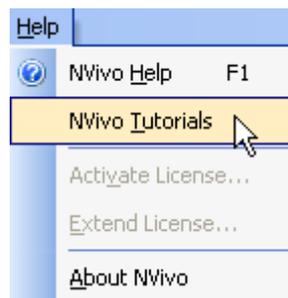
At this stage you need an overall familiarity with the tools offered by your software.

If you have access to an introductory class or workshop, this gives the easiest first encounter with the software. Watching someone who knows it will quickly show you how to use it.

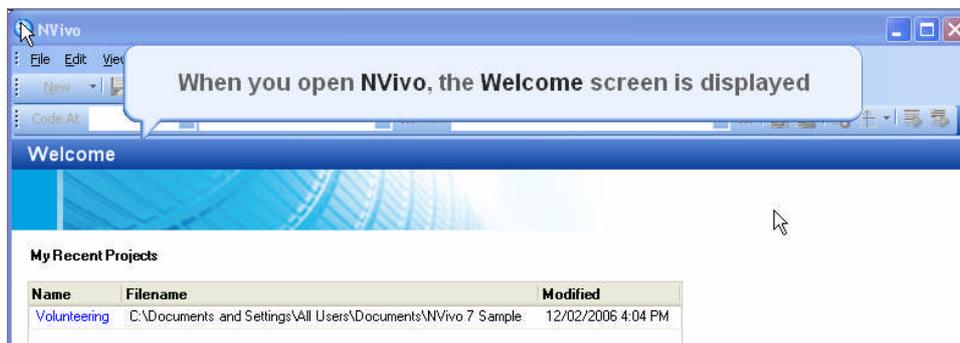
If you are teaching yourself, use the Getting Started Guide and the Tutorials provided with the software.

To access the Tutorials:

1. NVivo7 should be installed on your computer. This will be done from a CD or by download from the QSR website.
2. Start the NVivo application by clicking the desktop icon (or via **Start>All Programs>QSR>NVivo7>NVivo 7**). The Welcome screen shows a list of recent projects which includes the sample project and any other projects a user might have created.
3. On the menu bar, select **Help** and then **NVivo Tutorials**. There are five Tutorials, which run automatically.



4. On the left hand panel, select the tutorial called **Introducing NVivo**. The messages appearing on the screen will explain the basic processes of starting a project in NVivo.

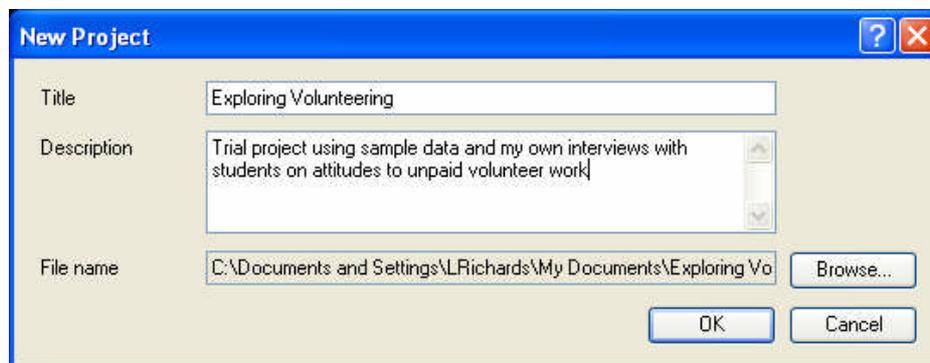


2. Setting up your own project

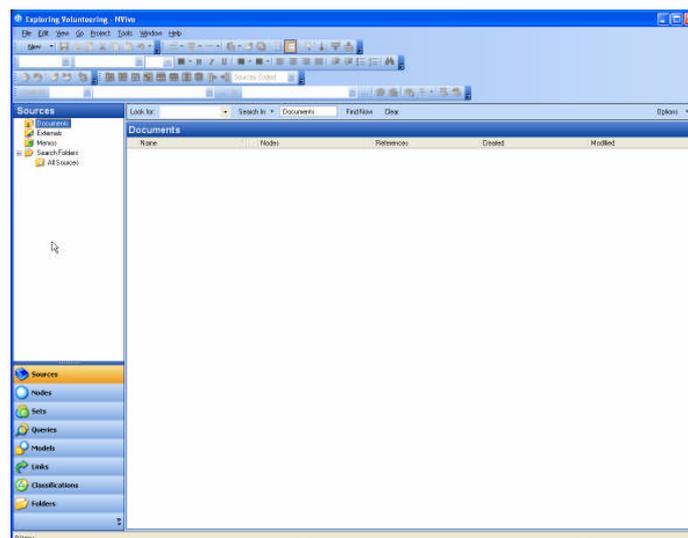
The next task is to set up your project ready to receive your data sources and ideas.

To create a project

1. Whether you just launched NVivo, or just closed a tutorial, the NVivo **Welcome** screen is displayed.
2. Choose **New Project** from the File menu
3. Type in the name of your project and a brief description. Note that unless you choose a different location, the project will be stored in your “My Documents” folder. You can change the location of your new project by clicking on the Browse button in the New Project dialog box. (If you want to move or copy a project **after** you have created the project, then you can do this from Windows Explorer just like any other data file.)



4. Once you click OK in the New Project dialog box, your new project is created and the NVivo **Navigation Window** opens. On the title bar at the top of the window will be the name of the project you created. (In the illustration, it is called “Exploring Volunteering”).



Getting to know the Navigation Window

This window will be home base for your project. Its left hand side folders store all the data items you create or import, and its right side panes list those items and display their contents. (Currently, there's nothing there to show.)

If you are using MS Outlook, this window looks very familiar. It's meant to do so! For the life of your project, it will be the way you access data items and content.

In the folders on the side you can store all the data and explorations of a project.



Setting up your project, you can

in **Sources**, put your data documents and memos;

in **Nodes**, store ideas and coding;

and in **Sets**, group those sources and ideas.

Then, as your analysis progresses, you can

make **Queries** to ask questions of your data;

in **Models**, make diagrams and images;

use **Links** to connect data items and content,

and make **Classifications** for attributes and relationships.

As you create data and start analysis, there is a place for each item in these folders.

And in the panels on the right hand side of the Navigation Window, you will be able to see and manage the contents of any folder – listed, or shown in detail.

The **List View** of items, and information about them, will appear in this space when you click on any folder.

The **Detail View** of the contents of an item will appear below that list when you double click on any item in the list.

Name	Nodes	References
Anna	0	0

Anna

Interview with "Anna"

Q.1 Current use of time

*In an "ordinary" week, how do you currently spend your time?
(What takes most time, how much time spent on work, family, leisure etc...?)*

I am still studying so an ordinary week for me is mainly spent studying and working; send about 32 hours a week at work, 6 contact hours at university, and I spend my evenings studying. I also play Netball and attend a Yoga class of an evening once a

3. Using Help

1. Click on the Help menu, this time to access the Online Help

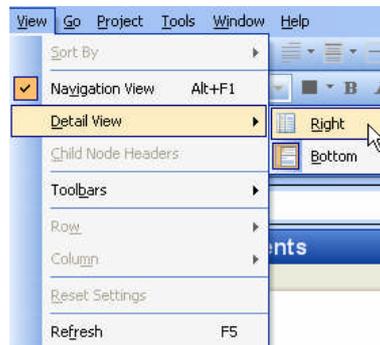


2. Take time to check the Help contents. Note that there are two parts.
 - In the sections on **Using the Software** you will find instructions for conducting each task or process in NVivo 7.
 - Go to the topic on **Getting Started** and read the subtopics about navigating NVivo and customizing the workspace.
 - The sections called **Working with Your Data** offer advice on why you would be doing this, and how to use these tools in *your* project for *your* analysis goals.
 - Go to the topic on **Approaching an NVivo Project**. Read about what it is like to work in NVivo 7.
3. Click the Search tab and try searching for information about some of the processes you are about to conduct. Note that each topic takes you to information about using the software and working with your data.

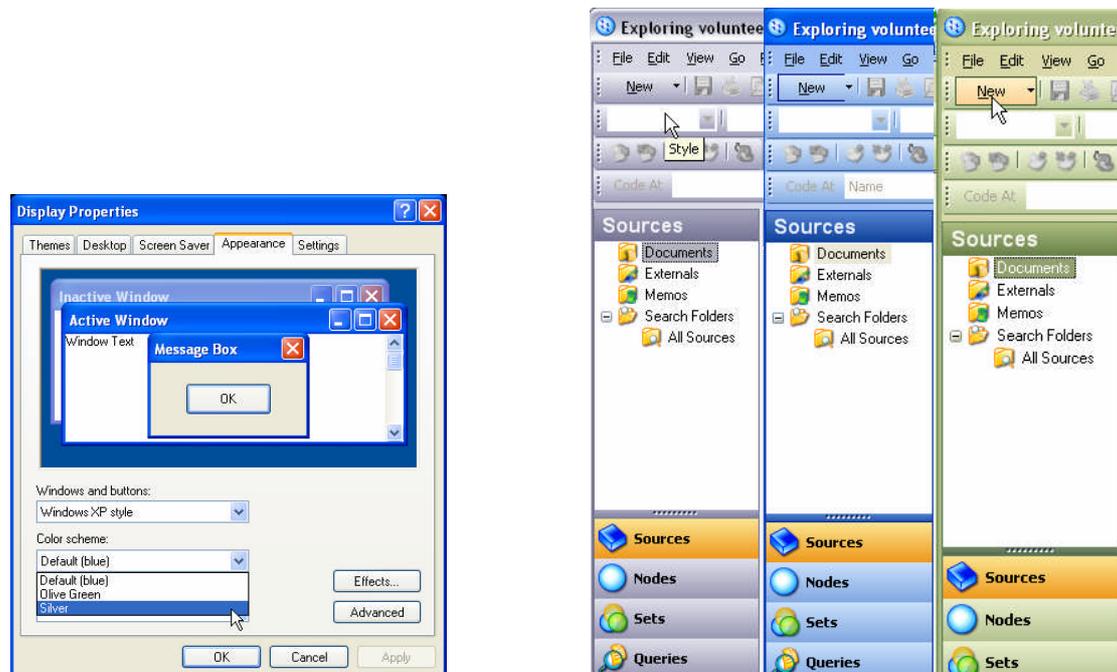
4. A first step to customizing NVivo

Qualitative researchers often care about the way their data records look, and the appearance of the screen they are working on.

1. In the Navigation Window, you can change how the folders appear (just as in MS Outlook) by selecting to show and hide them or see the subfolders all together.
2. You can undock (and re-dock) the Detail View, making it a free-floating window, whenever you want to concentrate on just one item – to do this, click **Docked** in the **Window** menu.
3. And importantly, you can change whether you see the panels of the Navigation Window with the Detail View below the List View, or on the right hand side. Experiment with different layouts especially when you start coding.



4. And yes, you can even change the color scheme of NVivo – and of course any other application you run under Windows, to fit your preferences by changing the Windows settings. If you see a colleague’s NVivo in different “livery”, this is why! Go to **Settings> Control Panel> Display> Appearance** and choose from colors offered.

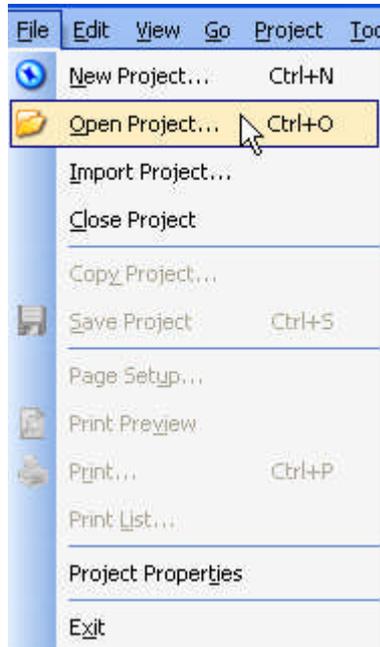


These tutorials and the Help files are in the default color, “blue”.

5. Your project and its management

Now, to your project. Your NVivo project is stored as a single file. The **File** menu allows you to make a new project, open your existing project or close it.

Note the options available from the File menu.



From this menu you make a new project, open an existing one or import one project into another.

If you are working in a team you may later wish to combine your projects in one. By importing one project into another, you can merge your work. If you wish to do this, go for advice to the Help topics on importing projects.

The File menu also gives access to the Project Properties. Here you can change the name or description of your project.



Note, if the name is changed internally, the project's file name on your computer hard disk will not be changed.

To close and locate the project

1. From the File menu select **Close Project**.
2. If you have made any changes to the project, you will be asked whether you wish to save this project, choose **YES**.

Congratulations! You have a new, saved project, waiting for your data and ideas.

Your NVivo project database is saved in a single file. By default it is in the My Documents folder. (If you changed this default, or move it at any time, be sure to record where you placed that file.) Your new project should now be stored in the location you specified.

3. Go to the **Windows Explorer** and the folder for **My Documents** to check your project is where you put it. It is a single file with the NVivo 7 icon and the extension **.nvp** (for "NVivo project"). Like any other file it can be copied, moved or sent to a colleague.

To open and save your Project

1. When you closed your project, you returned to the Welcome window, which now shows the name of your project. Click on its name. Your project will open in the Navigation window.

Note that on the **File** menu, **Save Project** is probably not available, because you have not made any changes to save.

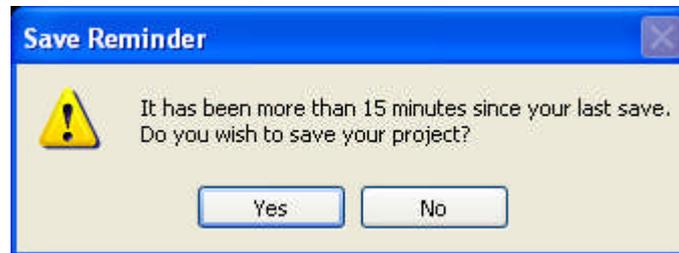
- From the File menu, select **Project Properties**. The window tells the name and description you gave your project, and the time you created it. Alter the description to add detail. Now, you have made changes and can select the **Save Project** option, or simply use **Ctrl+S**.



Make a habit from now of doing a Save whenever you feel you have significantly changed your project.

To manage saving and undoing

NVivo has **Undo** – more on how to use it below. After you save changes, they cannot be undone. For this reason, NVivo will not “autosave”. Rather, it will ask, at regular intervals, if you wish to save. (You can change the frequency of reminders – see next section on Options). Always consider your answer, as you may wish to **Undo** something you just did.



When you close a project, if any changes have been made to it, NVivo will ask you if you wish to save changes.

To back up your project file

There is great advantage in having your project saved as a single file. It is much less likely to be damaged by bad file management than a project saved in many folders. Also, you can easily send the entire project to a colleague or supervisor as an attachment to an email. If it gets big, compress the file using Winzip.

You back your project up like any other file.

When you wish to back your project up

- use whatever is your normal backup procedure to make a copy of the project file on another safe storage device;
- or if you prefer, make a copy of a project from the Welcome window in NVivo. (Simply select **File>Copy Project**)

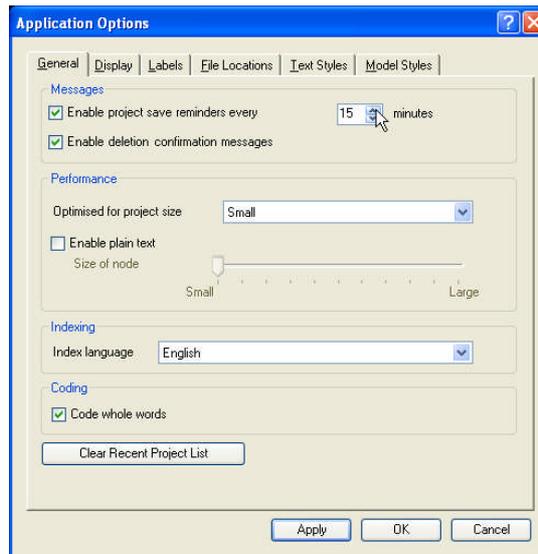
Always back up your project frequently, and keep a record of where you stored the backup copy, and of other relevant information about date, state of project at backup, in case of computer problems or change of direction in your thinking. When you are working qualitatively, you can change the project data base very many times in so many minutes! Like any computer file, your project can be deleted or mislaid if you are not careful with your data management processes.

To set application options for save and safety

1. From the menu bar select **Tools>Options**. The Application Options window opens. Set the project save reminders to the time you prefer.
2. Click through the tabs to check the range of project options you can set.



Big Warning! one option is **Enable deletion confirmation messages**. Unless you are very confident, **don't un-tick it!!** For most users, it is essential to have that warning when, unintentionally, they have asked to delete items.



3. Note the final button will **Clear Recent Project List**. You'll be needing this! Use it when you wish to clean up the Welcome Window's list of projects after you remove experimental old projects, or move ones you are working on.

This concludes NVivo 7 Tutorial 1. Go to Chapter 1 of *Handling Qualitative Data* for advice on any of these research processes..

Now for some data! In Tutorial 2, you'll make documents in three different ways – and back up the now growing project.

NVivo 7 Tutorial 2:

Creating and Importing Sources

This tutorial is about how to make data records in NVivo7, or import them into your NVivo project. There are three ways of doing this – in this tutorial there are instructions for each. You will:

- **import** one or more records from a word processor file;
- work in your project, and **create** a record there;
- record a summary of what's in an **External** record.

And since at the end of this tutorial you will have a project underway, it concludes with instructions for a fourth task:

- **back up** this precious project file that records your work!

Chapter 2 of *Handling Qualitative Data* is about making qualitative data, the many ways of doing so and how to make useful data for your purposes. To review what you need to know about documents, go to the [Online Help](#).

About sources: documents, memos and externals

NVivo provides three folders for three sorts of Sources – documents, memos and externals.

These are common divisions in a qualitative project. You can make further sub-folders of your own to hold different types of Sources. Documents, for example, may be divided into interviews and focus groups, or memos into theoretical and methodological notes.

If you are working in NVivo you can write early research design records or letters etc. in a word processor and import them to your new project as documents or memos. Or simply write them within your project.

And you can make “External” sources to represent other material that you will not bring into the project at all but don't want to lose.

This tutorial takes you through the steps to import a source, to create a source in NVivo and to create an External to record other data.

As you work through these steps, note that there are always at least two ways of getting to the commands you wish to give the software. Familiarity with these different ways of working with software will help you find the way that suits you best.



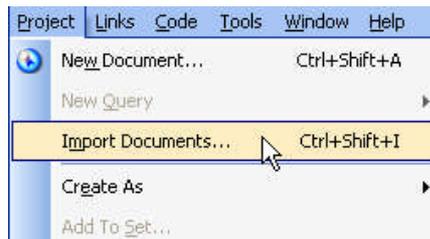
Use the List View, as you work. Like the familiar Windows Explorer, it will allow you to sort on any of the columns in the right pane. As you bring in more sources, you can view your documents or externals in order of size, amount of coding, or date created or modified.

1. Choose how you work in NVivo

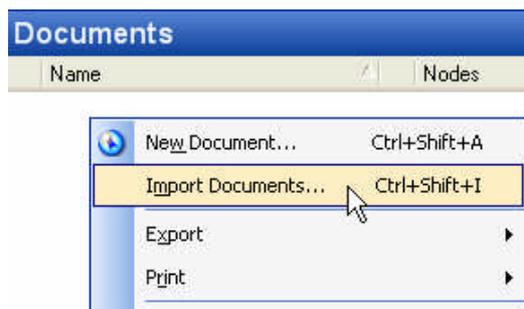
Most tasks can be accessed via the top level menu and also the context menu available from the right-mouse button. For most menu items there are short cuts. And for some there are icons on the tool bars. For example, there are always three ways to add any new item.

You first need to tell NVivo *what you wish to add*. You do this by clicking on the appropriate folder, and then clicking in the right pane **List View**. Now what you can do for that sort of item will show on the Project Menu and the Context menu when you click the right mouse button.

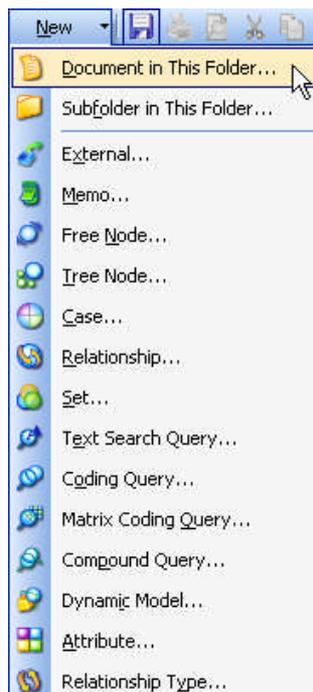
1. Go to the Project menu and you will find it offers the option to create a new item of that sort (or, for documents, import them).



2. Or right click in the List View and from the right mouse **Context** menu select the option to add a new item of that sort (or, for documents, to import them).



3. Or just use the **New** button to create this sort, or any other sort of new project items.



Have you noticed that most common actions in NVivo 7 have fast keys showing with the menu items? It is useful to learn the ones you will often want to use.

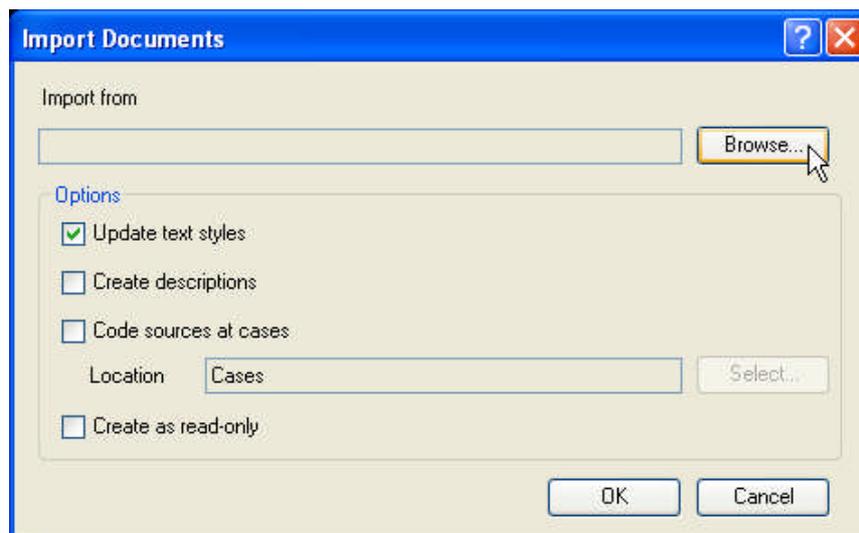
2. Making sources

Most of the data sources in most qualitative projects are recorded in text. At this stage, you may have early research design documents. Later, you will add transcripts of interviews, field notes, survey responses etc.

As those documents are created, they are usually typed up in your normal word processor (here we will assume it's MSWord.) These word processor documents can be imported directly into your project in NVivo. They can be in Word files (.doc) or in rich text format (.rtf) or of course in plain text (.txt). If you use Word files, they can include pictures or tables or other embedded objects, and you will be able to view, code and retrieve this content.

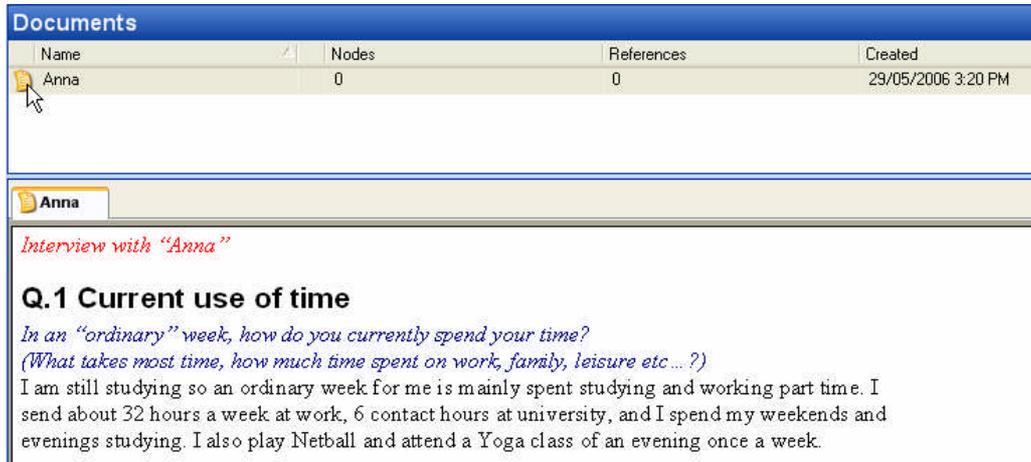
To import a document

1. Create a document in your word processor, or locate one you have already typed up. Or write an informal one about what you are planning to do and call it something like "Project Journal". Save it as a Word (.doc) file, in a sensible location.
2. In your NVivo project, click on the folder for **Sources**, and then **Documents**. Click in the List View to show you want to work with the items in that folder. From the **Project** menu select **Import Documents**. (Or select this command from the context menu when you click your right mouse.)



3. Note the options offered. The option to **Code sources at cases** is covered in the tutorial for Chapter 3. **If you are importing documents (e.g. interviews) that represent cases for which you want to store information, go to that tutorial to read about cases.**
4. Click **Browse** to select the file to import. Navigate to where your first source file is located. Select it, and click **Open**. (If you have prepared more than one document, select with **Ctrl+click** or **Shift+click** to import many documents at once.) Click **OK**.
5. The **Document Properties** are shown. By default, the name of the document is the name of the file selected. You can rename or re-describe the document at any time by going to its Properties.

6. Click **OK**. Your document is imported and its name and details appear in the **List View**. To read it, double click on the icon next to its name, and its contents will open in the **Detail View** below.



The screenshot shows the NVivo interface. At the top is a blue header labeled 'Documents'. Below it is a table with columns: Name, Nodes, References, and Created. The table contains one row for 'Anna' with 0 nodes and 0 references, created on 29/05/2006 at 3:20 PM. A mouse cursor is hovering over the document icon next to 'Anna'. Below the table is a tab labeled 'Anna'. The main content area shows the text of the document: 'Interview with "Anna"', followed by a section header 'Q.1 Current use of time' and a paragraph of text describing the respondent's current use of time.

Name	Nodes	References	Created
Anna	0	0	29/05/2006 3:20 PM

Q.1 Current use of time
*In an "ordinary" week, how do you currently spend your time?
 (What takes most time, how much time spent on work, family, leisure etc...?)*
 I am still studying so an ordinary week for me is mainly spent studying and working part time. I spend about 32 hours a week at work, 6 contact hours at university, and I spend my weekends and evenings studying. I also play Netball and attend a Yoga class of an evening once a week.

If you wish, you can edit the text, cut and paste text or images, change colors and fonts etc just as though you were in a word processor. Close the Detail View at any time by clicking on the X in the top right corner of the detail view.

To add a new source in NVivo's editor

Documents or memos can also be introduced into a project by transcribing directly into NVivo. It has a rich text editor, with font controls, and Undo. (Though of course it does not have full word processor functions like spelling checkers.)

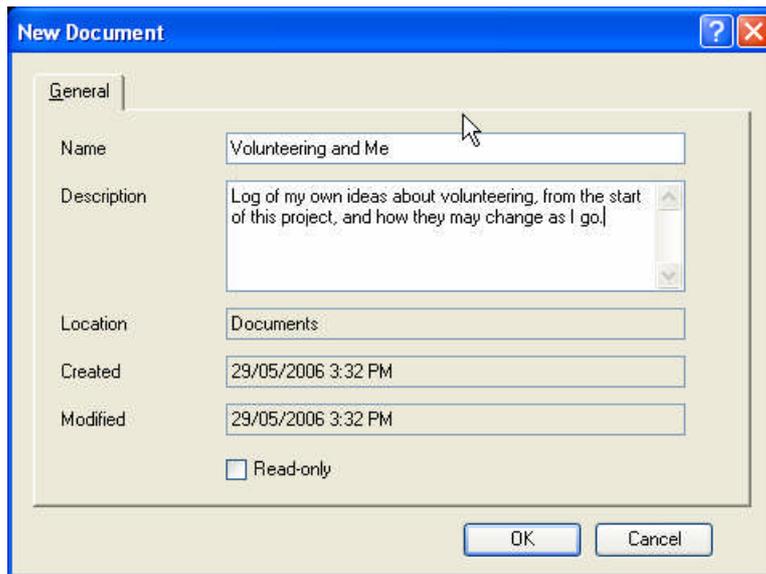
Now consider a memo you wish to start. Perhaps a record about your own attitudes (prejudices?) to what you are researching? This may be a first important contribution to your project's logging process. Once it's created in NVivo you can continue to enter into it all the changes in your views (or confirmations of them) that should be logged.

As you'll see in later tutorials, there are huge advantages in typing directly into NVivo. Any log trail document can be linked to the data it describes and you can code as you type. But for now, just start it.

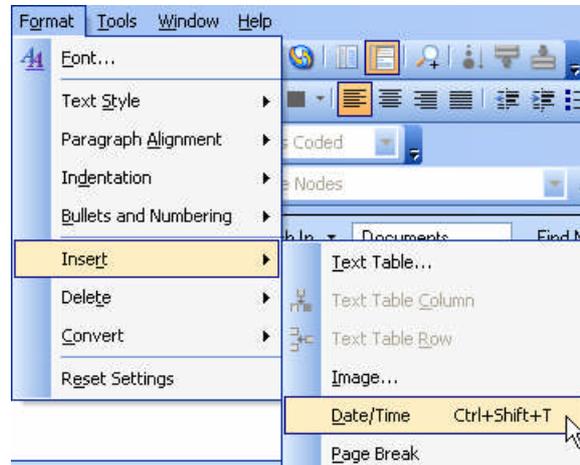
1. In the Navigation window, click on the folders for **Sources** and then **Memos**. Remember to click in the List View to tell NVivo you want to work with the items in that folder. Now you can use the menus as before: click **Project>Add Memo** or use the context menu **or** the **New** button.
2. In the **New Memo** window, name and optionally describe your memo.



Descriptions matter! NVivo gives a description option for most project items. Always use this if your purpose in creating an item (like a memo) may be forgotten or confused. Teams are much helped by storing descriptions to convey purpose.



3. Click **OK** and the memo is created. The content (currently none) opens in the **Detail View** Type on... you are in NVivo's rich text editor so use heading styles, italics, bold or color as you wish. (Advice on starting a Log Trail document is in pp. 43-44 of *Handling Qualitative Data*.)
4. It's important to date the entries in any project log. Note that you can time-stamp your entries by selecting **Format >Insert> Date/time**, or just hitting **Control+Shift +T**.



5. Close the memo as you would in a word processor, by clicking the corner X in the title bar. Changes will be automatically saved.

3. Recording external data

Now for data that is not easily brought into NVivo. As noted in Chapter 2, qualitative data records are rarely homogeneous. Much of your data will not be textual.

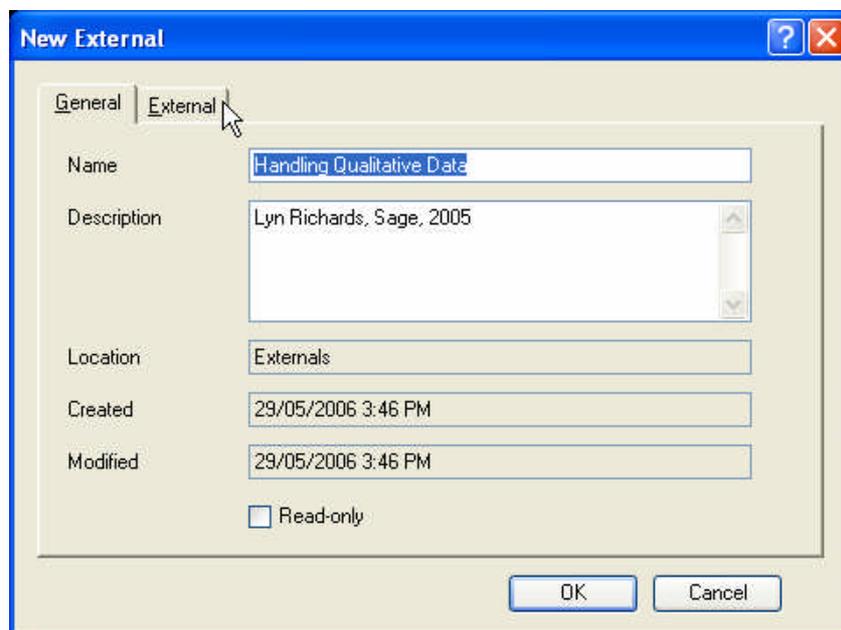
For the project you proposed, find some data that you do not want to bring into the computer, or can't – e.g. books, photos, a video, or a box of newspaper cuttings. In NVivo, such data can be represented by "Externals". If the data represented is a file on your computer it's called an "**external file**" because it will not be in your project. If it's not on your computer, it's termed **non-file** data.

To add an External for a book

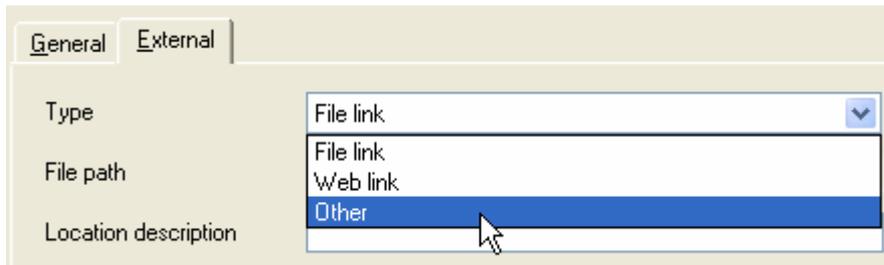
If you are stuck for some external data, make an External for *Handling Qualitative Data*. Any project requires work with literature, and with an External you can reference and keep connections with books and articles. Your summary of each chapter, with occasional quotes, is a Source for the project; you can link it to relevant data in your project and use coding to find the passages when they are needed.

The process of creating a new item should be familiar now – select the folder you will create it in, (**Sources** and then **Externals**) click in the **List View** to show you want to work with the items in this folder.

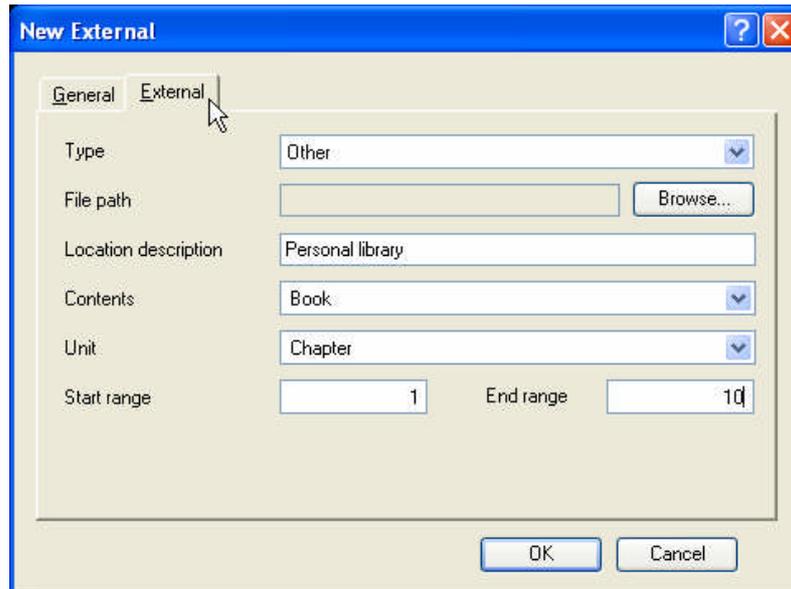
1. From the **Project** menu (or the context menu), choose **Add External** (or use the New button: **New>External in this folder**).
2. Type in the name and any relevant details.



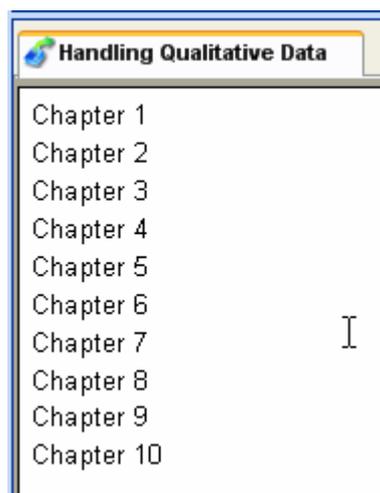
3. Click the **External** tab to specify the **file type** – this can be a file link or web link. If you are describing something (like a book), that is not a file on your computer or a URL, select **Other**.



4. If you wish, specify what the contents are, the unit (e.g. chapter) and the range (e.g. chapters 1-10).



5. Click **OK**. Your External appears, ready for you to type in summary or comments. If you asked for numbered units, you have a template into which you can type the summaries of your external data. Each chapter (or other unit that you've specified) has its own paragraph, so you can put the summary or your comments at the appropriate place.

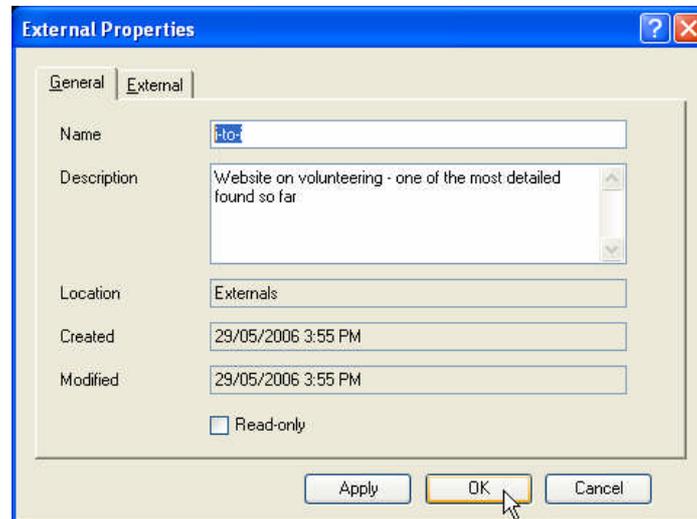


6. As before, just type as though you were in a word processor, changing styles, fonts, etc as you wish. You can insert hyperlinks to a website or images from the book. In the later tutorials to Chapters 3 and 5, you'll learn how to link and code this different sort of data.

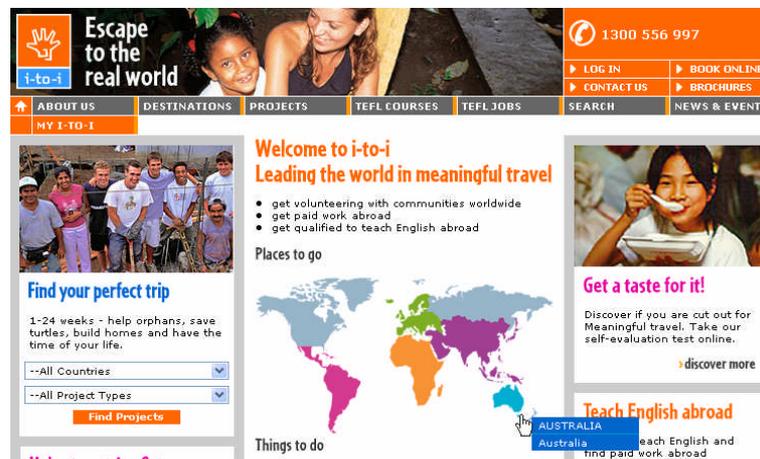
To add an external for a website

This is a very common requirement – you have found a site and wish to keep the link to it and record your notes on the content. Make an External for that website and you can at any time jump to the site from your NVivo project.

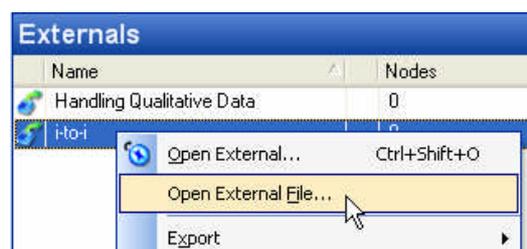
1. You've found the website and copied the URL. As above, **Add External**. Type in the name and description.



2. Click the **External** tab to specify the type and location of this source. Contents or units are not relevant for a site – simply leave these options. Click **OK**.
3. The External opens in the **Detail View** and you can type your summary or reflections. You can copy and paste images into your External if you wish.



4. From the **List View** you can at any time Open External File – (from the Project menu or Context Menu). This calls the website (if your computer is connected to the web).



4. Saving and backing up

A reminder: NVivo 7 has saved your project in a single file. This single file can now be stored on a CD, Zip Disk, Network drive or emailed to a supervisor or colleague.

1. **Save and Close** your project.
2. In the Welcome Window, select **File>Copy Project** and follow the directions to make a copy of your project.

OR

3. Find the project file in your My Documents folder, and make a copy of the file.
4. Now, save the copy somewhere other than on your computer hard disk, for backing up.



You haven't created a secure backup until this backup file is copied elsewhere. A backup on your hard drive is a copy not a backup - reflect on what happens to it if your hard drive dies or your computer is stolen.

This concludes NVivo 7 tutorial 2. Got to Chapter 2 of *Handling Qualitative Data* for advice on any of these research processes..

You now have a project with data, and a good routine for keeping it safe! In the next tutorial, you'll learn how to store different sorts of information.

NVivo 7 Tutorial 3:

Managing data: Cases, Attributes and Sets

For most new researchers an early concern is to learn the ways data are recorded. One aspect of this process is to store the context and the sometimes complex information that you have to accompany the qualitative data sources you are gathering via discussions, interviews or field notes.

In NVivo, you can store such information as **Attributes** of your **cases**, that is, the sites or individuals you are studying.

In this tutorial you will learn how to

- make **case nodes** to gather all the material about a case, and create the relevant values of variables, such as gender = female;
- create **attributes** and store the **values** for cases in NVivo;
- import a table of attribute values;
- and “tidy” sources and nodes into **Sets**.

Chapter 3 of *Handling Qualitative Data* is about the importance of making good data records, storing the information about cases which may be essential for your analysis and managing the data records.

For more detail about Attributes and Sets, go to the online Help.

Thinking nodes and coding

Nodes are containers for categories in your project, ideas or topics you are interested in. They can store references to data segments about any topic or concept. So they do what for most researchers is a most basic task of all qualitative projects – bringing together the relevant data content for a question or reflection.

You gather data together by **coding** those segments at a node. You can then view and review all of the data coded at a node.

Nodes and coding are the subject of the next tutorials. Most of the coding you do at nodes will be interpretative – recording your interpretation of the selected data and gathering everything about a topic at a node.

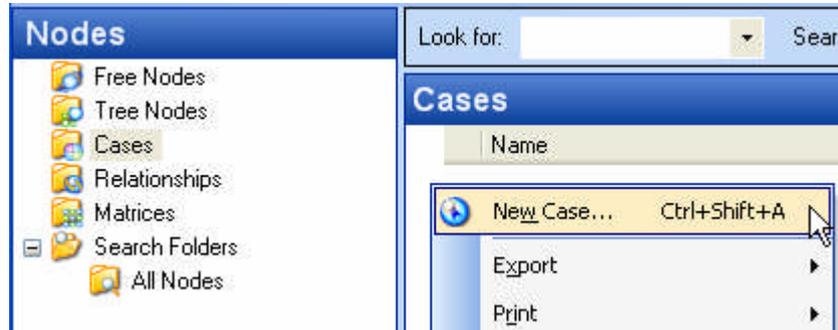
But nodes also have many important data management roles. They can hold all the answers to a particular question or store all the results of a query. And most obviously, they can hold all references to data about a case. In NVivo 7, any case for which you wish to record attributes is given a Case node.



In the previous tutorial, when you imported documents, an option was to **Code sources at cases**. If you are importing documents (e.g. interviews) that represent cases for which you want to store information, you simply select that option and the whole document will be coded at a case node with the same name.

Cases as data containers

In the Navigation Window, the second folder is for **Nodes**. This has five folders for different sorts of nodes. One of these is for **Cases**. In that folder, you can make new items. A new case will be represented by a node.



Sometimes, a case is represented by all of and only one document (for example in a project where interviews were conducted just once with each person). But this is unusual in qualitative research. More often, you have material about a case from bits of many sources, (a joint interview with a colleague, field notes on a meeting, bits of a focus group). To gather all that material about the case, you code it at a **Case Node**. Then you can see it all together and ask questions about it. You can also store information about the attributes of that case – e.g. this is a female, unemployed. Then, when you wish to find what unemployed females said about an issue, NVivo can locate all of the data coded at cases for which gender (attribute) = female (value).

To design cases for your project

For your own project, ask, “**What is a Case in this project?**” Try these ways to the answer:

- What is the project *about*?
- What *places or institutions or individuals* are you asking about?
- What classifications are relevant? What sort of information do you want to store, and what cases have that information?

Almost always these questions focus the study. If you are comparing schools, according to their socio-economic status and staffing profiles, *schools* are cases for this study. Code all the material about each school at its case node, and store there its attributes. Now you will be able to ask the comparative questions. (Did staff of working class schools have different attitudes to discipline?)

As you build more data about a school, you can code it at the relevant case node. The attributes recorded for that node will automatically apply to the new material.



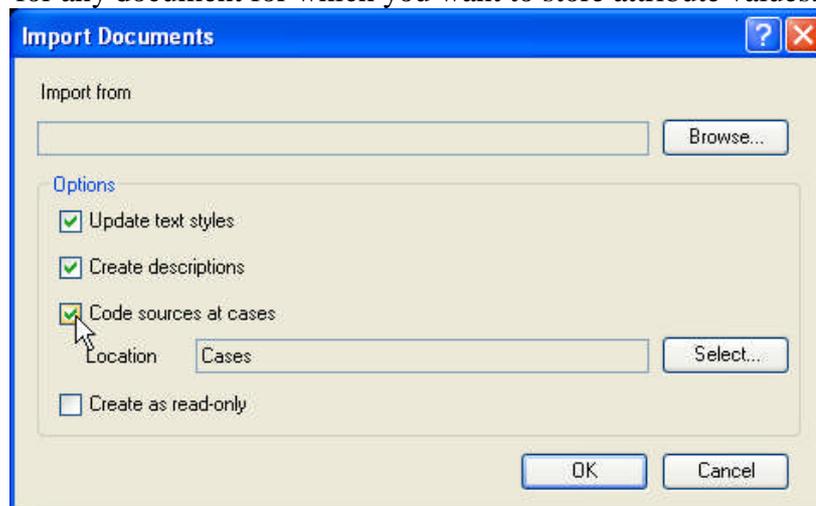
You can arrange cases in sub-groups, each under a more general case node. (A good design in the Sample Project would be to make case nodes for “Focus Group Participants” and “Interviewees”. And perhaps to have another node for cases of “Companies” working with volunteers.)

1. Bringing more data into your NVivo Project

To start this tutorial, prepare at least two more data documents, each of which represents a case, for example transcripts of interviews, each with one person. If you have no such data records yet, create documents from other sources, like website descriptions of relevant people.

To import documents and create case nodes for them

1. Import more documents into your NVivo project, following the instructions in the previous tutorial.
2. At the Import Source(s) window, click the option to **Code sources at cases** for any document for which you want to store attribute values.



(If you want to put these new nodes under case nodes for each type of case, click **Select** and select the node, e.g. “Interviewees”, “Focus Group participants”, “Companies”).

3. Click Browse to locate and import the source(s). In the **Navigation Window**, they appear in the **Documents List View**.
4. Go to **Nodes** and click on **Cases**. You have a new case node for each document (with the same name as that document). Click on a case node to see, in the **Detail View** what is coded there. You have coded at that node the entire document.

Now that you have a Case node, you need not restrict the material on this case to just one document. When you later get more data about that case, you can code that data at the Case node. But for now, the task is to store information about the attributes of that case.



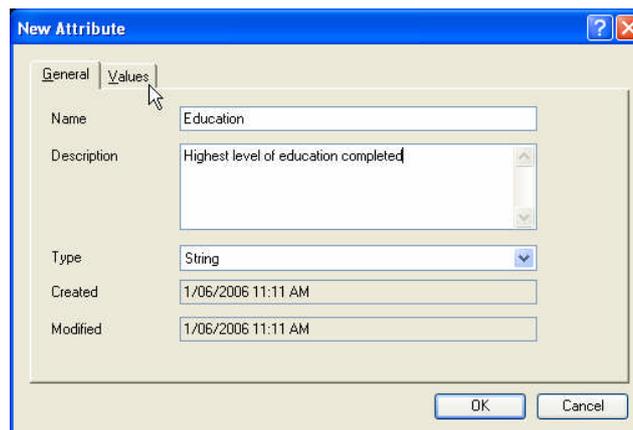
Note how often **Attributes** appear in the menus and dialogs. If you store information about the attributes of cases, this information will be useable in all **Queries**, “Find” processes and **Reports**.

2. Using attributes and values

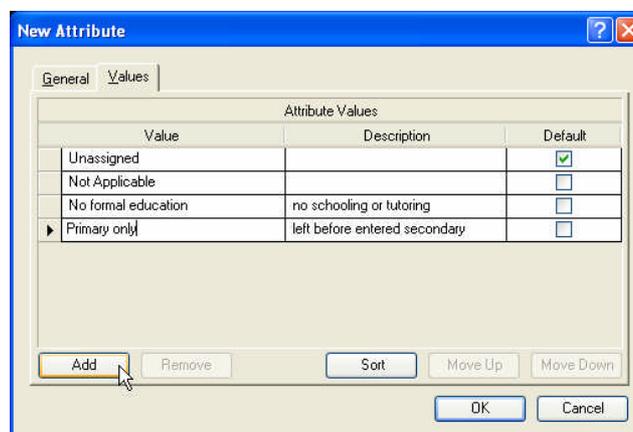
If you know the attributes your respondents or sites will have (that is, the information you'll want to store about them), you can create them all now, with their values. But there is no need to – attributes and values can be created as needed. You can individually create attributes and allocate the appropriate values in NVivo. Or, if you have substantial amounts of this type of information (e.g. in an SPSS or Excel file) it can be imported as a table.

To create attributes and values

1. In the **Navigation Window**, select **Classifications>Attributes**. Right click in the **List View**. From the **Project** menu, (or the Context menu, or the New button) select **New Attribute**. The New Attribute dialog box is displayed.
2. Type in the **name** and, *unless it is absolutely obvious what you are recording*, a **description** of this attribute.
3. Select the attribute **Type** (string, number or date) from the drop-down list.
4. Click the **Values** tab to define the values for the attribute.



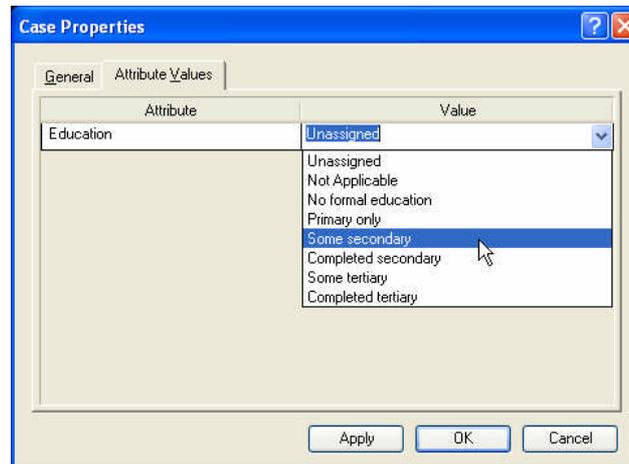
5. To add each new value, click the **Add** button and enter value name and optionally description.
6. Check the **Default** checkbox to specify which value will be allocated to new cases as a default (unassigned is usual.)



To assign Attribute Values to Cases

If you know the information about an individual case, you can easily store it, or at any stage change it.

1. In **List View**, select the required case. From the **Project** menu or right mouse context menu, click **Case Properties**.
2. Click the **Attribute Values** tab and from the drop down menu for each attribute, choose the relevant value. Click **OK**.



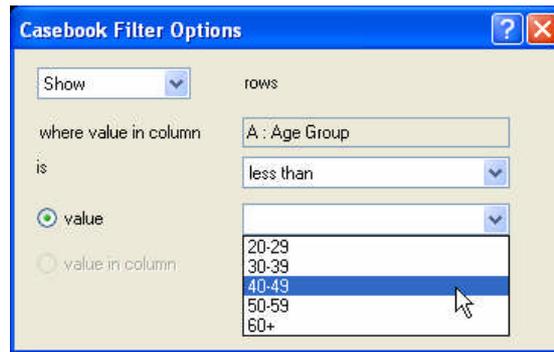
To view and use the Casebook

Information about attributes is best displayed in a table. NVivo shows the **Cases** you create, and their **values** for each **attribute**, in a table called a **Casebook**. You can view the Casebook, import a table to it or export from it the information stored so far.

1. From the **Tools** menu, select **Casebook>Open Casebook**.
2. The Casebook appears in the **Detail View**. It may look very small if you have only one case with only one attribute! But as your data builds up it will fill up. The Casebook for the sample project looks like this. You can print it.

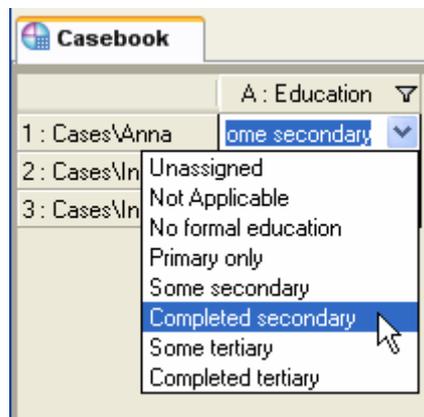
	A : Age Group	B : Country	C : Current pai...	D : Currently v...	E : Education	F : Ever done ...	G : Gender
1 : Cases\Anna	20-29	Aust	Student	Yes	Tertiary	Yes	Female
2 : Cases\Annette	40-49	US	None	Unassigned	Secondary	Yes	Female
3 : Cases\Annie	20-29	US	None	Unassigned	Tertiary	Yes	Female
4 : Cases\Bernade...	60+	Aust	Retired	Yes	Secondary	Yes	Female
5 : Cases\Elaine	30-39	US	Guest Services	No	Secondary	No	Female
6 : Cases\Grace	20-29	Aust	Marketing	No	Tertiary	Yes	Female
7 : Cases\Marie	30-39	US	Teacher	No	Tertiary	Yes	Female
8 : Cases\Mary	60+	Aust	Retired	No	Secondary	Yes	Female
9 : Cases\Olivia	50-59	US	Nurse	Unassigned	Secondary	Yes	Female
10 : Cases\Phoebe	30-39	Aust	Teacher	Yes	Tertiary	Yes	Female
11 : Cases\Roberta	30-39	US	Waitress	No	Secondary	No	Female
12 : Cases\Rosa	40-49	US	Teacher	Unassigned	Tertiary	Yes	Female
13 : Cases\Stepha...	20-29	US	None	No	Tertiary	No	Female
14 : Cases\Dan	60+	US	Retired	Unassigned	Primary	Yes	Male
15 : Cases\Fredric	30-39	Aust	Management Con	Yes	Tertiary	Yes	Male
16 : Cases\George	60+	US	Retired	Unassigned	Secondary	Yes	Male
17 : Cases\Lin	20-29	US	Bus Driver	Unassigned	Secondary	Yes	Male
18 : Cases\Jose	30-39	US	Teacher	Unassigned	Unassigned	Yes	Male
19 : Cases\Ken	60+	Aust	Retired	No	Secondary	Yes	Male
20 : Cases\Nick	30-39	Aust	IT	No	Tertiary	Yes	Male
21 : Cases\Raul	30-39	US	Insurance	No	Tertiary	No	Male
22 : Cases\Sunil	20-29	Aust	Software Consult	Unassigned	Tertiary	Yes	Male

3. Using the filter icons, you can change which rows appear. For example, to see only the under 40's in your sample, filter on the column "age group":

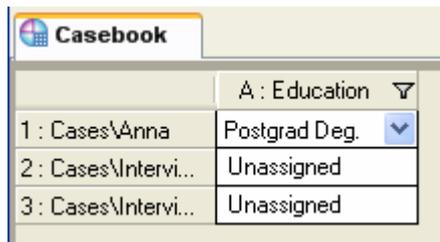


- Case characteristics can be changed, when you get more information, or perhaps the circumstances of people are altered. At any stage, you can alter the value shown for any attribute of a case.

To alter it to an existing value, select from the drop down list.



To create a new value for a case, select the value in that cell and edit it – if, for example, Anna just graduated!



 Note that long names of attributes and values will be shortened in the Casebook - for efficiency, keep them as short as possible.

3. Importing attributes and values

You can import information to a casebook from any program that handles tables (a spreadsheet, data base, statistics package, or just a table you make in MSWord.)

An attribute table can be created “outside” NVivo and imported. You can create it by exporting attributes from a statistics package or spreadsheet. Or you can type up the table in spreadsheet or word processor software. If you have a lot of attributes and documents, this is more efficient than creating them in NVivo.

Please check the Help files for more detailed advice on the formatting of tables and the format selected for import

To create a table for import to a casebook

1. Type a small table in any program that will create a table (e.g. Word or Excel), with the names of your cases down the side. The top left corner cell can be blank, or have any word in it (such as Schools or Interviewees).



Make sure that the case names are the same as the names of case nodes in the NVivo project that you want to give these attributes to. If a case name is not recognized, NVivo will optionally create a new case node for it. If you don't yet have those case nodes in your project, this may be what you want to do (it's a quick way of creating case nodes). But if you have them slightly different, you'll get a lot of nodes!

2. Type names of attributes as the headings of the columns. (Keep them brief.)
3. Type into this table the names of the values for each case, under each attribute. If the attribute isn't applicable, leave the cell blank.

You will have a table that looks something like this (start small for a first try).

	Gender	Age	Income
Interview 1	Female	Under 20	None
Interview 2	Male	20-30	Middle

4. Save that table in your table-making software, selecting the options for cells to be tab-separated, and the “encoding” to be **Unicode Text (*.txt)**.

If you prepared your table in Word, check that there are no blank lines above or below the table, then on the top menu go to **Table>Select>Table**, then **Table>Convert>Table to Text** and choose **Tabs** for separation.

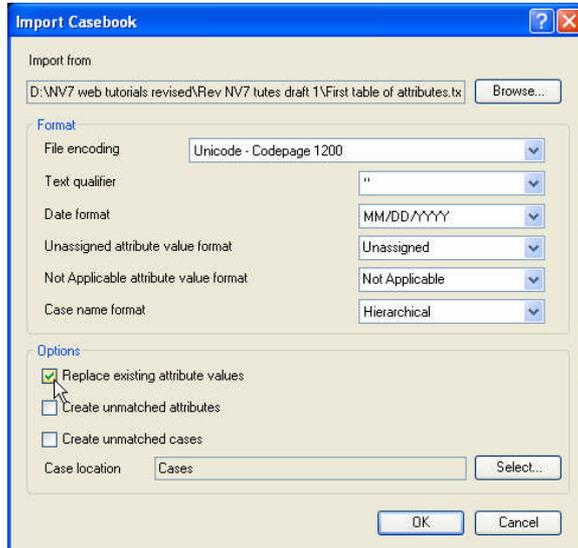
Now select **File>Save As** and from **Save As Type** and **Plain Text (*.txt)**. When you close the window, Word asks you to specify **File Conversion**. Unclick the **Windows (Default)** and instead choose **Other Encoding** and scroll down to select **Unicode**. This matches the default setting for importing Casebooks into NVivo

*Or: if you leave the File Conversion at Windows (Default), the table will import so long as you change the **File encoding** setting in NVivo to US-ASCII.*

5. Save it somewhere you will find it again!

To import a table into your Casebook

1. If you are unsure what you are importing, find and open the file you saved as plain text. It looks a lot less tidy than in its table format. But it has the same content as the table you saved. The cells are marked by tabs rather than neat lines. This is the version that NVivo can import.
2. In your NVivo Project, choose **Tools>Import Casebook**.



3. Click Browse to locate your tab separated table.
4. Check that the File encoding setting is correct for the table you saved.
5. Check the **Options**. You can ask NVivo to
 - overwrite existing values
 - create any attributes or cases your project doesn't contain.

6. Click **OK**. Now open the Casebook and check what you've done.



If the values didn't appear as specified in the table you imported, it's probably because you created those attributes prior to import, giving default values (usually not applicable) to the cases. If you didn't ask to overwrite existing values, these will remain.

4. Using Sets

This tutorial finishes with the simplest way of managing your data records in NVivo, by grouping sources and/or nodes in **Sets**.

Whilst Sets are very easily made and used, they are also very effective quick ways to gather data in groups and ways into the most subtle and powerful searching processes (see Chapter 8).

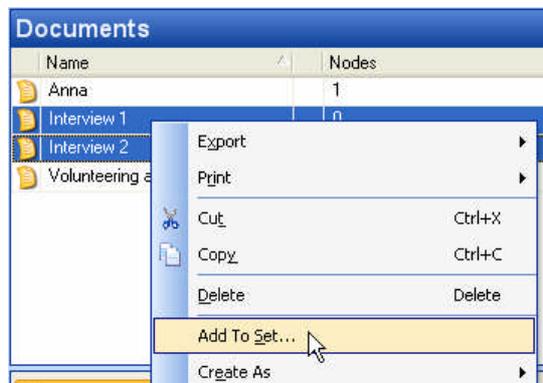
To make a Set

There are many ways to create a set in NVivo and add items to it. Whichever you use, what is added is a shortcut to the items you select.

1. To make a new, empty Set, click in the Sets folder in the Navigation Window, click on **Sets**.
2. Select (from the Project menu or Context menu or the New button) **New Set**.



3. Or, to make a new set with items in it, or add items to an existing set, go to the **List View** for those items (either sources or nodes) and select them. Then from the right mouse Context menu select or **Add to Set or Create As Set**.



4. Check the contents of a set by clicking on it in the Sets folder; the sources or nodes you put in it will show in the List View. Note, the icons are different – these are shortcuts to the item. So you can put a source or a node in any number of different sets.



5. As a final exercise for this tutorial, think of useful ways you could group your documents and nodes for your project's purposes. In the example above, the researcher created a set for all coded sources – a useful way of checking whether coding is proceeding as planned.

For most qualitative projects, a useful set is of documents and/or nodes coding content that will contribute to your “log trail”, your growing account of the project and how it is conducted. Visit the final chapter of *Handling Qualitative Data* to read about the task of doing a “stock take” of your writings about the project. This will be much easier if there's a pointer to each relevant document in a set called “Log trail documents”.

This concludes NVivo 7 Tutorial 3.

Got to Chapter 3 of [*Handling Qualitative Data*](#) for advice on any of these research processes.

You now have a project with data documents and information about their context, and have started managing those records in sets. Time to back up.

In the next tutorial, you'll learn skills for discovery and handling of the ideas that come from the data.

NVivo 7 Tutorial 4:

Editing and Linking – Getting “Up From The Data”

In this tutorial, you will work with just one document in your project, to explore the processes of “taking off” or “getting up” from the data. As you read the record, and discover new ideas, you will try different ways of storing these in software.

In Tutorial 5, the processes of coding will be described. Normally, researchers combine the storing of ideas with the creating of categories and doing coding – but for early steps, it is useful to take them separately. In the following exercises you will:

- Edit a document
- Annotate it.
- Write about it in a memo.
- Link it to related data.
- Draw your first ideas in a model.

The first section of this tutorial, on editing, contains an introduction to the toolbars and icons that give access to NVivo’s processes. Unless you are very familiar with using toolbars, you will be helped by familiarizing yourself with the shortcuts and quick access routes to tasks you may wish to do often.

Remember, there is almost always a choice of ways of asking NVivo to do something. As a reminder to select the processes that suit you best, the alternatives are noted in this section, in blue.

Chapter 4 in *Handling Qualitative Data* is about the exciting processes in qualitative research involving discovery and exploration of ideas from the data.

To review what you need to know about the different ways of storing ideas and different sorts of links, go to Help.

Focusing on a document

To start this tutorial, select a document you already have as a Source in your project.

Print it out or browse it on the screen, and *really* read it. Make notes about it as you read.

Now, go back to the start of that document. This time read the text very thoroughly, line by line. (As you find material that is interesting, conduct the exercise on “Taking off from the data” in *Handling Qualitative Data*, pp. 70f. In turn, the following exercises use each of the ways of storing ideas about the document discussed there.)

1. Editing and undoing

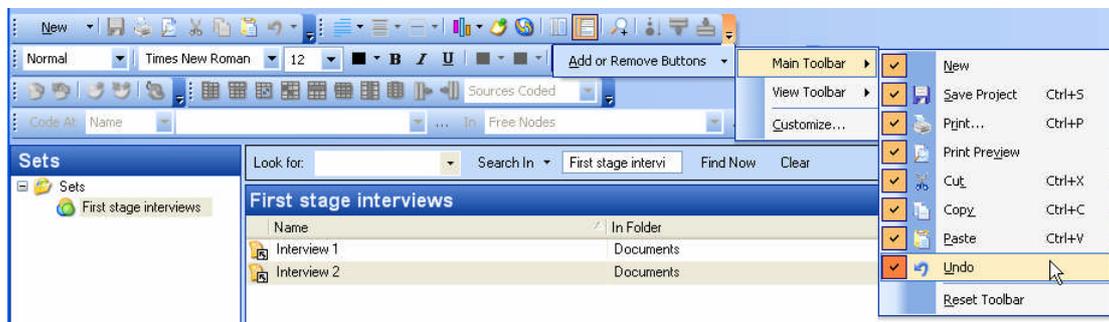
To edit a source

1. In the List View, create or select the document you wish to edit. Double click to open it in the Detail View below.
2. This window allows you to write text, delete and edit it, as well as to annotate, create memos and (see next tutorial) code.
3. Do some editing. The easiest way to create, add to or comment on the content of your data records is of course to edit them. You edit in NVivo very similarly to editing in a word processor.

A note on toolbars

If you are familiar with your word processor's toolbars, or those in Outlook, you will find NVivo's have icons for the same main processes and you can manage them similarly. Check the special NVivo functions and icons and then move to the next section!

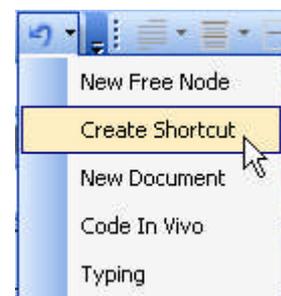
But if you are not used to using toolbars, take time to make these suit you. Qualitative research involves a lot of writing. Check that you know what each icon represents, by hovering over them. The **Main** toolbar has familiar icons for cut, copy, paste options, and importantly, **Undo**! (You can view all the icons and what they represent in the **Add or Remove Buttons** list.)



These main menu options will apply to many processes, not just editing a data record. You can cut and paste a node, for example, or undo a change to a model.



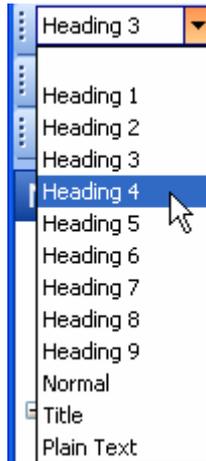
Clicking the **Undo** icon will undo the most recent process. Clicking the dropdown arrow beside the **Undo** icon will show the last five processes you conducted. Select any to undo back to the selected process.





The **Edit** Toolbar has icons for familiar word processing tasks. The first slots on this toolbar set text styles, font and font size. You may wish to make the toolbars shorter and use short cuts instead of icons. To do so, from the Add or Remove Buttons list untick any options you wish to hide. (As above, you can view the icons with their names by pulling down the Add or Remove Buttons list.)

From the first slot on the Edit toolbar you can set the style for your text.



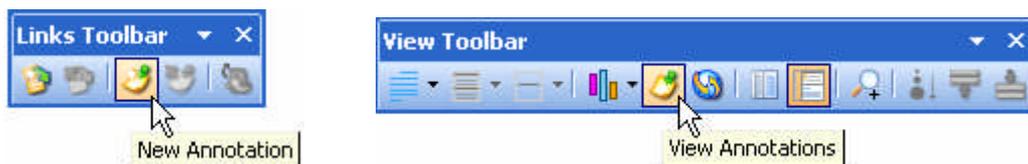
If you use Headings when typing sources in Word, they will be imported with the source to NVivo.

By setting heading level, you give NVivo information that allows it to show and autocode the content between headings.

Click **Customize** at the end of any toolbar to hide icons you don't want to use. But first check what they offer you!

There are four further Toolbars specific to NVivo's processes, **Coding**, **Links**, **Grid** in tables, and ways of **Viewing** the data. Check how they represent items in the menus – those most commonly used.

You can drag the toolbars, as in Word, to relocate them (with their identifying names).



For the next section, on annotating, try using the icons on the **Links** and **View** toolbars.

2. Annotating sources

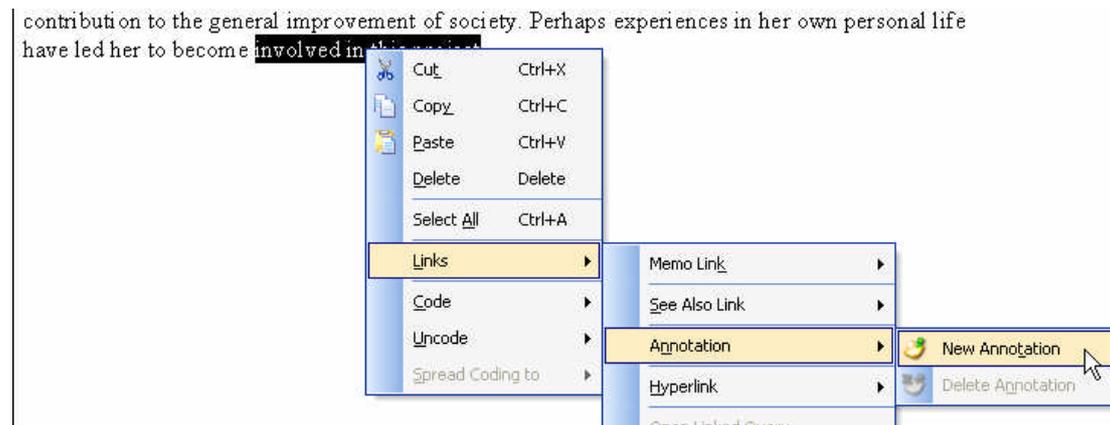
Editing a data record is not always a desirable way of recording your ideas. If this is a record of an interview transcript, or a letter, you are unlikely to want to alter it with your comments, or distract from the voice of the respondent. For such commentary it is preferable to add an annotation that is linked to the text but does not interrupt it. Annotations can be searched using **Find** or **Text Search Query**, and when you do coding, your annotations will be kept live with coded text.



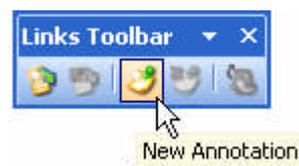
Words in an NVivo annotation cannot be separately coded. So use annotations for ideas that belong with the text annotated. A "bigger" idea or interpretation requires a memo - whose content can be coded like that of any other source.

To add an annotation:

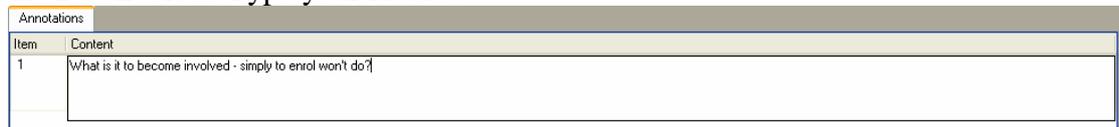
1. In the Detail View, select some words that require an annotation.
2. From the context menu select **Links>Annotation>New Annotation**.



OR go to the **Links** menu, or on the **Links** toolbar, click the **New Annotation** icon.



3. The selected text is highlighted. An Annotations tab appears at the bottom of the Detail View. Type your ideas...



4. Make more annotations to this source. (Note any selection of text can have only one annotation). They will appear, appropriately numbered, in the tab. You can always go to an annotation to edit or delete it. And when you print the source, you can have annotations printed as endnotes.
5. If you wish to hide your annotations, while you work in the Detail View, go to that **View** toolbar (or the **View** menu) and unselect **View Annotations**.

3. Writing a memo

There is an emphasis in all qualitative methods on using memos to capture thoughts and insights you have when you are working through your data: (see *Handling Qualitative Data*, Chapter 4.)

Memos are full status sources in NVivo. The program sees them differently from other sources only because you label them as memos. (The tutorial for Chapter 2 suggested a first memo called “Volunteering and me”. If you made that, it’s a memo simply because you put it in the memos folder. If you are using the sample data, you will find several other memos in the Data folder for importing.)

Any source – including any memo – can be linked to the content of any source. More on these “see also” links below.

Any **source or node** (with one restriction) can have its “own” **Linked Memo**, linked directly to that project item. These memos, “owned” by a document or node, are optional, provided for the reflections on just that interview or concept.



The restriction? A Linked Memo can't itself have another Linked Memo. (This restriction protects you from endless tangles!)

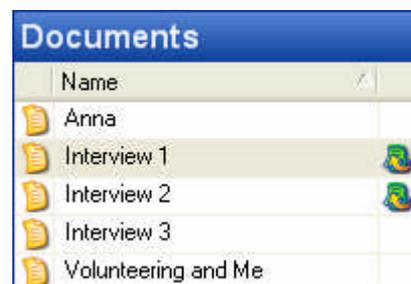
To make a Linked Memo for a source or node

1. In **List View**, select the source or node for which you want to create a memo.
2. From the **Links** menu, choose **Memo Link > Link to New Memo**



Or right mouse to get the same options on the context menu.

3. Name and describe this new memo, (as shown in Tutorial 2), and write your thoughts. Remember to insert date and time. Note that the sources that have linked memos show icons for these in the **List View**.



4. “See Also...”: ways of linking to related data.

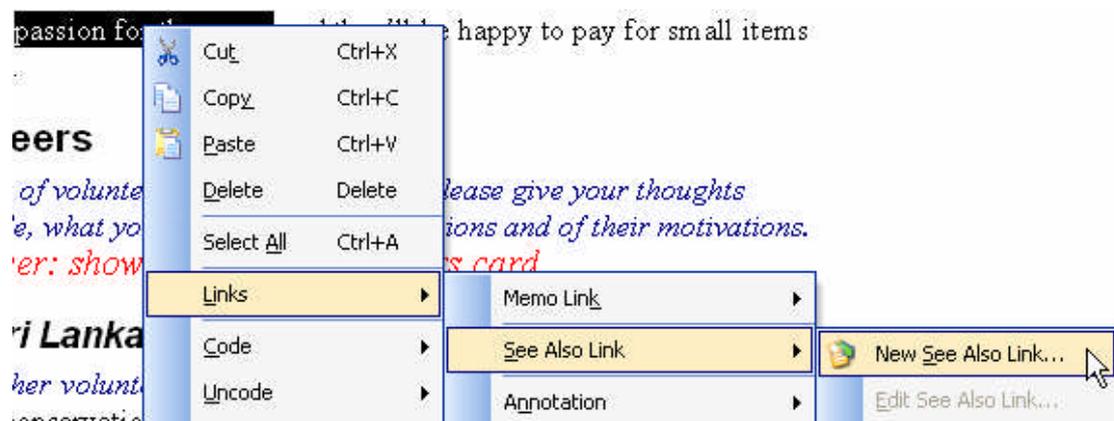
Qualitative research does a lot of linking – as in most interpretative work, the researcher is often wishing to say “See also the data to be found...” (*Handling Qualitative Data*, pp 75-6). Now the data records are becoming “richer”, with your own ideas and the links to related material.

NVivo provides a range of ways of linking for this purpose. As you reflect on your data document, you may wish to place a **See Also link** to a new item, to particular words or images in existing data items or in a file that is on your computer (in any other software) or a website. Here we will show the first two of these. Explore other options using the online Help.

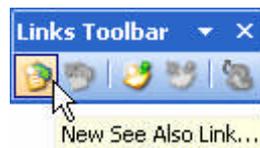
You can make Memos that are not directly linked to an item, to record your growing ideas about themes and concepts that you want to go back and explore later on. You can also of course keep those ideas in a notebook. But unlike the notebook, they can be linked directly to the text that gives you an idea, or the place you store it. This will matter when you wish to report and log the way you developed your analysis.

To link from content of a source to a new or existing project item

1. Open a document in your project. (Or any memo, external, or node).
2. Highlight some content you wish to link *from*.
3. Right mouse click and choose **Links>See Also Link>New See Also Link**.



Or get the same option from the **Links** menu, or on the **Links** toolbar, click the **New See Also Link** icon.

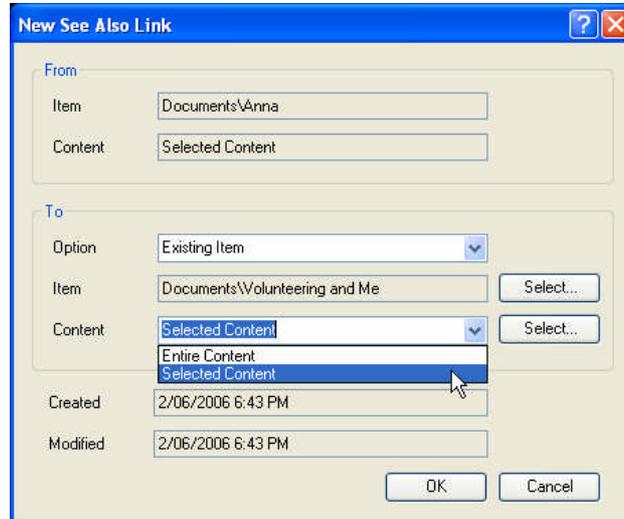


4. In the **New See Also Link** window, specify what you want to link *to*. If it is a new document or memo, this will be created and opened.

To link to particular content of an item

If your **Option** is to link to an existing item, you can select either to link to the whole or link to particular content (this is often more useful).

1. Select to make a “See Also” link to **Selected Content**. Click **Select**.



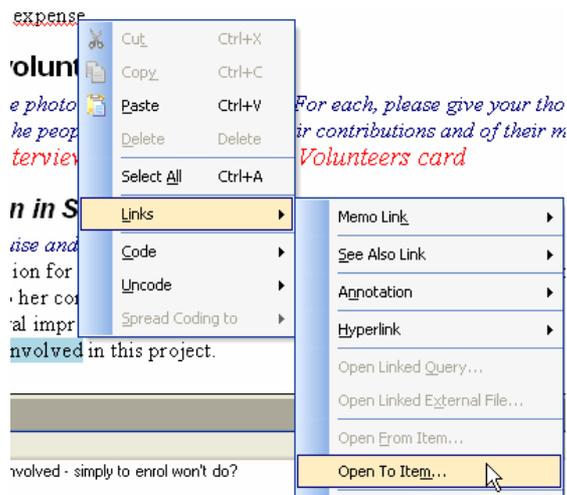
2. NVivo will open that item in a new window. Select the relevant content.
3. At the bottom of the window, click **Select**, then in the dialog, click **OK**. The link is made.



Note, you can make a link to selected content in the same document, useful if for example the speaker changed their mind on an issue later.

To open the “to” item

1. At any stage, you can go to the text you linked *to* from the anchor, now marked by a red wavy line under the text from which you made the link.
2. Click in that anchor, and right mouse to select **Links>Open To Item**.



5. Drawing it – the early uses of models

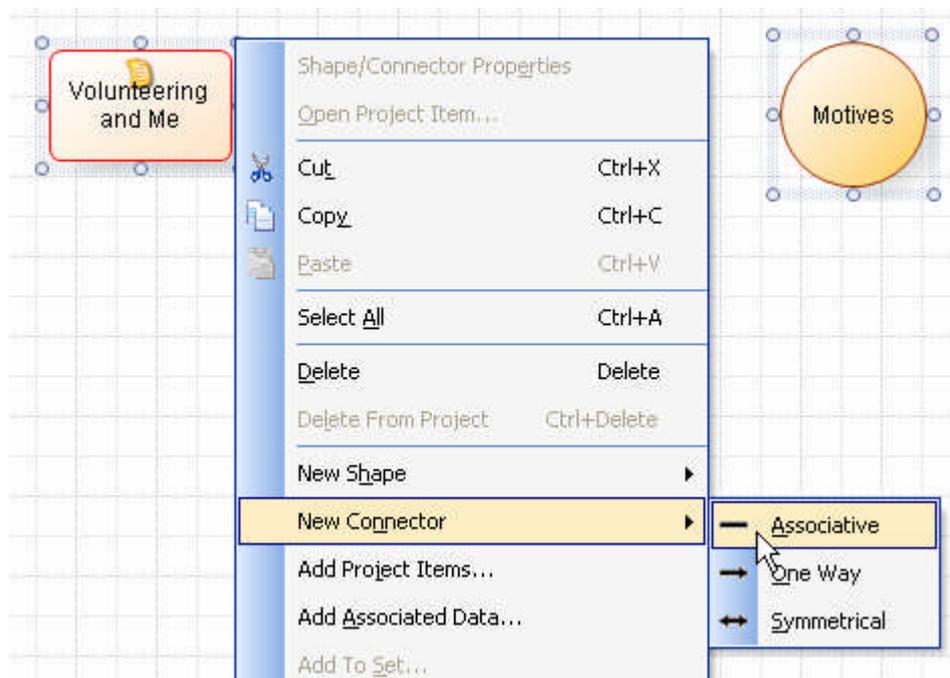
Throughout qualitative research, models are widely used, with many ways of representing hunches, discoveries and theories. (Go to *Handling Qualitative Data* Chapter 4, pp 76f, for suggestions for first uses of simple models as ways of sketching and exploring what you think you are seeing in the data.

You may wish to explore these techniques more fully by jumping to the discussion of NVivo’s model tools in the tutorial for Chapter 7. Here, the goal is simply to become aware of the possibility of modeling your emerging ideas.

To start a first model

Models are made up of shapes and connectors. You start a model by adding these to a blank “sheet”. You add new models just like any other project item – from the List View, using the **Main Menu** (Project menu), the **New** button or the right mouse context menu.

1. In **Navigation View**, click the **Models** button and click in the **List View**.
2. On the **Project** menu, click **New Model**.
3. In the **New Model** dialog enter a name and if you wish, a description. Click **OK**. An empty model is displayed in **Detail View**.
4. Now add either empty shapes or project items to the model. [There are many ways to do this: copy/paste, drag and drop, or use the Model menu or right mouse context menu.](#)
5. To connect two shapes, select them both and from the right mouse Context menu select **New Connector**.

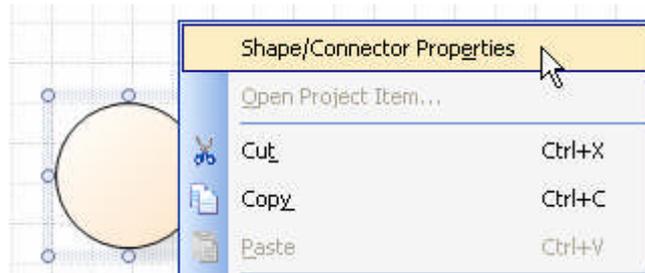


6. If you add Project items to the model, they are “live”: double click on them to open them in **Detail View**.

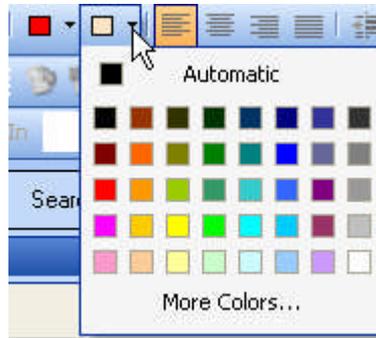
Shaping and changing the model's appearance

Appearance does matter, when you are drawing a model to show (to yourself or your colleagues) what you are seeing in your project. But beware of how much time you can spend on cosmetic touches!

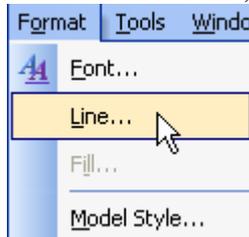
1. To name your shapes and connectors, double click on them to go to their **Properties**.



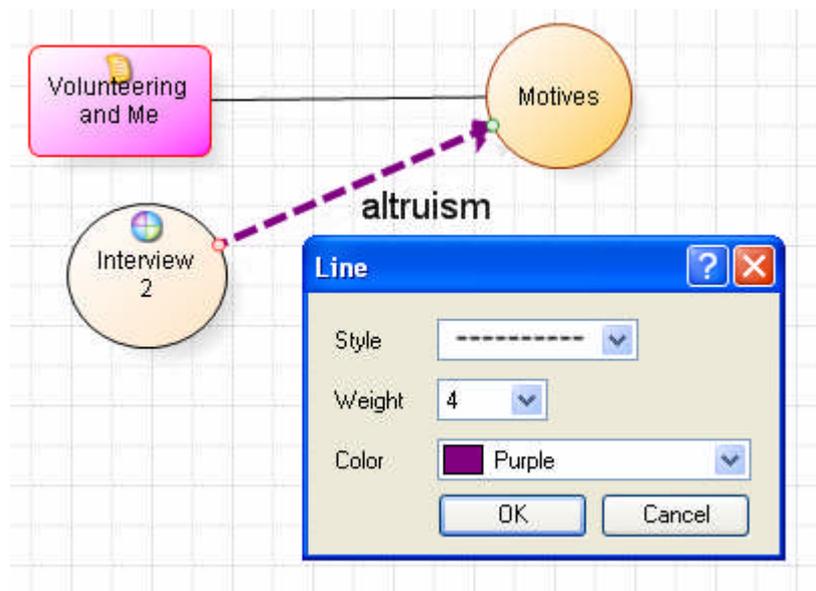
2. To color lines or fill shapes, go to the edit menu.



3. Select a connector, then from the Format menu that appears, select Line



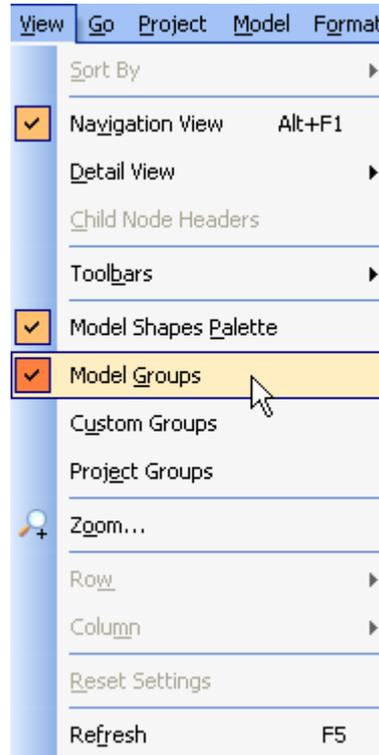
and you can give your connectors style, weight and color.



Customizing the model space

A final exercise in using the software concludes this tutorial. Use the menus to customize this modeling space to suit you. Models are a clear case for maximizing your screen “real estate”.

1. Remember that you can undock the Detail View - click **Docked** in the **Window** menu. Now maximize the undocked window, to have your model able to take up the whole screen .
2. From the **View** menu, select to hide the panels to left and right of the model – the Model Shapes Palette and Model Groups.
3. You can also Zoom in or out on your model.



This concludes the NVivo 7 Tutorial 4. You now have data, ideas about your data and a rapidly growing project. Remember to back up the project file after you exit this tutorial! Go to Chapter 4 of *Handling Qualitative Data* for advice on any of these research processes.

For most researchers, at this early stage in a project, the next task is to start gathering material according to topic. For this purpose, you need to code. If you are unfamiliar with qualitative ways of coding, go to *Handling Qualitative Data*, Chapter 5. In the next tutorial you'll learn many ways of doing coding in NVivo.

NVivo 7 Tutorial 5:

Nodes and Coding

Nodes – the containers for ideas and coding – should be familiar by now. They were explained in Tutorial 3, where the exercises created nodes to hold references to all the material about a case. That tutorial also taught one sort of “descriptive coding”, the storing of attributes (e.g. gender) and assigning of the relevant value (e.g. female) to each case. Revisit that tutorial for techniques of doing this manually or by table import.

But when qualitative researchers *code*, they are usually doing something interpretative, not merely descriptive. This tutorial shows techniques for doing qualitative coding. It introduces ways to create the categories for thinking about your data, to identify new categories and ideas from the data, and to gather material about those ideas.

In it you will learn how to:

- Create nodes from prior ideas;
- Code at existing nodes;
- Create nodes and code “up” from meanings in the data;
- Create and name new nodes “in-vivo”, from the words in the data;
- View coded data and its context;
- Work with coded data, coding on to other nodes;
- Auto-code data records that are structured, using headings.

For advice about creating categories and coding, explanation of the differences between qualitative and quantitative coding and the purposes for which qualitative researchers use coding, go to Chapter 5 of *Handling Qualitative Data*.

For more detail about coding processes in NVivo 7, go to the online Help.

Focusing on a document

To start this tutorial, as with the previous one, you need to concentrate on one document in your project.

It may be the document you worked with in the previous tutorial; it’s interesting (but not necessary) to combine writing and linking techniques with those of coding. If you want to move to a different document, read it through before you begin coding on computer. Now, go back to the start of your document.

The simplest goals of coding are to identify the categories for thinking about your data and to gather at a category all the data about it.

In these examples, the document is one of the interviews in the sample project on Volunteering, the interview with “Anna”. You can conduct these exercises with any source (document, external or memo) in your own project.

1. Making a node

Where do the categories for thinking about your research come from? Researchers coding in qualitative research often create categories, “down” from their research questions and designs, before they start exploring the data. In NVivo, those categories and the coding you do are stored at nodes.

The node areas

In the Navigation View, click **Nodes** to view the different areas for nodes.

These provide folders for:

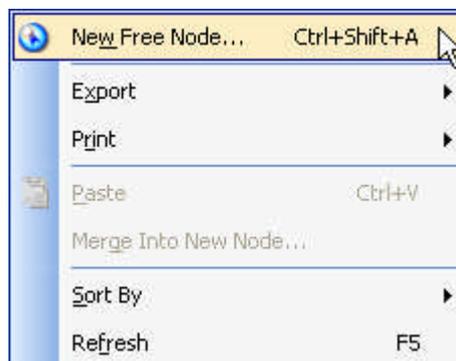
- nodes “**Free**” of organization
- nodes in catalogs or “**Trees**”
 - **Cases** (see Tutorial 3)
- nodes for coding **Relationships**
 - **Matrices** (see Tutorial 9)
- and to see nodes all in one list, **All Nodes**.



The next tutorial covers Relationships and the managing of nodes in trees. Here you will code just at Free Nodes.

To make a node

6. Using a memo or model in NVivo, or if you prefer, paper, or a white board, sketch a beginning list of the categories your project is about – topics or ideas about which you wish to collect data. (For example, in the Volunteering project you might be curious about what motivates volunteers or the images of volunteering.)
7. Click on **Free Nodes**. And click in the empty **List View**.
8. Just as for making new documents, there are many ways to make a new node.
 - From **Project** menu OR **Context** menu, select **Create a Free Node**.
 - OR use the **New** button, to create a **New Free Node in This Folder**.
 - OR use the fast key, **Ctrl+Shift+A**.



9. Name the new node, and if you wish, add a description.

10. Check the information in the **List View**. Note that the node is showing that it codes no Sources and (not surprisingly!) has no references to content. It is a useful habit to scan the nodes you create, watching for the ones that show no sources coded there, and wondering why they don't have coding.



11. Continue creating and naming nodes for any broad topics or concepts you expect that your project will require. If wish to change the properties of a node, select **Free Node Properties** from **Project** or **Context** menu.
12. You changed your mind? Select **Delete Node** from the **Project** or **Context** menu – or hit the **Delete** key.

You may wish to continue reading and looking for data about the categories for which you already created nodes.

Placing your nodes

In Tutorial 6 you will learn the ways of moving nodes around, and using tree structures to represent their logical relations. If you wish to tidy the “starter” nodes you've created, go to that tutorial for the techniques of cut, copy, merge and paste.

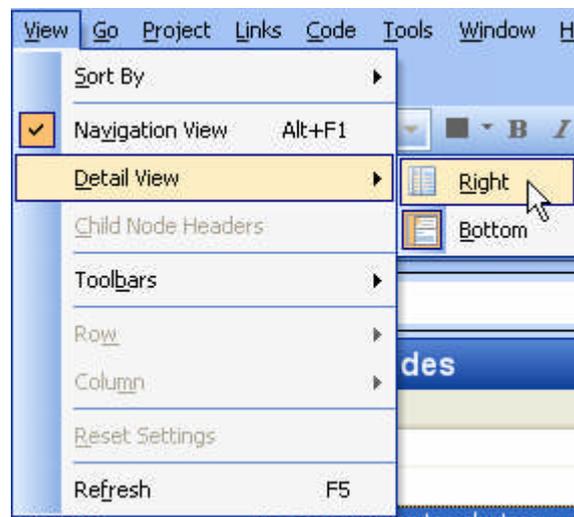


You may later wish to revisit the early ideas as they were represented by these first nodes. They offer a way of recalling your early assumptions, what you thought then would be important, what the literature alerted you to. One way is to make a Set of all the nodes that you create at this starting-out stage of your project. But if later you delete a node, of course its shortcut will be deleted from that set. Another way is to store a report of your nodes at this stage, and later stages. (Go to Tutorial 6 for ways of reporting your nodes.)

2. Coding at an existing node

To set the screen to suit your coding

1. In the folder of **Sources**, select **Documents** and from the **List View** select the document you wish to read and code. Double click to open it in the **Detail View**. This window, in which you annotated and linked a document in the previous tutorial, also offers several ways of coding.
2. Click on **Nodes>Free Nodes** and the **List View** shows your **Free Nodes**.
3. Now set the screen to suit you. Most researchers when coding wish to see all their nodes displayed beside the content being coded. From the **View** menu, select **Detail View>Right**, to see the panels of the Navigation Window vertically.



4. The **Coding** toolbar offers ways of selecting nodes and buttons for coding functions. You may wish now to move it to the bottom of the Detail View.

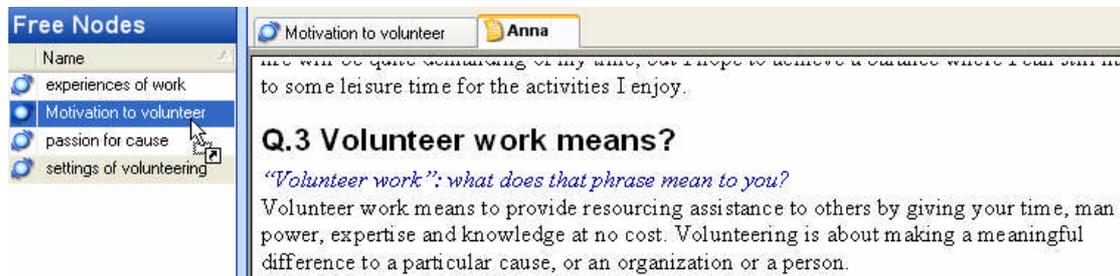


5. Hover over the icons, or go to the end of the toolbar to check the names for each option. You may wish to hide some of them – but first, check what they do! One will be wanted often: the green tick over lines of text that says Code.

Now you are ready to code at your existing node, in any of several ways. You can drag and drop, use the menus or use that coding bar.

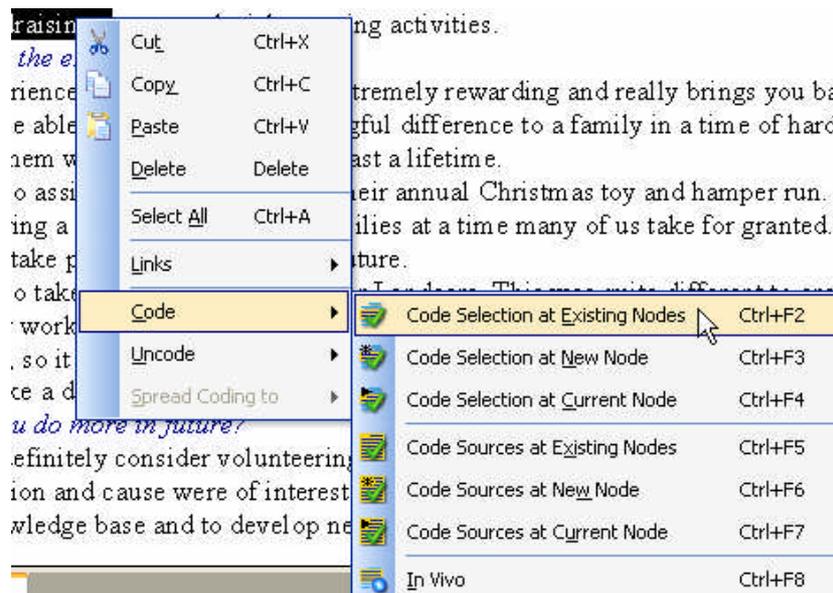
To code by drag and drop at an existing node

1. Select some text that you wish to code at the Free Node you have created.
2. Drag the text onto the node. (the mouse icon shows that it is being “dragged” and then that it has “dropped” what it was dragging.)



To code at an existing node using the menus

1. Select some more text that you wish to code at an existing node.
2. From the right mouse Context Menu or the **Code** menu, select **Code>Code Selection at Existing Nodes**. Note the other options: to code at a new node, the node currently showing in the coding bar, or to code at any of these whole source(s).



3. NVivo asks what node do you wish to code at, by offering the **Select Project Items** box. Select the node, *or if you wish more than one node*, and click **OK**.
4. The node selected appears in the slot for a node name in the Coding toolbar.

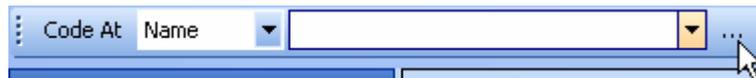


To code further content at this node, select it and click the Code icon.

To code with the coding bar at an existing node

The Coding Bar can be used directly. Check if this suits your style.

1. Select some more text that you wish to code at an existing node.
2. Check what node is in the slot in the coding bar. When you click the Code button, it will code at the node showing there.
3. To select a different node – or nodes – to code at, set the coding bar to **Code At Name**, and click the [...] button to Select Nodes.



4. From the **Select Project Items** box select the node or any number of nodes at which you wish to code this text.



5. Click . Note that if you change your mind, the Uncode icon is the next on the bar!

Those prior categories will probably not suffice for what you are now seeing in the data. Researchers sometimes start this way.

But almost always, most categories are discovered and created “up” from the data, as they read and interpret data sources. This is the most usual form of qualitative coding.

You could of course create new nodes as you discover new categories, and continue as above, making the nodes first, and then coding at them by dragging the text to them or selecting them and clicking Code.

But NVivo allows you to combine these processes, making the nodes and coding at them as a single task. As you work with your data, you’ll make a lot of nodes!

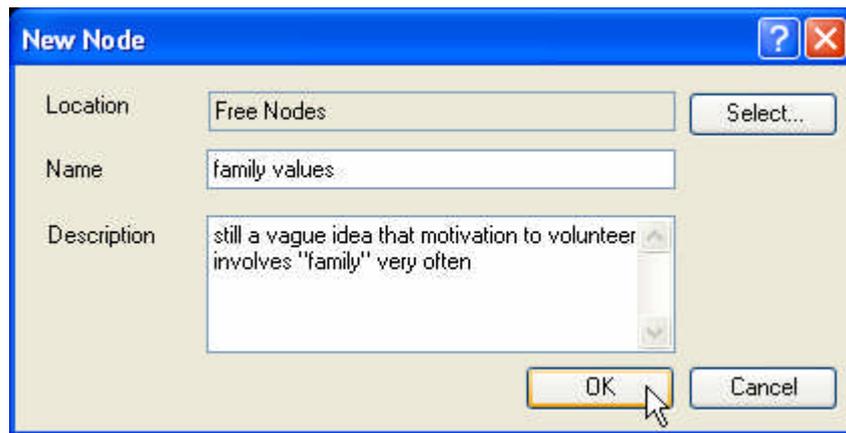
This is the next task. If you are new to qualitative coding, you may like to follow the steps in Chapter 5 of *Handling Qualitative Data*.

3. Creating new nodes “up” from the data

As you read the document, you may see a category “emerge”. You can make the node and do the coding as one task, either with the menus or with the Coding Bar.

To create a node by coding (using the menus)

1. Highlight some text you wish to code.
2. From the Context Menu, select **Code Selection at New Node**
3. In the **New Free Node** box, type a name for this node – the category or theme - and, if you wish, a description. Click **OK**.



4. The node is created and the coding done. Your new node appears in the Free Nodes List View and in the **Name** slot on the **Coding** bar.
5. If you wish to place the new node in another node area, use **Cut** and **Paste** as described in the next Tutorial.



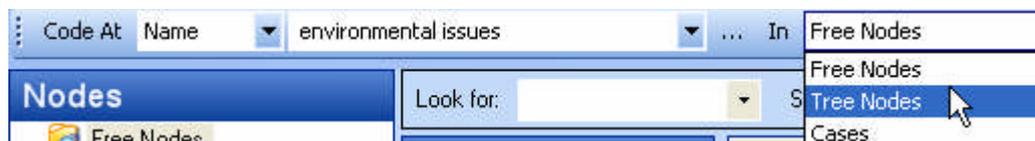
The process you just conducted is often the most exciting and important one early in a project. It's worth becoming very familiar with this swift task, so the creation of a node and coding of data at it feels like thinking aloud.

Note there is a shortcut - **Ctrl+F3** - for coding a selection at a new node, and when the **New Free Node** box appears, if you wish to place your new node in Free Nodes, you need only type the name and press return - the rest is done for you.

Try working through some rich data, making new nodes as they occur to you, using the shortcut, type name, press return.

To create a new node whilst coding (using the Coding Bar)

1. Highlight some text you wish to code.
2. On the **Coding Bar**, check that the slot is set to **Name**.
3. Type the name for this node. (If a name is in the slot, highlight and type over.) Select the node area it will be in.





4. Press Return (that's fastest!) or click **Code**.
5. The node is created and the coding done.

To create an In Vivo node and code at it

You can also create the new node by naming it with the word(s) in the text you are coding.

This is called “in vivo” coding, a technique very important to researchers who wish to record the categories emerging from their data (see *Handling Qualitative Data* p.95.) It's useful when the data provide specially suggestive or meaningful concepts. For example, in the Volunteering project, Anna used the term “self worth” to explain motivation to volunteer, a new idea which you might like to store.



When you do in vivo coding, you name the new node with all the text you selected. Make the selection brief and relevant - long node names are awkward to use.

1. Highlight a word or a *few* words in the text with which you would like to name a node.



2. Click the “Code In Vivo” button on the coding bar, (or use the **Code** or **Context** menus)
3. The node is created (in Free Nodes) and the coding done. Your new node appears in the Free Nodes List View and in the **Name** slot on the **Coding** bar, so you can code again at that node immediately.
4. Note that a shortcut is Ctrl+F8. Create a new node using that shortcut.

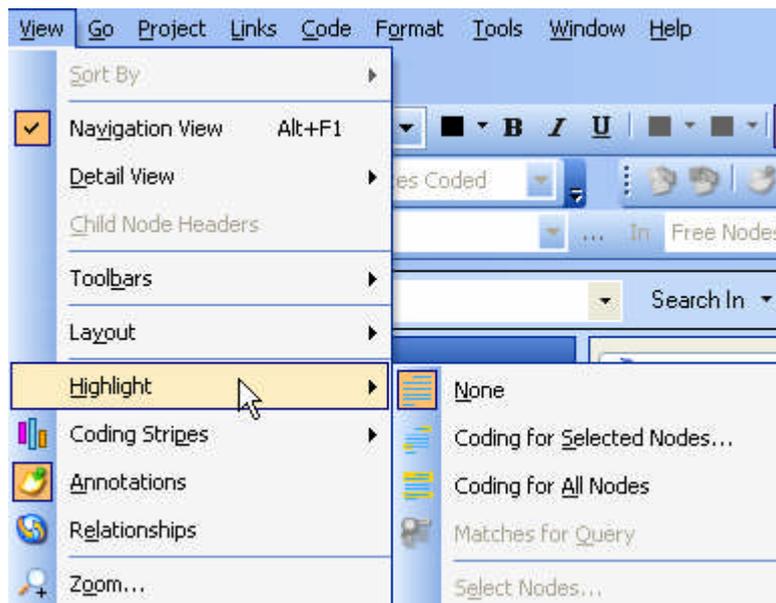
	Code Selection at Existing Nodes	Ctrl+F2
	Code Selection at New Node	Ctrl+F3
	Code Selection at Current Node	Ctrl+F4
	Code Sources at Existing Nodes	Ctrl+F5
	Code Sources at New Node	Ctrl+F6
	Code Sources at Current Node	Ctrl+F7
	In Vivo	Ctrl+F8

4. Viewing your coding

There are many reasons why you may wish to see what coding you've done, or what content is coded at a node – for example, to review your coding, compare with a colleague's coding, browse to check what else is coded in this source at that node, or simply to get back to coding where you left off.

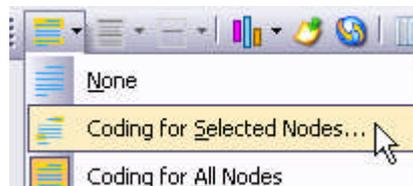
NVivo provides two ways to view your coding as you work. Both are on the **View** toolbar (and the **View** menu and right mouse **Context** menu).

When you are in the Detail View of a source or node, **Highlight** and **Coding Stripes** are available.



To Highlight Coding

1. In the Detail View of the document you coded, click Highlight.
(or select **Highlight** from the **View** menu).
2. Select the option you want

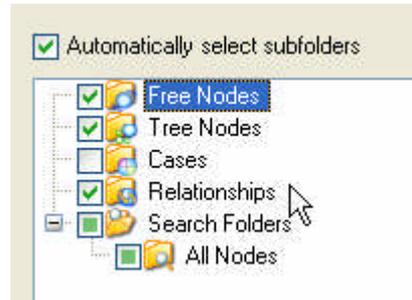


3. In the **Select Project Items** window, select the node or nodes you are interested in. The coded text is highlighted yellow.

Why would you select Coding for All Nodes? This will show you everything that has been coded – and thus everything you haven't coded yet – a useful way to see how your coding is progressing!



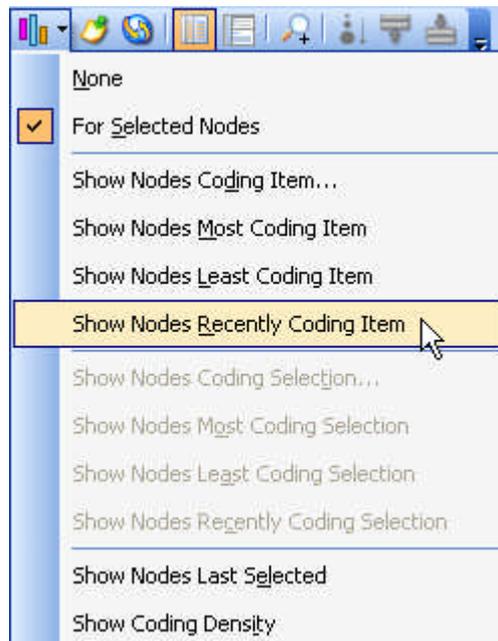
The whole document may be highlighted when you select Coding for All Nodes. Why? Probably, as in Anna's interview, the entire content is coded at a Case node. To exclude Case Nodes (or any other node type you don't want), in the left pane of the Select Project Items window, click Automatically select subfolders, and then select all the folders whose nodes you want highlighted.



To use Coding Stripes

NVivo will show in the right margin of a Detail View (source or node) colored lines that show where content is coded at up to seven nodes, and a grayscale line that shows the Coding Density for that content.

1. In the Detail View of the document you coded, click the icon for **Coding Stripes**, or select from the **Project menu** or **Context menu**.



2. Select to **Show Nodes Coding Item**. The **Select Project Item** box will appear.
3. Select which nodes you are interested in and click **OK**. The stripes appear for those nodes. If you code some more, at the nodes for which you are showing stripes, the lines will update.
4. In **Detail View**, the coding stripes appear where there is coding at each selected node. Each selected node will be marked by its specific colored line throughout **Detail View**, so you can scan for coding at each.

The screenshot shows a window titled 'Anna' containing text about Louise and her volunteer work. The text is divided into sections: 'Your thoughts about Louise and her volunteer work?', 'Q.7b Housing in Honduras', and 'Q.7c Food program in Melbourne'. Coding stripes are visible on the right side of the text, with labels such as 'effectiveness', 'motivation', 'personal qualities', 'qualifications', and 'Motivation'. A vertical 'Coding Density' stripe is also present on the far right.

5. Hover over any stripe to see the node's folder and full name.
6. Right mouse to select to **Highlight Coding** at that node throughout the Detail View, to **Open Node** or **Uncode**.

Explore the options so you can use the stripes strategically. Two tips may assist:

- To use coding stripes rapidly to view current coding, select to show Nodes Recently Coding Item.
- Show stripes for just a **Selection** to focus on nodes coding that passage. Most sources or nodes will have coding from a large number of nodes, but if you make a small selection, you will most clearly see what codes it.

To use the coding density stripe

The Coding Density stripe is shaded to indicate number of nodes coding this segment of the source content. Hover over the stripe to see all the node names.

If you wish only to monitor what coding at *any* of your nodes applies to the content, without showing the colored stripes for particular nodes, from the **View** menu or the Coding Stripes icon, select **Show Coding Density**.

The Coding Density Stripe offers a quick way to check on the state of your coding.



You went off for coffee and need to know where your coding work had taken you in a source? Show the Coding Density stripe and it will be obvious! (Remember that if you coded the source entirely at a case node there will be at least one node coding past where you had worked before coffee.) Alternative tricks: place an annotation noting things to remember when you return to the coding - you can use a Text Search Query to search just annotations in just one source for a word you inserted. Or simply edit into the text where you finished coding a keyword like CODED TO HERE and use the simple Ctrl+F (find content) to locate it.

5. Working with Coded Data

The primary goal of coding is usually to gather and review and work with all the material about a topic or concept. You were coding data in order to be able to see all that coded material together, to interpret its variety and to explore its context. Now to the node!

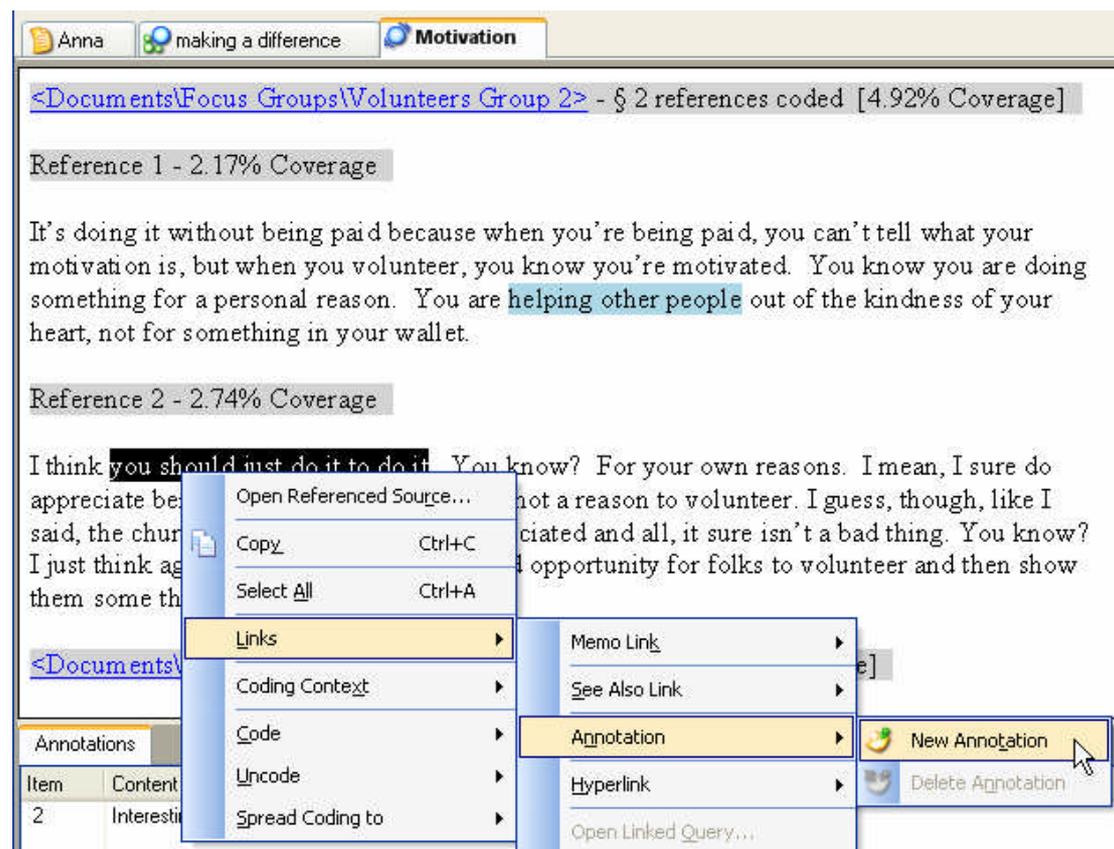
You can view the coded content of a node in exactly the same way as you view a source – in **Detail View**. Moreover, you can code that content, to other nodes, just as if you were coding a source. This is called **coding on**.

Working in the Node Detail View

1. In the List View of any node folder, double click on a node you've coded at. The coded segments appear in **Detail View**. Each segment has identifying information for the Source and the number of references coded from that source at this node.

Are you still using the online Help? Go to [Help and Opening Nodes](#) for full detail about what is showing in the pane.

2. Click on the hyperlink above a segment to open the Source from which that segment was coded.

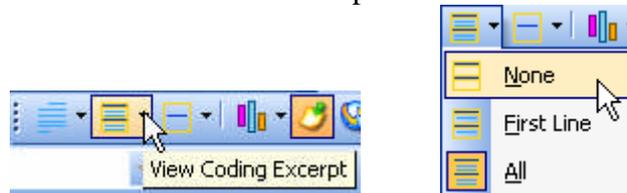


3. Note that any annotations or other links that you made to this segment of the source will appear and are live, just as they would be in the coded source. And you can place a new link, just as you would if you were in the source from which the extract came.

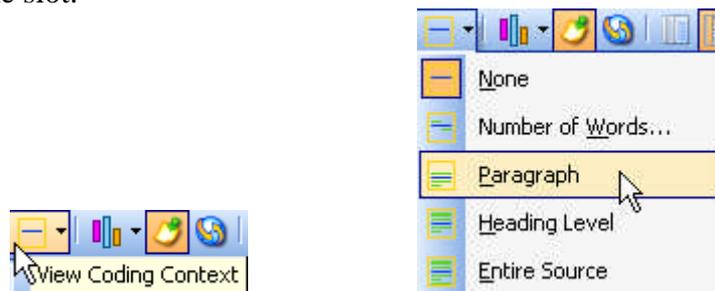
To work with the coded content and its context

Now explore the options that allow you to see less or more of the text of every excerpt from sources that you have coded.

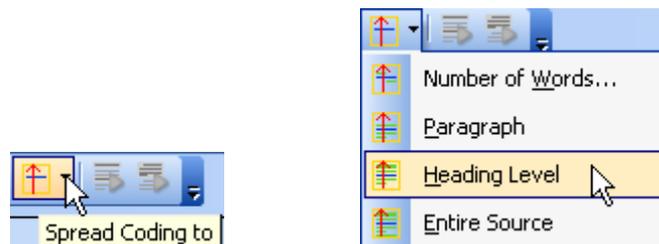
1. First, adjust what you are seeing for your purposes. You may wish to **reduce the amount of text** you see as a **Coding Excerpt**, to get a big picture. From either the View menu or toolbar, you can select to see all or none of the coded text, or just the first line of each excerpt



2. Now to see more of the context of each segment, to understand for example what question the speaker was answering when she said that. From View menu or toolbar, select **Coding Context**. Nominate how wide a context you want to be shown. NVivo will show that extra context in the Detail View in a pale color. If you wish to improve the coded selection by coding some of this context, select the words to be included, and click **Code!** This node is waiting in the Name slot.



3. A third option allows you to **spread the coding to a wider context** without first viewing the extra content. From the **Coding** menu or toolbar, select **Spread Coding**. Again, you can select a small or very wide spread. That wider context is coded at the node. **Changed your mind? Undo!**



4. Often when reflecting on a coded passage, you may wish to return to rethink the original source. You can jump directly to the place in the source from which the coded passage comes. Click on the hyperlink above the passage, or from the right mouse context menu, select to **Open Referenced Source**.
5. Wondering what else codes this content? Show coding stripes or highlight coding, just as you could in the Detail View of a source. Or highlight text, and select **View>Coding Stripes>Show Nodes Coding Selection**. In the Select project Items dialog, only those nodes that actually code the selected text are available to be viewed as stripes.

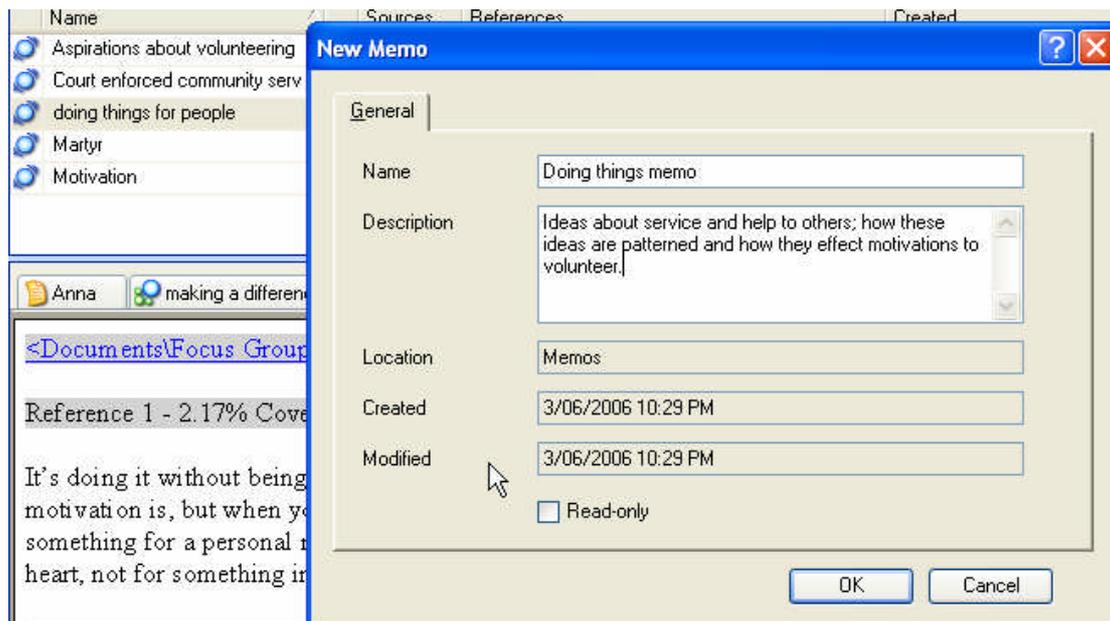
To code on from the Node

1. Read the node's content, and consider whether there are other places to code it. For example, are there several different motivations for volunteering coded at that Free Node?
2. Select content and code it at a new or existing node, (the processes are just the same as for coding a Source). In this way you can develop your ideas beyond the original coding.

To store your ideas about a node

Continue, reading and coding your data, working with the content coded at your nodes, expanding or revisiting context of coded passages. Create nodes as they are indicated in the text, for topics you wish to collect data on, or concepts you wish to explore. But remember to store your growing thoughts about that idea.

1. For each new category you create, unless its meaning is obvious, enter a description. You can alter the description at any stage.
2. If you find you have created a particularly interesting category, you may wish to make a Linked Memo for it. Any node can have a linked memo. Revisit the previous tutorial for the process of making a Linked Memo.



In all this work, you are creating ideas, which need logging for your analysis. The List View of **Sources > Memos** shows what Linked Memos you have made for your nodes (sort them if you wish). Click on the **Links** folder and then on **Memo Links** to see and sort those belonging to a source or a node.

doing things for people	2	2
Martyr	1	1
Motivation	12	22

6. Auto-coding

Not many qualitative research processes can be automated. So it is advisable to check which are sufficiently mechanical to be conducted automatically by the computer. Obviously, interpretative coding is not one of these processes! But much descriptive coding can be automated. (Tutorial 3 covered how to import attributes in tables.)

Coding of text always involves creating the node, selecting the text to be coded and coding. All this can be automated. In this section, the exercise is for auto-coding, using formatting of the document by headings. NVivo will make a node for each heading and code all the content till the next heading at that node. If you plan to autocode by heading, format the source with this in mind, ensuring that the **structure** of your headings is logical. (Don't use Heading 8 because you like the style, followed by Heading 1!) The node tree hierarchy created will follow the Heading hierarchy (i.e. Heading 1 will be parent, heading 2 will be a child of the previous Heading 1 and so on. These techniques do a **mechanical** coding process. Check the warnings in *Handling Qualitative Data*, Chapter 5 about interpreting mechanical coding.

To format for autocoding by heading

When you type your source, either in MS Word prior to importing to NVivo, or in NVivo, create headings to name the nodes you wish to code at. Make them brief!



If you are typing in MSWord, always use the **Style** slot to create headings. Making it **BIG** and **BOLD** does not make it a heading! You can see the headings in a Word document by selecting **View>Document Map**. Anna's interview looks like this in Word.

The screenshot shows a Microsoft Word document with the following structure in the Document Map:

- Q.1 Current use of time
 - Q.1a Feelings about current time use?
- Q.2 Time use ten years on
 - Q.2a Feelings about future time use?
- Q.3 Volunteer work means?
- Q.4 Volunteering experience
- Q.5 What sorts of people volunteer?
 - Q.5a Typical volunteer worker?
- Q.6 Rewards for volunteer work
 - Q.6a Incentives for volunteering?
- Q.7 images of volunteers
 - Q.7a Conservation in Sri Lanka
 - Q.7b Housing in Honduras
 - Q.7c Food program in Melbourne
- Q.8 About yourself

The main text area shows the content for Q.5:

Q.5 What sorts of people volunteer?
 Some may have a personal link to the cause, or may enjoy a pi
 enjoy sharing their skills, knowledge or qualifications to help :
 Some people may enjoy volunteering to fill in spare time and ;
 For example retirees often spend some of their time volunteer

Q.5a Typical volunteer worker?
Can you describe a typical volunteer?
 The typical volunteer just an everyday person with a passion f
 community.
(For each "typical", do you know anyone like that? What do)
 I do know people in these categories and I highly respect them
 themselves and for making the time to do this when they them
 responsibilities of their own which take up a great deal of their

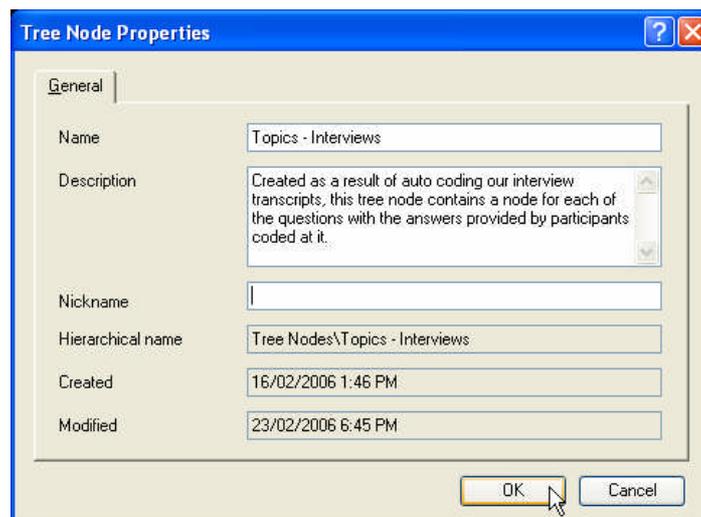
Q.6 Rewards for volunteer work

Note: two levels of Heading are used for **brief names** for each question and sub-question. The full text of the question and the answer are in (different color and font) Normal style.

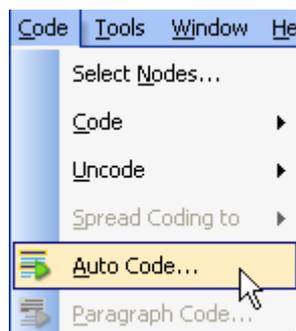
To do autocoding by heading

In this example, we will autocode all answers to each topic posed in the interviews, creating a node for each topic and coding all the answers at it.

1. To create the nodes for each interview topic, you need to make a node below which all the question nodes can be stored. Here is an obvious use for the **Trees** area of the **Node Explorer**. Click on **Trees**, and in the **List View**, right mouse to create a node. (Or use the **Project** menu, or click on **New** and select to make a new tree node in this folder.)
2. **Name** the new node. It's good practice to note in the **Description** that these node trees are being made by autocoding.



3. Now go to the folder of Sources you want to autocode. (You may wish at this stage to import some more sources if there are several with the same formatting.) Select the items to be autocoded and select **Code>Auto Code...**



or click **Auto Code** on the **Coding bar**



4. In the **Autocode** dialog, leave the options unchanged and click **Select**.
5. In the **Select Project Items** window, click on your new Questions tree node, then **OK**. Confirm the **Autocode** instruction with **OK**.
6. Now, check your Tree Nodes to see what you've done. The **List View** shows the nodes created and named and what coding was done automatically: in the Sample Project nine sources were coded at each topic node with one reference from each.



When auto-coding is completed successfully, this does not mean that the results are as you expected! Go to the node for one topic, double click to see in Detail View what was coded at it. It should contain each person's answer to that particular question - no more and no less. If it doesn't, return to check that your formatting was as you intended.

Other ways of autocoding

Now check the options in the autocode dialog. Did you notice that if you autocode by heading, you could specify what heading level you were autocoding? For your project, consider how this could be used. For example, in the Sample Project, autocoding at Heading 1 coded focus group topics. By autocoding at Heading 2, Case nodes were made coding what was said by each focus group participant. It's all in the formatting!

The **Autocode** dialog also allows you to code by paragraph. (Go to **Help** for details).

You can also automate coding by text search, using the occurrence of words in the text, and NVivo's ability to code the context you specify.. For instructions on text search, go to Tutorial 8.

This concludes NVivo 7 Tutorial 5. For full discussion of the purposes of qualitative coding, either interpretatively or automatically, and uses to which these software tools can be put, go to Chapter 5 of *Handling Qualitative Data*.

You now have data, ideas about your data and have started to relate them by coding to gather the relevant data at those ideas.

Don't forget to back up your project. The next task is to manage those growing ideas, and this will change your project dramatically.

NVivo 7 Tutorial 6:

Relationships and Other Nodes: Handling Ideas

The previous tutorial was about discovering or creating new ideas and the nodes that store them in NVivo. This tutorial is about managing the relations between ideas.

NVivo provides four folders for nodes, representing four different sorts of categories at which you may want to code data. Three have been encountered in earlier tutorials – Free Nodes, Tree Nodes and Cases.

The first section of this tutorial is on the fourth, Relationships. It shows how you can store relationships you see in your data, and code the evidence for those relationships.

The next sections are about managing categories. Ideas isolated are the researcher's enemy. And ideas that are not organized and managed are often very problematic. You may lose them, or worse, you will lose them sometimes. The next sections are about how to catalog ideas, by reviewing, merging and rearranging nodes and their coding in trees. Tree organization also facilitates many query operations.

As you work in your project, you will find that coding data or exploring relations of ideas always requires finding nodes, and seeing their associations. In order to bring data and ideas together, and create new understandings, data management is necessary. As in most areas of qualitative method, efficiency is necessary for creativity.

Revisit Tutorial 5 for ways of creating, naming and describing nodes and coding at them.



If you are setting up your own "real" project, you will be greatly assisted by early attention to the management of your ideas. Software enables far more categories to be created, and far more coding to be done at them, than manual methods. This is a great advantage, unless the categories become a problem to the researcher. From the start of your project, work *with* your node system, visiting and reviewing, revising and improving it constantly. This is a major way of "talking to" your project.

The goal is to have the node system as parsimonious and efficient as possible, without losing any insights or hunches that should be contained in it. (Rather like a shrink-wrapped package, a useful node system is as small as it can be whilst being as big as it needs to be!)

Go to Chapter 6 of *Handling Qualitative Data* for advice on cataloging the categories that are part of the research design or emerge from the data.

To review what you need to know about creating nodes and managing them in NVivo, go to Help.

1. Relationships

Relationships in NVivo 7 define relations you see between sources (documents, externals or memos), nodes (free, tree, case and query results) or sets. If two of these items seem to you to be related, you can record this in your project, creating a Relationship that links them.

And that Relationship is itself a node. Like any other node, it can have coding. If you wish, you can code at the Relationship the data that you see as pertinent to it.

Relationships can be added between any sources and any nodes (except relationships) or any sets of sources and/or nodes. Like any other node, they can have any amount of coding, and the coded content can be browsed and recoded (see previous Tutorial).

In the **Nodes** folder of your project is a separate folder for **Relationships**. As you make relationships they will be shown in the **List View**.

A relationship has a “from” and a “to” item, linked by an arrow whose “type” you define.

In the **Classifications** folder is a folder for **Relationship Types**. You name and describe *types* of relationships, and specify how they are shown - a nondirectional “association”, or a one-way arrow or symmetrical (double headed) arrow.

Family values seem to encourage (though not directly cause) motivations to volunteering? You need a relationship *type* “encourage”. And a *relationship* between two project items – e.g. the memo about family values and the node for motivation.



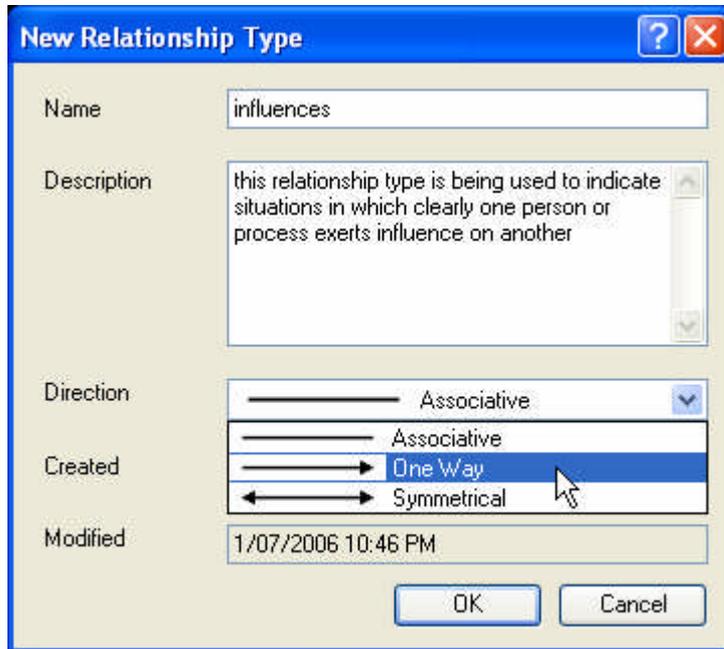
If you don't have nodes or sources to represent the relationship's “to” and “from” items, create them. NVivo has no problem with nodes or sources with no content. In the example above, “family values” could be created as a memo, named and described in the project. Later as you explore the relationship you may wish to write your changing ideas about family values in the memo, then code some material at the relationship.

To make a Relationship Type

1. Go to the **Classifications** folder, and click on **Relationship Types**.
2. As for any other new item, click in the **List View** and then from the **Project** or **Context** menu or the **New** button select to create a New Relationship Type.

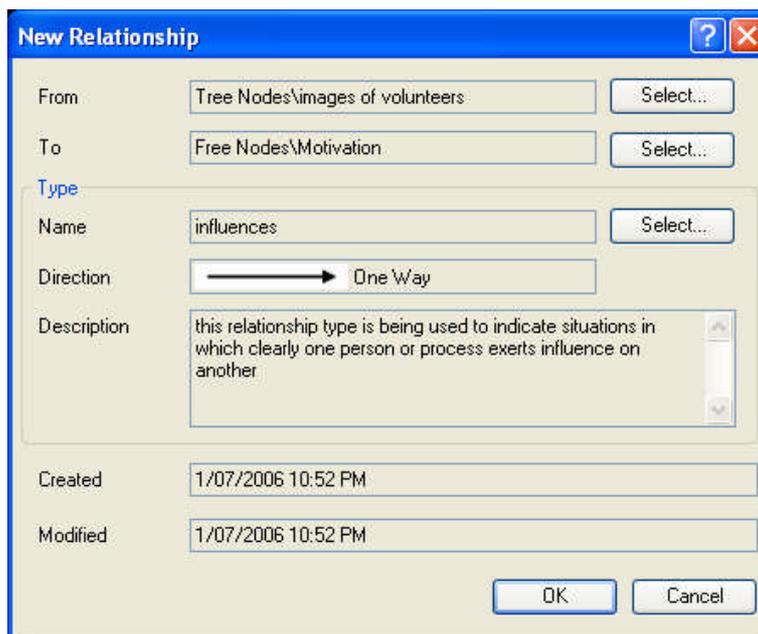


3. In the dialog, name the Relationship Type, and add a description. (This is usually very important as you may be creating many Relationships of this type and need to check consistency.)
4. Now select the direction of the Relationship



To make a Relationship

1. Select the **Nodes** folder, and in it the **Relationship** folder.
2. As for any other new item, click in the **List View** and then from the **Project** or **Context** menu or the **New** button create your new item.
3. Select a “from” and a “to” item, and then the “type” for this relationship. Note that the description of your Relationship Type appears, so you can check that this is appropriate. Click **OK**.



- The new relationship appears in the **List View**. Note that as you record more relationships, you can sort them in **List View** according to each column – for example, get all the relationships of type “decreases” listed together.

Relationships					
From Name	From Folder	Type	To Name	To Folder	Direction
Anna	Cases	lives with	Sunil	Cases	←
Bernadette	Cases	is friends with	Ken	Cases	→
contexts	Tree Nodes	impacts	images of volunteer	Tree Nodes	→
contexts	Tree Nodes	impacts	assumptions	Tree Nodes	→
Ken	Cases	is friends with	Bernadette	Cases	→
time\lack of time	Tree Nodes	decreases	Motivation	Free Nodes	→
personal goals\fa	Tree Nodes	Associated	Motivation	Free Nodes	←

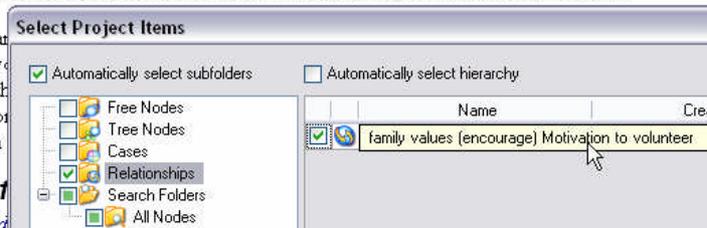
- Each Relationship is a node, and you can select it, just like any node, to code at it any source content that you see as pertinent to this relationship.

Q.6 Rewards for volunteer work

What do you think motivates volunteers? (What do they get out of it?)

They could have a personal motivation. Often volunteers are connected in some way to their cause – through a family connection. Or the skills they donate are a personal passion – such as cooking, or craft.

Recognition is important in community groups I work with. It's interesting news for other people. Perhaps the most important thing is that it's making a difference.



Q.6a Incentives for volunteering

What incentives should be offered?

Using Relationships in your project

Relationships that can code the relevant data are an entirely new tool with NVivo 7. They may be used for very specific statements of fact (Anna lives with Sunil) or very abstract reflections (lack of time decreases motivation to volunteer),

For your project, ask early what relationships you are anticipating, then as you work with the data, create and code at Relationships that express what you are discovering.



If you create two or more different sorts of relationships, note that while they cannot be in subfolders, they can, like any nodes, be managed in Sets. Here the researcher has created different sets because some relationships record conceptual relations, and others simply domestic relations like living together.



2. Reviewing your nodes

If you have been coding data, you may already have begun assessing the nodes you have made, and rather than placing them all in Free Nodes, sorting them into “Trees”.

As explained in Chapter 6 of *Handling Qualitative Data*, tree structures allow you to catalog nodes so they are easily found and consistently used.

NVivo does not require that you keep any nodes in Trees, but you will be greatly assisted by doing so. Cataloguing nodes does not require “top down” thinking. Rather, as you see that some of the free nodes created are all a “sort of” a more general category, you may create that category and move the nodes under that “parent”.

To do a review of nodes

1. On a whiteboard or very large sheet of paper, or in a model in NVivo, review the nodes created so far. Do you see the categories needed for thinking about your project there? If not, sketch in the other categories you think you will need.
2. Now in your NVivo project, open **Nodes>Free Nodes**. In the **List View** review the free nodes created so far. Click on relevant columns to sort them – e.g. according to amount of coding, or date of modification.
 - Are they named accurately and described adequately? Go to a node’s **Properties** to change any name or description.
 - Are there more categories needed to ask the questions or explore the issues you are tackling? If so, create the nodes.
3. Do they belong together in any logical order? Don’t force it! In NVivo (in a memo or a model) or if you prefer, on paper or whiteboard, sketch the shape of a starter catalog that looks logically sensible. If a category doesn’t belong with others, leave it free.
 - Looking “top down”, from your project design; what are the main areas of enquiry? Revisit the categories you started the project with
 - Now consider the categories you created from the data. Do they hang together in logical groups? Ask each, what is it a “sort of”. If some nodes group logically, note this. (For detailed advice on cataloging nodes and evaluating the node systems you create, go to Chapter 6 of *Handling Qualitative Data*).



Consider carefully how the growing node system relates to your design or intentions for this project. A good rule of thumb is that if you want to ask questions about your data in NVivo, you will need nodes in terms of which the questions can be stated. If you have done a project design, or a literature review, try importing that into NVivo and coding it: the project needs the nodes that result.

3. Rearranging nodes

At this stage, you may make major changes to your project. You did back it up at the end of the last tutorial, didn't you?

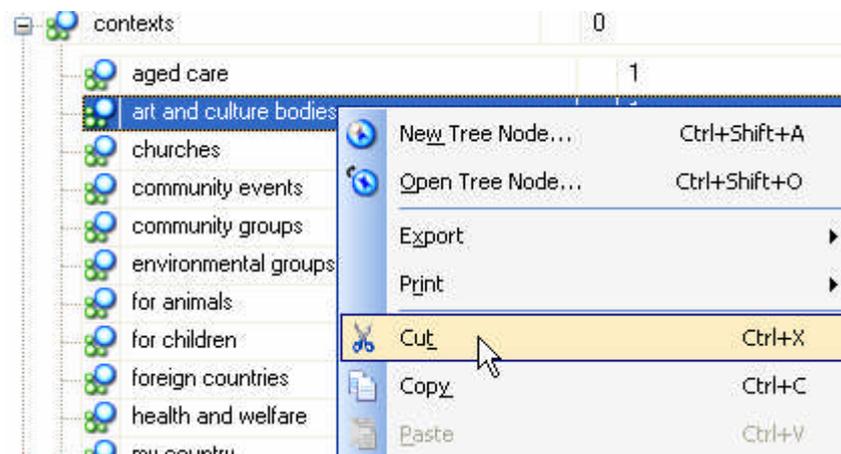
You can *cut* or *copy*, and *paste* or *merge*, any node in NVivo, without losing any of the data it codes, or its links to a memo or, if it's a case, its attributes. So if your nodes now should be catalogued, the steps are simple.

To cut and paste a node

1. Back in your NVivo project, create nodes in the Trees area for the main categories you have sorted your ideas into. These new tree nodes will be “parents” for the subcategory “children” that belong there. (The child nodes are a “sort of” the parent.) Thus my node for “self worth” might go with other categories about perceived benefits under the parent node, “benefits of volunteering”). Create any parent nodes indicated by your review.
2. Go to the Free Nodes you created by coding in the previous tutorial. Select one that properly “fits” as a “sort of” one of your new parent nodes.
3. Right mouse click and **Cut** the node from the Free Nodes area



(or use the Cut button).



4. Go to the parent tree node you want to place the cut node under. Right mouse and select to **Paste** the node. Click the “+” at the parent node, and you will see your pasted node, which still holds all the coding you had done.



If you prefer caution, **Copy**, and then when you're sure it's pasted correctly, **Delete** the free node.)

To shape your node system

1. Continue cutting and pasting nodes as indicated by your review, until you are confident the arrangement is logical and that it does not in any way force your thinking about the categories or pre-empt things you might later find. (Chapter 6 of *Handling Qualitative Data* advises on design of tree catalogs avoiding these traps.) Remember, if a node won't logically "fit" in a tree, leave it in Free Nodes.
2. Now code another document, working with the categories as they are now arranged, so you can find existing ones and place new ones. You will find that as you work with the nodes, now, it is very easy to cut or copy and paste or merge as the system of nodes starts making sense.
3. Visit the categories you have left "free" of the catalog and review them.

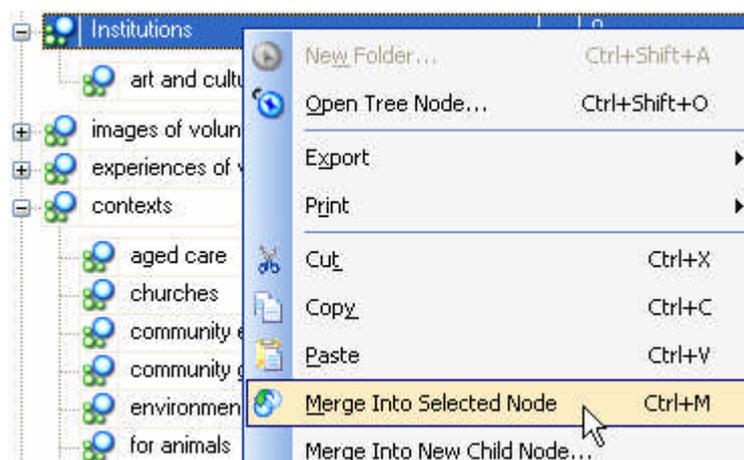


A good habit is to review nodes left "free" often - as the catalog forms, the remaining Free Nodes are special. They are the categories that don't fit anywhere. Maybe they are just irrelevant? But maybe they are the still unconnected ideas that will become crucial in making sense of the more organized thinking about your project.

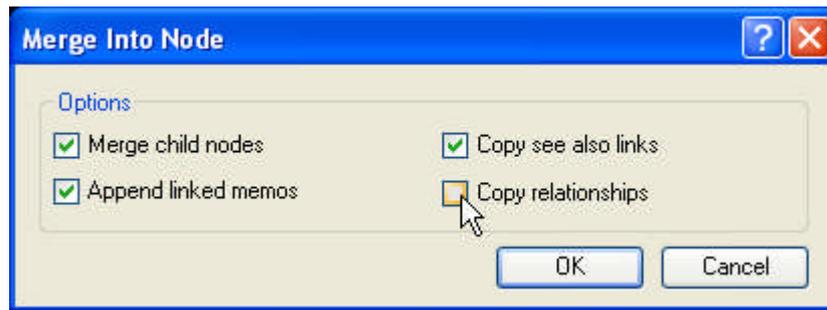
To merge nodes

Often at this stage of a project you find that you have more than one node for the same idea or concept. This is quite common, not to be regarded as a problem. Indeed it's good practice to keep nodes separate if there's a chance that the meanings are subtly different, and bring them together only when you get surer of their common ground. At that stage, you need to be able to merge their coding – and any other contents or links of the node.

1. Select a node you want to merge into another. Cut or Copy it (depending on your purposes).
2. Now select the node you want to merge this coding into.
3. From the right mouse context menu, select to Merge into Selected Node.



4. select what you wish to merge, from options presented.



5. Click **OK**. The nodes are merged.

Evaluating your node system

As the nodes are moved and merged, you will find a stronger sense of how they relate to each other. Treat the tree catalog like the catalog in the library, which assists you to look for an item rapidly, check if it's there, browse the items near it and note what's missing.

Like any catalog, it is only as useful as it is logical. You will find that revisiting your node system is richly rewarded with increased efficiency and a stronger picture of how the project is shaping.

Regularly, make time to check for and remove or merge duplicated nodes, examine and delete nodes that have proved unnecessary or redundant, and ensure that the logical structure of the node system remains strong and clear to you.



The catalog of nodes will change, as your understanding of what's going on in these data grows. So the node system at any time will be a record of where you are "at" in the project. A highly useful technique for logging progress is to save and archive a list of your nodes at regular intervals, or at significant milestones in the project.

For advice on constructing a tree structure that will work for your project, and for ways of checking it remains logical and useful, go to Chapter 6 of *Handling Qualitative Data*.

4. Listing and Reporting on Nodes

Now to get a report on the node catalog you have created. You can print the nodes that are displayed in **List View**. This is a what-you-see-is-what-you-get printout, so you will need to expand the hierarchies that you want to include. Alternatively, you can make a very detailed report on all or some of your nodes.

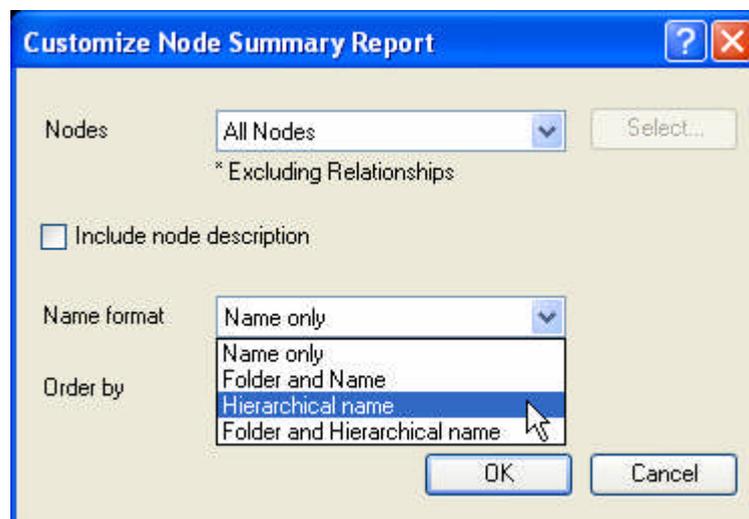
To print the list view:

1. In **Navigation View**, click the **Nodes** button.
2. Select the folder containing the nodes you want to print. To print a list of all nodes, select the **All Nodes** folder under the **Search Nodes** folder.
3. On the **File** menu, click **Print List**.

To make a report on your nodes

There is a range of reports available with detail and formal layout, from the **Tools** menu. The **Node Summary report** will give you everything you could want to know about each of your nodes and its coding.

1. On the **Tools** menu, select **Reports>Node Summary Report**.
2. In the **Customize Node Summary Report** window, select the nodes you want to report on, and specify your requirements. Note: hierarchical name will give you the tree structure if you have nodes in trees.



6. Click **OK**. The report appears on the screen.

Read the report, and if it is useful, print it.



Note that the report (like all reports generated this way) is not immediately editable. If you wish to save it as an editable report, from the toolbar, choose to Export the report.

To log your development of nodes

1. Write a **memo** about this first stage of catalog construction.
2. If you are working in a team, and wish to merge your projects later, this is a good time to design a common catalog of basic categories and discuss how you will use it to ensure consistency but allow innovation. If you are planning on merging projects by Project Import, please go to the Online Help for advice.

To create a coding comparison report

Amongst many other reports of your nodes and coding, you can make a special report on the similarities and differences in coding between two sources.

This report can be used for exploring different coding styles or checking differences in coding by different team members, as well as comparing coding across time as your ideas develop.

1. From the **Tools** menu select **Reports>Coding Comparison**.
2. In the **Customize Coding Comparison Report** dialog box, select the required options to specify the two sources whose coding you are comparing and the nodes for which it will be compared. You can also specify what information on the node content you want. Go to Help for details.
3. Click OK.



Do be careful to interpret the results appropriately: coding reliability is a challenging goal in qualitative research, and claims to reliability must be carefully established and discussed (see *Handling Qualitative Data* pp 98-100.)

This concludes the NVivo 7 Tutorial 6. Go to [Chapter 6 of *Handling Qualitative Data*](#) for advice on these processes.

You now have not only data and, ideas about your data, but also an evolving management system for those ideas. Time to back up your project!

As you continue relating data and ideas via links and coding, the ideas will be accessible for review and reflection.

If the reorganization of your nodes is satisfactory, you will now be able to “see” the relationships you are discovering and the logical groups of concepts and categories that are emerging in the project via the catalogs of nodes. But the catalog does not show the theories you are growing about how these categories relate. The next task is to represent the project visually in a model.

NVivo 7 Tutorial 7:

Models

The next stage for most projects is revisiting the project's purpose, goal and intended outcome, considering possible *and useful* outcomes for your project and seeing the ways to get there. For these tasks, you need many of the skills in the tutorials so far – memos, coding reviews and work on the node catalog.

But almost certainly you also need the ability to draw and show models of what is going on, and what is aimed for. This tutorial shows how to create models indicating the possible outcomes and how they would work for your project.

There is a much wider discussion of ways of seeing and considering project outcomes in Chapter 7 of *Handling Qualitative Data*.

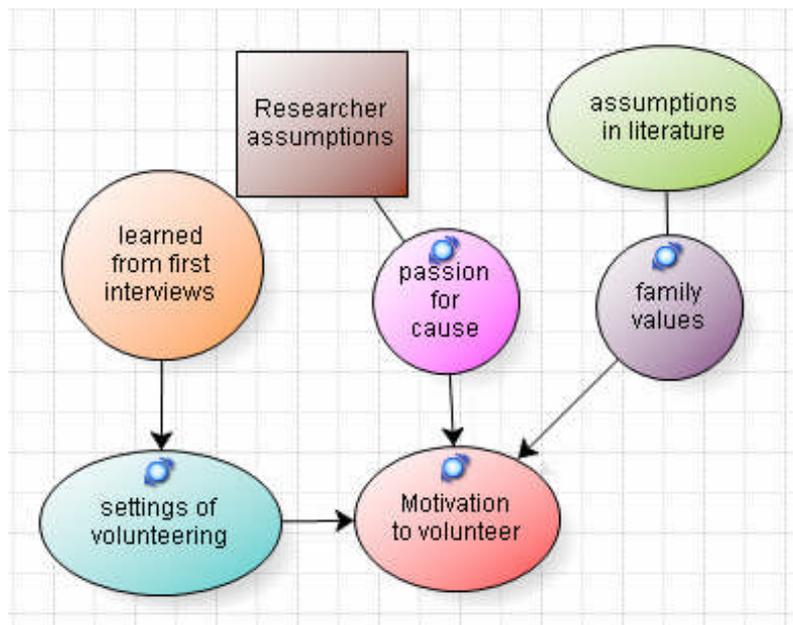
For full instructions about making and shaping models, go to the online Help.

Creating your model

Revisit [Tutorial 4](#) to customize the Model window.

To create a model and work in it

1. Select the **Models** folder and choose your first model. (If you completed Tutorial 4, you created a first model. If there is no model in your project, revisit Tutorial 4 and make a new model.)
2. Importantly, don't assume this first model has to be a definitive representation of anything! It's a first effort at picturing where you are. Place in it the items relevant to your work. A useful first step is to reflect on the differences between the assumptions you took into the project, those informing the literature, and what you have learned when you entered the research field.



1. Using the model to show the project

You can add any source, node, attribute, value, set or model. Note the **Select Project Items** box shows the items already in your model as grayed out.

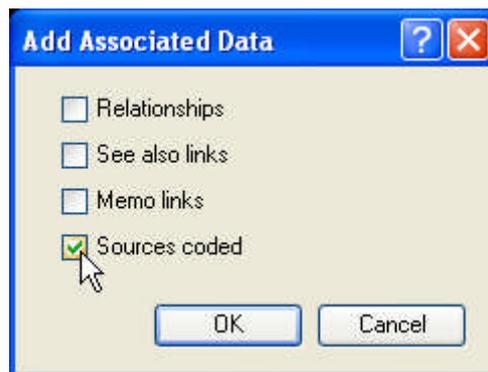
If appropriate, place links by selecting two items to be linked, (Ctrl + Click + Click) then from the right mouse context menu select New Connector.

As shown in Tutorial 4, the items you put in a model are live – you can open any item from the model.

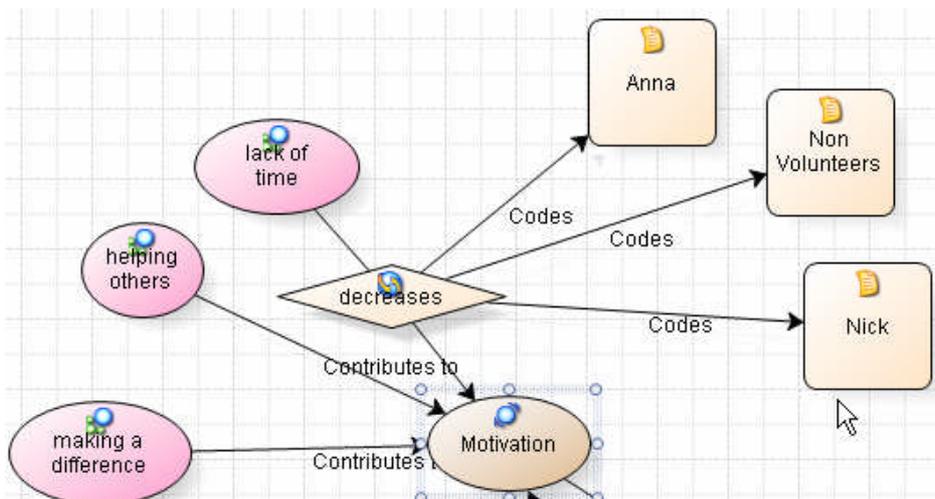
You can also add associated data. What documents are coded at this relationship, for example? Experiment with the effects of asking this for different nodes and watching the ways the patterns of coding are pictured. In this simple example, I have asked which documents are coded at the relationship “lack of time decreases motivation”?

Adding associated items

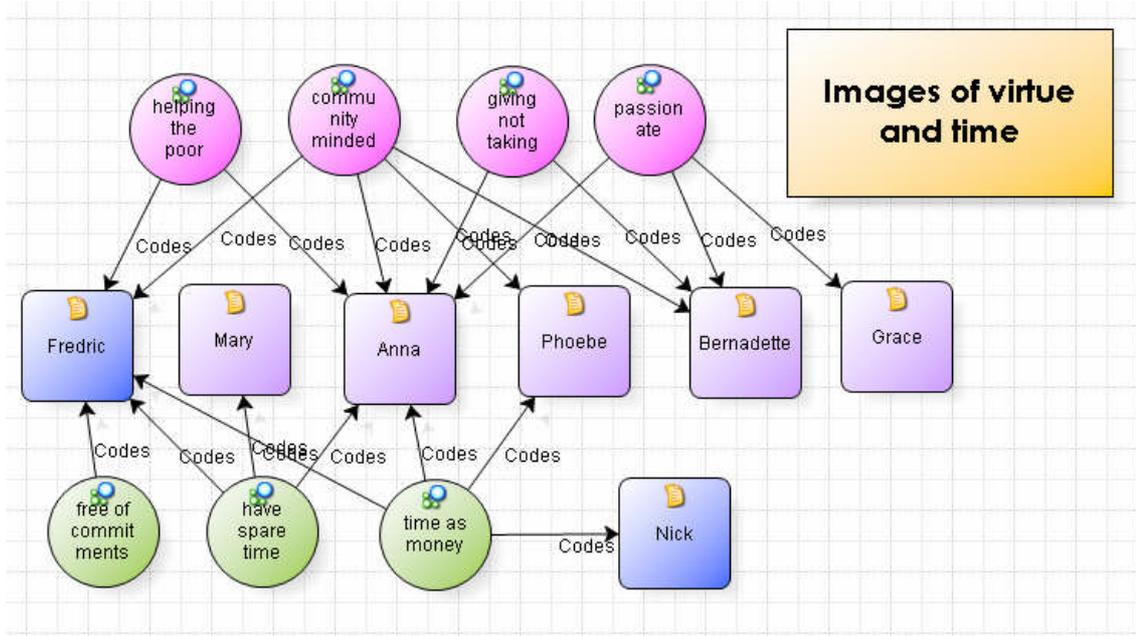
1. In your model, from the **Context** menu select **Add Project Items**.
2. In the **Select Project Items** window, select the node (here, a relationship) of interest to you.
3. From the **Add Associated Data** window, click **Sources Coded**.



4. The associated data items requested will appear in the model, and you can move them to show clearly the associations. Here, it is used to see which documents are coded at the relationship “lack of time decreases motivation”.



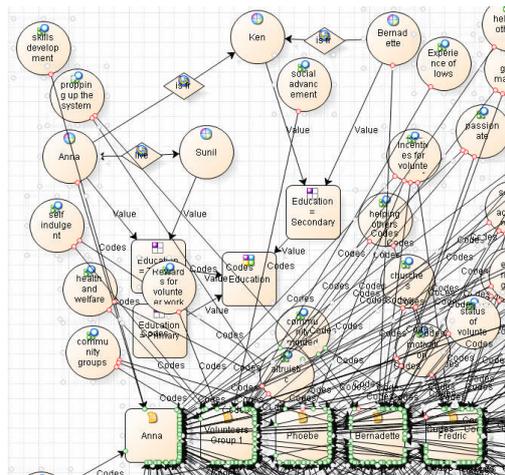
- Now use the modeler to clarify a pattern. Add to your model the nodes which code contrasting ideas – here, the positive and neutral or negative images of volunteers. Use color to display the contrast (select line or fill color from the edit menu).
- By adding items coded by these nodes, I explore how these images are patterned across interviews with females (mauve fill) and males (blue).



- To see more of your model with items and text smaller, go to the View menu and select **Zoom**.



Beware of selecting to add associated items if there will be very many of them. This will not assist you to see the pattern clearly. If your model is suddenly overwhelmed by associated items, remember Undo!



Better, use the Find tool (see Tutorial 8) to find the relevant associated items and then drag to the model from the List View those you want to see.

2. Designing the model

Appearances do matter (sometimes)! Model appearance is important, and not merely for aesthetic reasons. If your model is to show ideas, and suggest missing links, you need it to present clearly the ideas you are expressing.

You can change the appearance of fonts, lines and the fill of shapes. These and other aspects of the appearance can be set as a model style. And **NVivo** provides four auto layout options for arranging items.

To alter color and font

1. In the usual **Edit** bar, you can set color and font. The edit bar will also allow you to select a color for the fill of a shape.



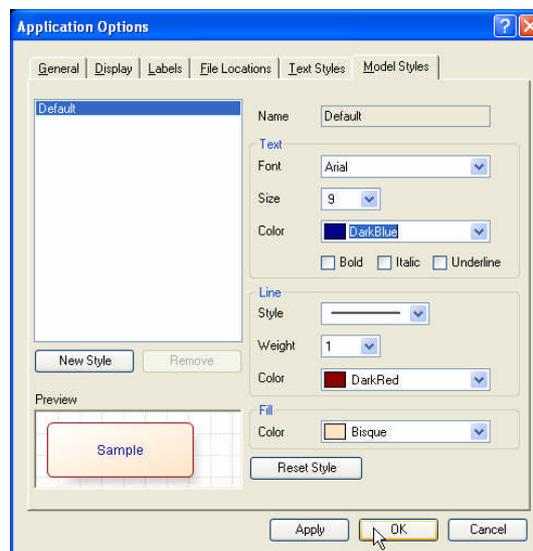
2. From the **Format** menu, you can select font, line, fill or model style. (Note that one Fill option is an image – but beware of inserting very large images in your model!)

To set a model style

You can set a model style for *only the current project* from **Project Properties**.

To set a style for *all your projects in future*, first close your project.

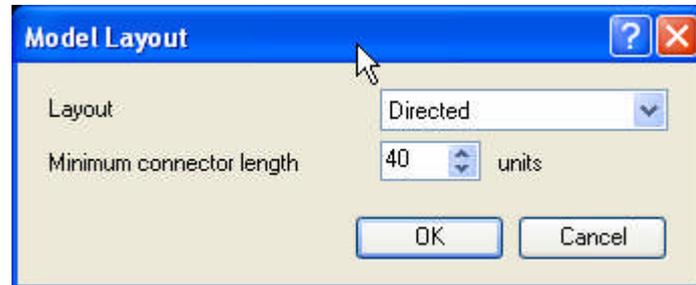
1. In the Welcome window, select **Tools>Options**.
2. Click the **Model Styles** tab.
 - To edit an existing style (including the default style), select it and set the required options.
 - To add a new style click **New Style**, and choose the options you want.



1. Click OK.

To set and change your Model's Layout

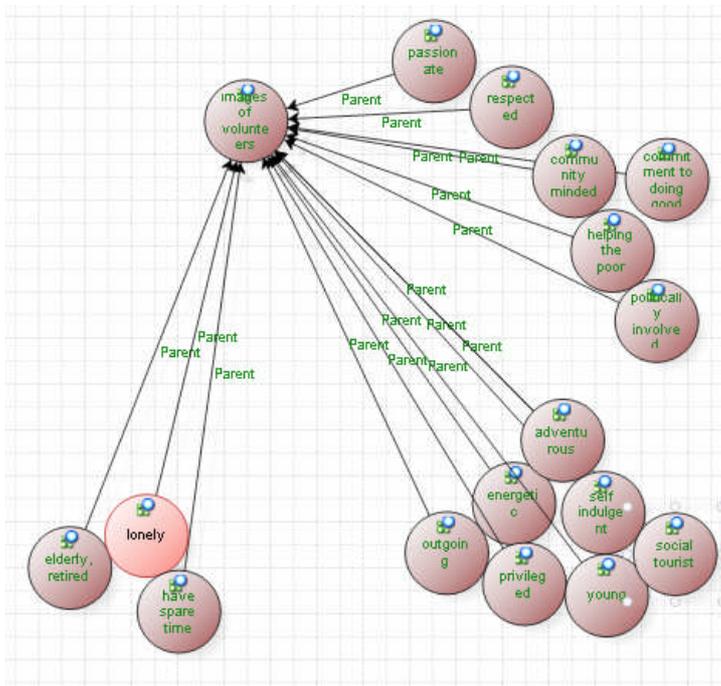
1. Click in the model.
2. On the **Model** menu, or the context menu, click **Layout**. The **Model Layout** dialog box is displayed. Select from the four options. Note you can also set how long is the minimum length for connector lines.



4. Click **OK**.

To set a default model layout for all new projects

1. In the Welcome Window, before you open a project, select **Tools>Options**.
2. In the **Application Options** window click the **Display tab** and **Model Layout**.
3. Select the default model layout you prefer. For example, if you work mainly with trees of nodes, the hierarchical layout would be the best default.



3. Hiding and showing groups in a model

You can make a model that is accessible in groups, so can be shown layer by layer, to tell the story of your interpretations of the data, or to compare different views.

To do this, you nominate which of the items in the model belong to which group. A shape or connector can belong in multiple groups. You can show and hide groups.

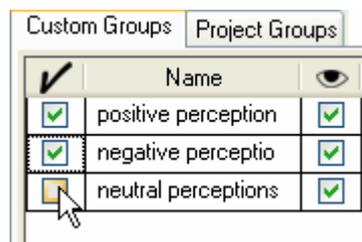


If you have worked previously in NVivo 2, you probably created layers and groups, viewing them through the Palettes. NVivo 7 simplifies this process by allowing you to create groups and show or hide them to see them as layers.

You can create custom groups for the shapes and connectors in a model. For example, a team might create groups for the different members' concepts. Use groups to show the stages in development of a theory. Show or hide the groups to tell that story.

To create custom groups

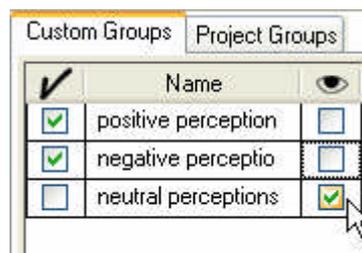
1. On the **Model** menu, click **Group> New Group**.
2. In the **Model Group Properties** dialog enter a name and if you wish a description and click **OK**.
3. The group is created and displayed in the **Custom Groups** tab.
4. In your model, select the shapes and/or connectors you want to include in the group. To select multiple items, click and drag or hold down the CTRL key.
5. In the **Custom Groups** tab, click the *left hand* checkbox for the required group (under the tick ✓).



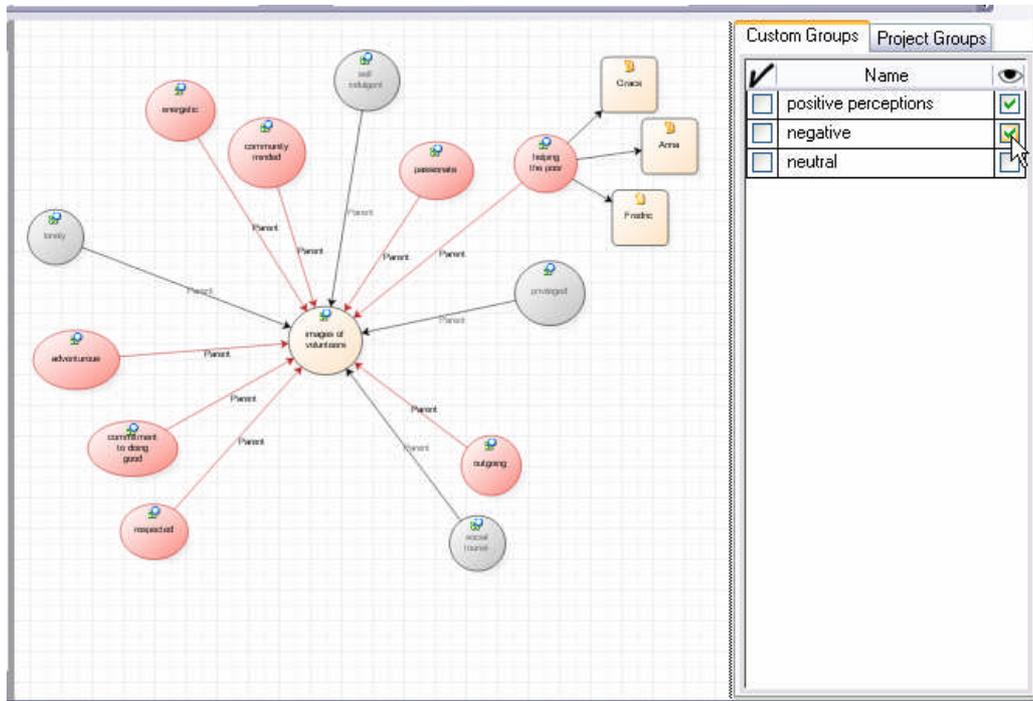
All selected items are now members of the group.

To show and hide custom groups

1. To show or hide a group of items or connectors, clear the checkbox on the *right hand* side of this group's name (under the icon with an eye).



- Experiment with groups as ways of layering your model. Showing and hiding Groups is a useful process early in a project, when it's hard to see the big picture. For example, in the Sample Project, as a first sorting step, you might group the nodes for "images" into "positive" and "negative". Now if you show only positive, you may discover that some of the more interesting images have left the model. Perhaps few of those images are clearly just positive or negative?



As you work with models, carefully distinguish between the purposes of node cataloging (in trees) and modeling. A catalog shows how, logically, your categories are related. In a model you show how, in the project data, or your hunches and predications about that data, or the theory you are creating, those categories may relate.

Computer projection of such a model to an audience is an impressive presentation format for qualitative research. Each stage can be shown and discussed, since the items are "live" to the data, you can show your audience the detail of the data. The last tasks for this tutorial are about ways of saving and showing your models.

4. Saving and presenting your model

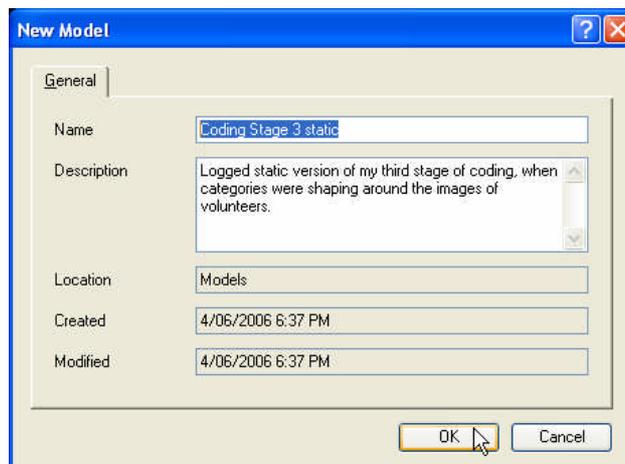
Models can be saved in the project either as dynamic models (linked to the data) or as static models (no longer linked, so they remain a record of an early stage of your analysis. These have very different uses.

A dynamic model can be opened and developed further at any stage, and the data items it contains can be visited and reviewed. A static model is fixed – the items are no longer “live” to the data, they cannot be moved around or altered and no new items or connections can be added.

So you need your model to be dynamic whilst it is growing and being actively developed. But you may well wish to keep a static copy as part of your log of the project’s progress.

To save a static model

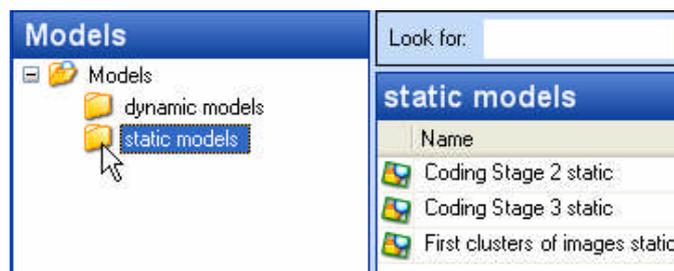
1. To create your model as a static model, to store for your project log, click in the model and from the right mouse context menu select **Create as Static Model**.
2. In the New Model dialog, name the model and add a description. Take care with the name and description – they must accurately identify that model when you return to it. It is good practice to include “static” in the name, so you will not get confused about which models are still “alive”.



3. The static model is created (with a different icon).



A useful strategy is to create two subfolders in your models folder for dynamic and static models, and move this newly saved model to the folder for static models. Note the icons for static models are different from icons for dynamic models.



To copy your model into a paper or presentation

You can copy all or any parts of a model and paste into a paper in your word processor or a presentation. To copy the whole model

1. In the model, select all (Ctrl+A) and copy (Ctrl+C).
2. In your word processor or presentation software, paste (Ctrl +V).
3. The model pastes into your paper or presentation and you can resize or add text.

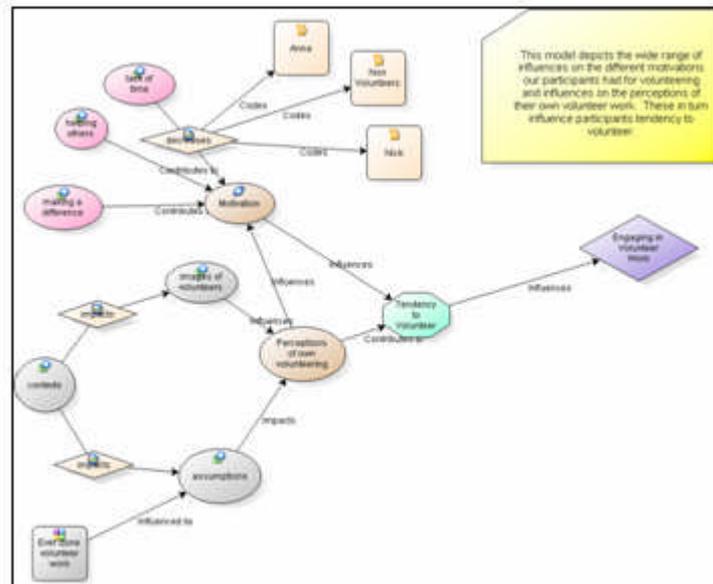


Figure 1: Model of tendency to volunteer and motivation

Using models to communicate your project

As an exercise, present the modeled story of your project so far to colleagues.

1. Using show and hide, diagram some aspect of the evolving story of your project. It could be as simple as a rearrangement of a tree of nodes, exploring whether there are clusters of different meanings.
2. Use groups to identify clusters. Place items and connectors representing the “story” or map of early research thoughts.
3. In a presentation to colleagues, use this grouped model to explain how your project is going, jumping from the model to the project item to show the data and discuss the possibilities and limitations of your work.

This concludes Tutorial 7. For advice on the early stages of “seeing” your project and planning the required outcome, go to Chapter 7 of *Handling Qualitative Data*.

You now have data, linked to other material and to ideas via coding. You have organized nodes in catalogs and modeled the beginnings of notions about how they relate in the data. You can of course delete or alter the models, but it’s highly advisable to leave them as an honest record of where you were. They will become part of your log trail.

The next task is to use the ability to search your documents and ask questions about your coding in order to develop those growing ideas.

NVivo 7 Tutorial 8:

Asking questions

This tutorial covers a range of techniques for finding and querying your project items and content – and using or saving the results. You may wish to work through it in two parts – first Find, then Query. But they are presented together here to help you see their differences and the ways they complement each other. Any **Find** or **Query** in NVivo 7 is a way of shaping or coding data. The result of a **Find** or **Query** can be saved as a set or a node. But they are ways of asking different questions.

Chapter 8 of *Handling Qualitative Data* is about the ways of searching text and coding, how different these are from manual methods and cautions in interpreting them.

To review what you need to know about **Find** and **Query**, go to the online Help.

Find and Query – what's the difference?

The **Find** tool is for simple or advanced questions about *your project items*. Use it for locating lost items, asking what you have in your project, checking sample characteristics.

The **Query** tool is for simple or advanced questions about the *content of those items*.

Three differences matter.

1. Find and Query answer different sorts of questions:

Find will locate any project *item* in specified folders. **Advanced Find** looks for project items with specified features. **Grouped Find** returns items grouped as you request, by project item.

Queries look for source *content* with specified features, such as words in the text, coding or attributes of a case. And you can build up questions using a range of logical and location operators.

2. Find and Query offer different sorts of answers:

Both **Find** and **Query** *list* what is retrieved, and give the option to *save* those items as a set or a node.

Find gives you only a *list of project items* as answer. (For **Grouped Find**, it will be a sorted list.)

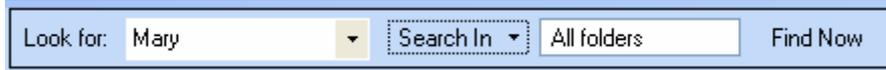
Queries find the actual *content* requested. Results can be previewed and then optionally saved at a node. Then content can be coded, or items saved, for further querying.

3. Queries can be saved as project items

You can optionally **add** a Query to your project: it is saved in the Queries folder. These queries can be used as a record of your work. They can be altered and rerun through other parts of the project data or later data stages.

1. Finding items

By now you have probably noticed that (like MS Outlook) NVivo has a **Find** bar at the top of your **List View** window. If so, you have probably used it – this is a very simple way of finding any project item or items. For example, you have a document and a case node for Mary – or was it Maria...? – and did you make a memo...?

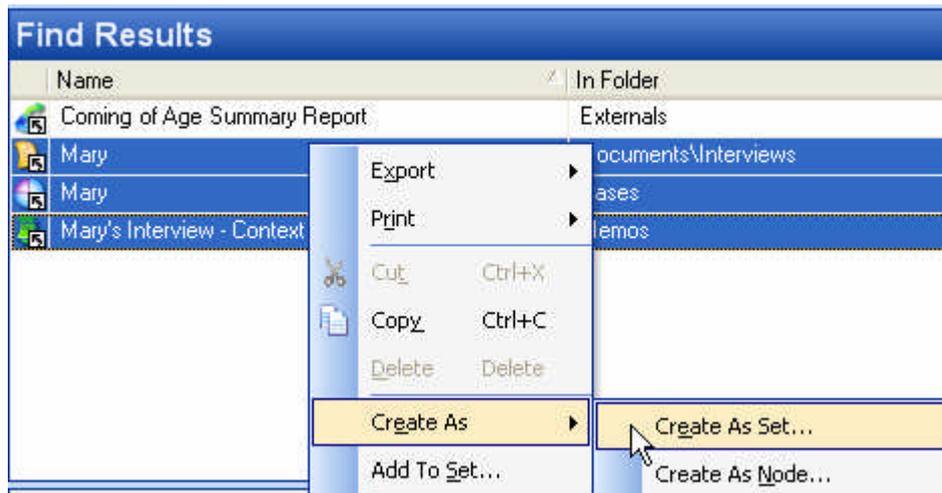


To find a project item

1. Enter the item name (or any part of the name) in the **Look for** field. You can include the * and wildcards (see online Help for information on these).
2. From the **Search In** drop-down list, select the folder(s) you want to search.
3. Click **Find Now**. The items that fitted your request appear in the **List View**.

Using the results of a Find

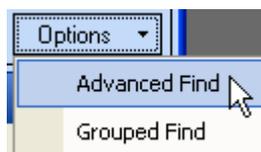
1. As in any **List View**, you can select any item to see content in **Detail View**.
2. If you wish to keep these finds, one way is to make a set of them. Select some or all items. From the **Context Menu**, select **Create As>Create as Set**.



3. In the **New Set** dialog, name the set. You now have made a Set that contains e.g. everything with Mary's name in it. (Note the Summary report was excluded from the set!) Now you will be able to focus on just those items in future analysis.)

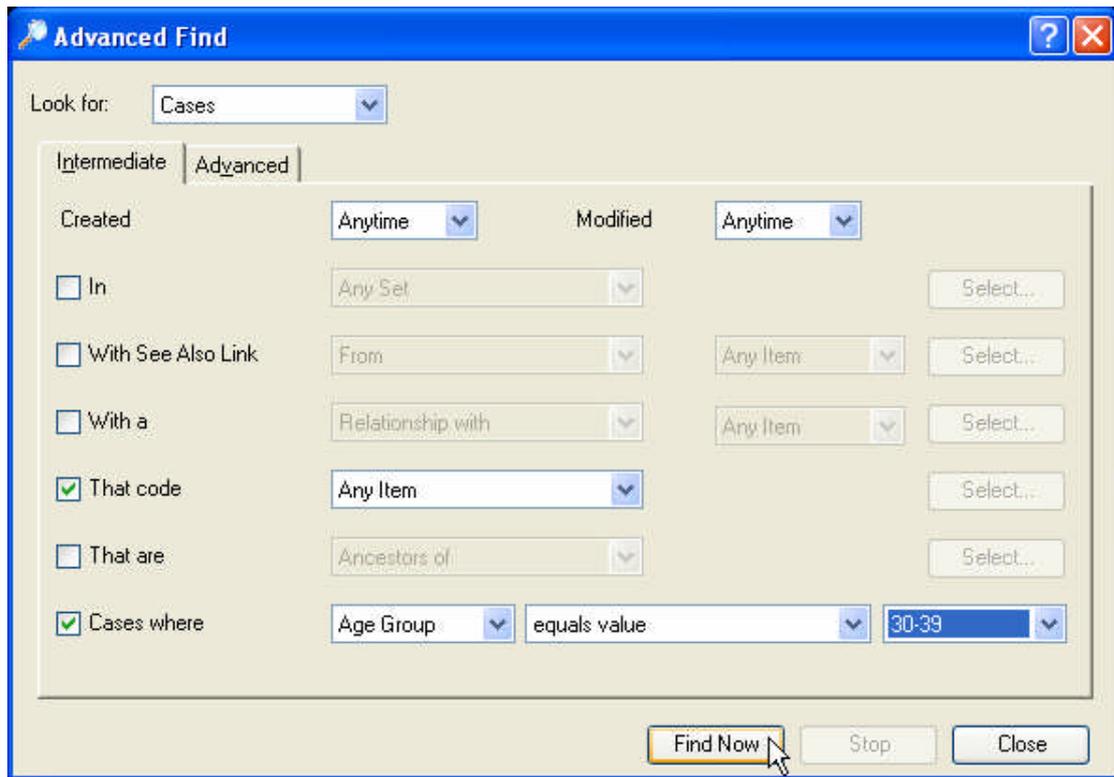
Using Advanced Find

1. In the **Find** tool click on **Options** at the far right side. ("Options" are the best kept secret of Find toolbars!)



2. Select **Advanced Find**.

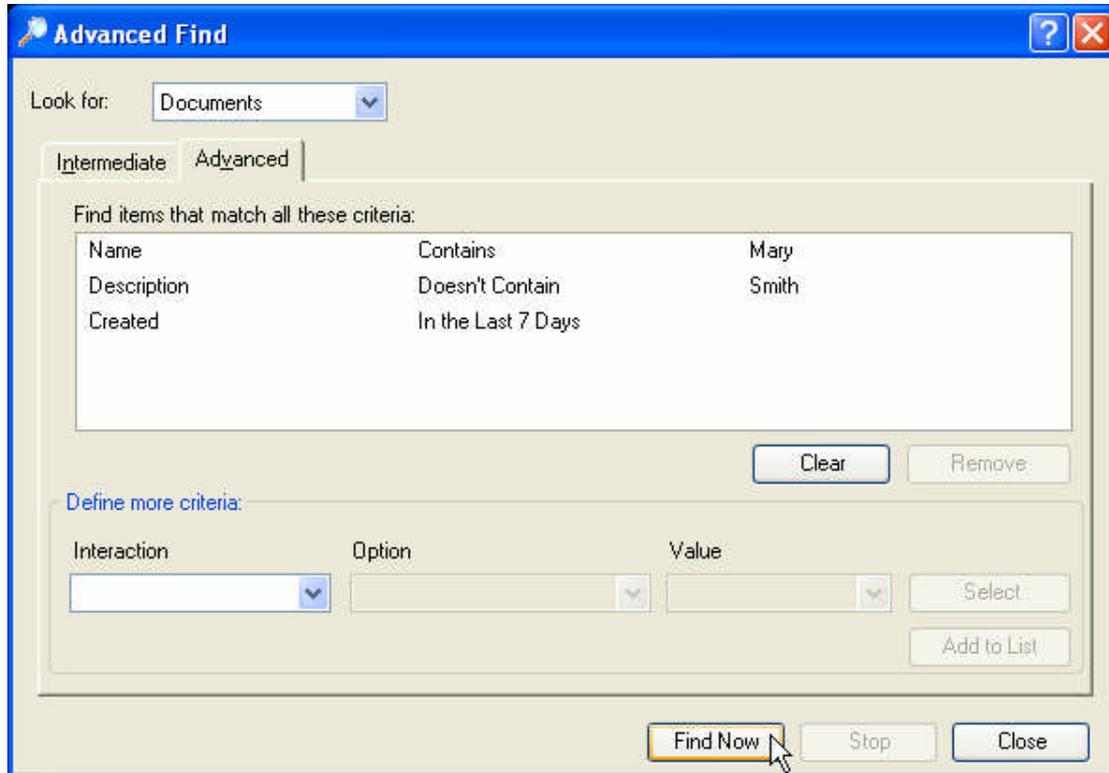
3. On the **Intermediate** tab, select the items you wish to **Look for** (this will set the characteristics you can ask about). For example, if you wish to find all cases where age group is over 60, **Look for Cases**, and click **Cases where** and select the attribute and value.
4. Add any other specification that will get what you want. For example, I don't want Case nodes if there is no content coded yet for that case. So here I have also specified "**That code Any Item**".)



 Use **Advanced** options to save work later. **Advanced Find** is also a way of asking questions of your sample (for example, let's check if we have anyone aged 60+). Or use it for project management: (which documents are not yet coded at any node?)

And now, really Advanced!

The second tab on the **Advanced Find** box is – yes – **Advanced!** Don't be put off: this window allows you to build up plain language requirements for just what you want. It can be as simple as a “this but not that” request: were there any documents whose name contained Mary other than those about Mary Smith?



1. Select the items you wish to **Look for**.
2. In the bottom panel, **Define more criteria** by choosing interactions of those items with others. For each, click **Add to List**. Note the range of criteria you can specify.
3. Click **Find Now**. The items that fitted your requests – only items that fit *all* your requests – will appear in the **List View**. Read or save them as a set or a node as before.



If you have used NVivo or N6 previously, you will recognize this as a (much easier) way of doing one form of a task previously done through the Search Tool: Boolean intersection. You have found *all and only* the with characteristics you specify. But if you want to know about the *content* of those documents, you need another tool.

And now for Query!

The next step is to explore Query.

2. Text Search Query

Any query in NVivo has a format that will become familiar.

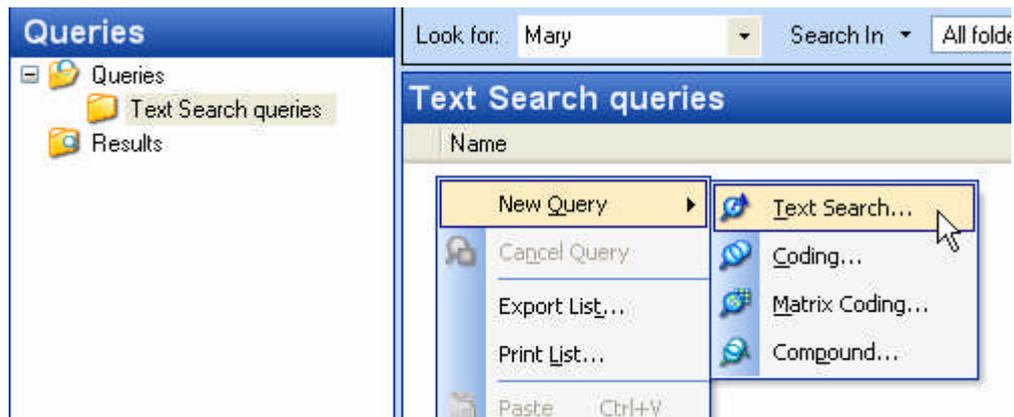
In three steps, you work through three tabs, (see the three areas above) to:

1. specify the **criteria** for your search
 2. select from the **options** for results
 3. (optionally) **Add** the query to your project for reuse.
- And then, if you wish, you can run the query.

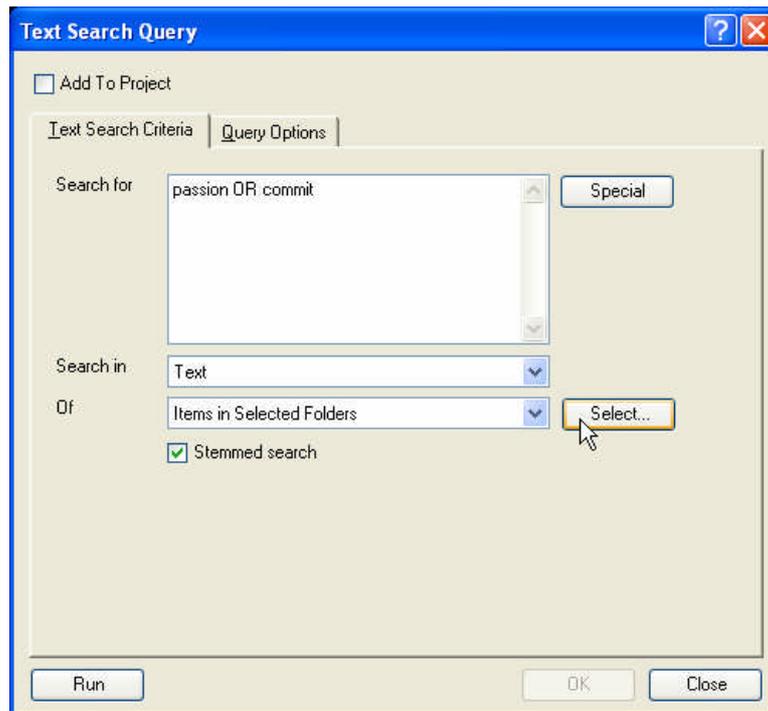
Here, we start with a Text Search Query.

To set Text Search Query Criteria

1. In the Navigation window, click on **Queries**. That folder contains folders for **Queries** and **Results**. You can make your own sub-folders for different sorts of Queries (but not for Results). Create a sub-folder for **Text search queries**.
2. Click on the folder you want to place a query in, and click in the **List View**. Using any of the ways to make a new item (**Project** or **Context** menu or **New** button) create a new **Text Search** query.



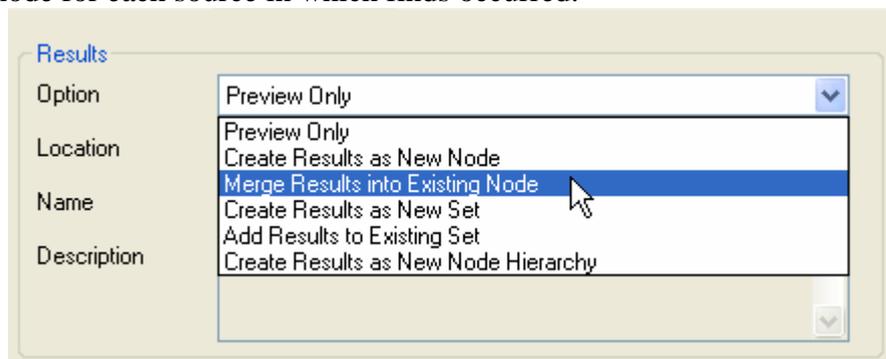
3. The **Text Search Query** window opens. Type in what you want to **Search For**. (Here I am searching for the words “passion” or “commit” and any words with the same stem e.g. “passionate” and “committed”).



4. Set the *scope* for this search, i.e. what you will **Search in**. Select text or annotations or both, and then **Of** which folders or items. (See section 6. **Scoping a Query** below.)

To set how the query results will appear and be used

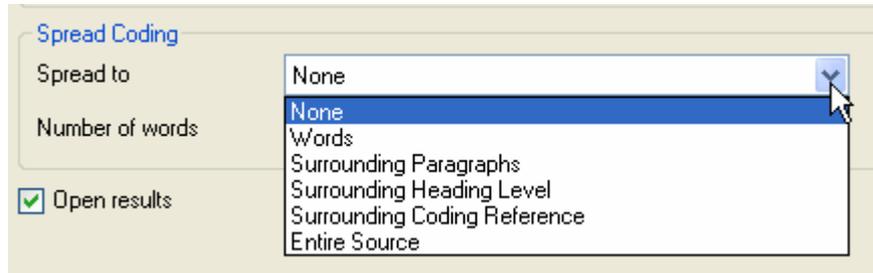
1. Click on the **Query Options** tab, to specify how you get the results.
2. First, ask yourself, what do you want to do with the Results? The options are to:
 - preview results (they'll appear in a list of items with finds);
 - save the finds by coding them, *either* at a new node *or* an existing one;
 - add the items with finds *either* to a new set *or* to an existing set;
 - create a new node hierarchy of nodes coding the results – that is a tree, with a node for each source in which finds occurred.



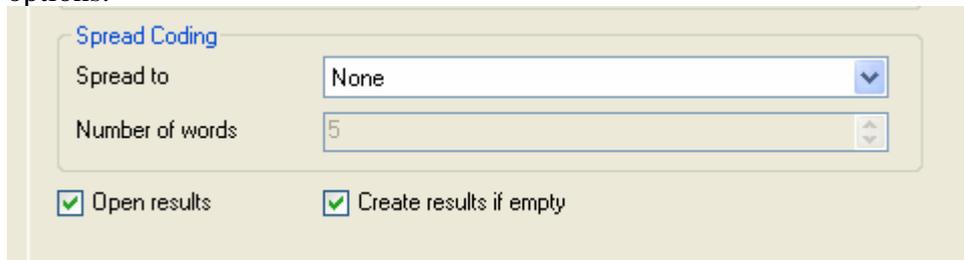
This step deserves your careful attention. As you learn the Query process, experiment with the uses of the different options. The ability to preview only gives you a fast way of finding whether there are any finds, or which sources they are coming from. Remember you can always save the listed items as a set.

- Now, do you want to **Spread Coding** of your finds, to see more content around each find? And if so, what context do you want included?

Note, you can spread to see content later – so long as you have saved the results as a node – and this may be preferable since it will show finds and context in different color font. (See below on using the results.)



- And finally, don't overlook the two tick boxes below the Spread Coding options.



Do you want to open the results in the Detail View, to work with the content immediately? And do you want a results node created even if no finds were made?

To save the query

Before you run the query, ask do you wish to save it? This will allow you to rerun it through later data or alter it to be more relevant.

- Click the top left corner box **Add to Project**.
- The **General** tab appears so you can name and give a description to your query. (Use the description to record what it was designed to do, in case you forget.)



Whilst you are learning the tool, it's a neat idea to use the option to Add to Project so if you find you didn't ask for quite what you wanted you can very quickly go back and change the specification.

Note that from the list view of results you can also return to last run query (that's an option on the context menu.) But if you add queries to the project often, regular housekeeping is useful!

To run the query

- Click **Run!**
- The results will appear as you specified. Results show in the Detail View Always go to the results to check that the query did what you meant it to do.

3. Using the results of any query

Using Preview

When you run any query, the first question may be: did you get any results and if so, what? Preview answers this question, and allows you to explore what you did get.

1. The **List View** lists the items which contained finds.
2. Click on any item to see it in the **Detail View** with the passage(s) found highlighted.

Text Search Query - Result	
Name	In Folder
 Double standards	Memos
 Anna	Documents\Interviews
 Project Log	Documents\Project Notes
 Volunteers Group 1	Documents\Focus Groups
 Bernadette	Documents\Interviews

Saving the results as coding at nodes

The two options to save as a new node or merge with an existing node both *code* the results. All content that satisfies your specifications will be coded at a node you specify. As with any other node, its content can be read in **Detail View**, the context of coded excerpts can be expanded, you can jump to the source or *code on* to other nodes.

(For example you might discover that there are two meanings of “commitment” in these accounts of volunteering – and all these finds refer to how committed people’s time is in other activities! Code on to a node for “too little time”?)

Using text search for automating coding

The ability to code the results of your search has very considerable implications for your data management. Consider using text search for accessing material to code if it is reliably indicated by the presence of a word or words you can accurately identify with this text search query tool.

1. Create a Text Search query as above. Specify the word or words as accurately as possible, using wildcards, stemmed search to ensure that you minimize false finds.
2. In **Options**, specify to **Create Results as New Node** (or if appropriate, add to an existing node). Specify the **Spread** of finds that will be useful for your purposes.
3. Click **Run**. The node is created and opened in Detail View.



A node in a Results area cannot be altered. If you wish to alter a Results node, and keep working with it, move it into the Free or Trees area. But you can **code on** from a Results node to another Free or Tree node - this doesn't alter the results node. If you want to work with query results, this is often the best method.

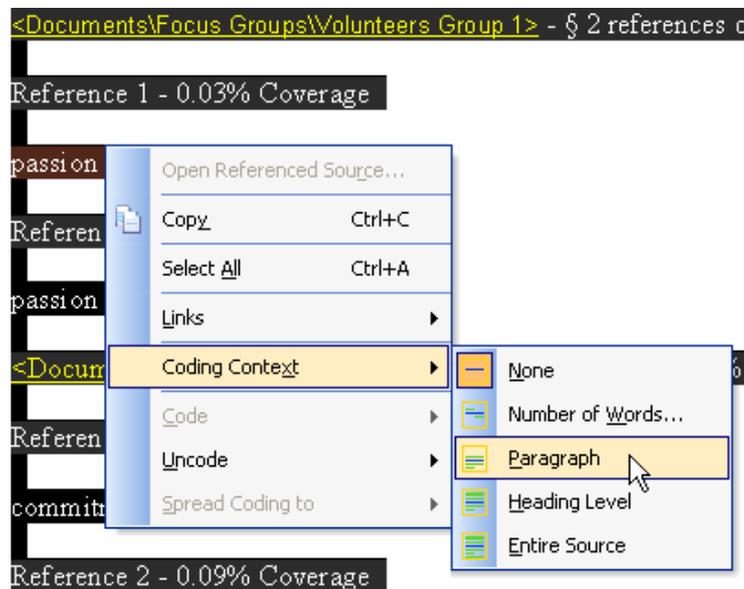
To see and code context of your finds

Text searches always require context, but often you don't want the context to hide where the actual "hit" was. To examine the "hits" in context, and separately code the appropriate surrounding text:

1. Select at **Options** to **Preview Only** results but **don't Spread** finds.
2. From the List View of **Results Preview**, visit each find in the source to see content. Select the appropriate wider content, and code it at the Free or Tree node you are creating for the outcomes of your search.

OR

1. Select at **Options** to save results as a new Results node and **don't Spread** the finds;
2. Open the Results node, **Select All** the content (Ctrl+A), and from the right mouse Context menu or the toolbar icon, choose to **Coding Context** and the amount of context you want to see.



The required context will appear in the Detail View, in pale text, so the original find (which is all that is currently coded) is easily identified.

They could have a personal motivation. Often volunteers are connected in some way to their cause – through a family connection. Or the skills they donate are a personal **passion** – such as cooking, or craft.

3. Read each passage, select just the context you want to code – and **code on** to a new Free or Tree node that will contain only the finds and context you consider relevant for your purposes.

Tree Nodes		
Name	Sources	References
elderly, retired	6	8
energetic	2	3
financially secure	3	6
free of commitments	2	3
have spare time	5	7
helping the poor	2	4
lonely	4	4
outgoing	2	2
passionate	4	8
politically involved	1	1

passion or commit search

Reference 1 - 0.18% Coverage

Volunteering is where you do it. Volunteers identify with the organizations and communities that they serve. These associations were especially strong for those whose volunteer work involved a significant commitment of time. Volunteers expressed pride in

Help with text search

Are you a user who refuses to use online **Help**?

This is one area of NVivo where you must seek Help, as the NVivo search engine, like web-based search engines, allows you to do far more subtle searching than merely look for a word or words. Go to **Using Special Characters and Operators** for many ways of making your searches powerful.



Using the Software

Text Search: Special Characters and Operators

When conducting a text search you can:

- Use [wildcards](#) in place of characters
- Combine multiple words or phrases using [boolean operators](#)
- Find words with similar or identical spelling using a [fuzzy search](#)
- Specify proximity using [near](#) search characters
- Specify [relevance weightings for words and phrases](#)

Some [metacharacters and stop words](#) and are reserved for special use in searches and you cannot search for them explicitly.

Related Topics

[Using the Software](#)
[Working With Your Data](#)

You can short-cut coding considerably by building up a node coding all likely words, with context, and then working from it, deleting false finds and coding on to more finely defined nodes.



Always be careful to use and interpret this rapid coding appropriately: go to *Handling Qualitative Data* pp 155-8 for advice and warnings on using mechanical text search processes for coding.

4. Coding Query and Compound Query

Now to try asking questions about your coding. You will find the steps very like those for text search.

There are three further query types available. (As above, it's recommended to make folders for the different types.) Here we start simple.

Matrix coding queries are the topic for the next tutorial. In your own time, play with Compound queries – they combine Text Search and Coding queries.

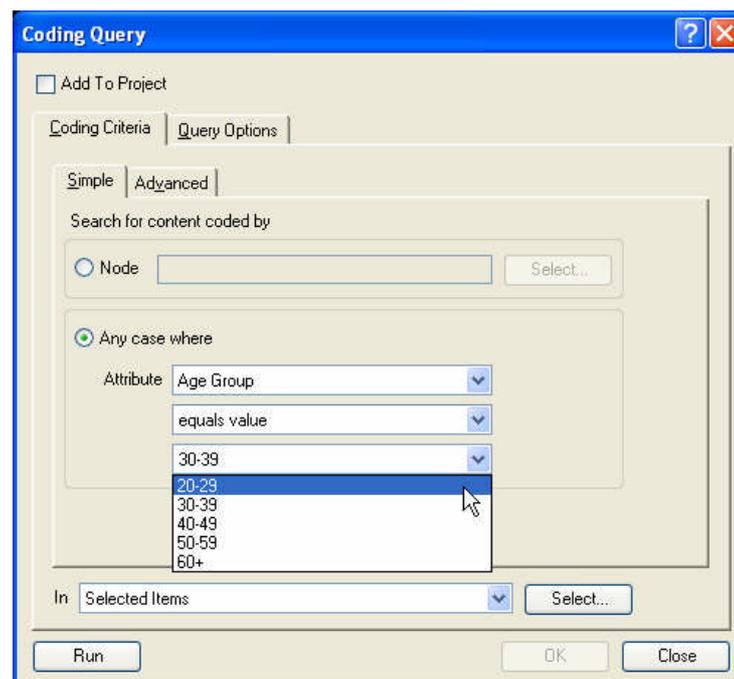


To make a simple coding query

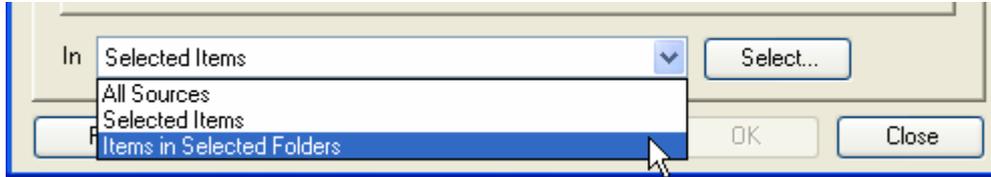
The **Simple** tab on the **Coding Query** window allows you to ask for everything coded at a node or everything coded at a case with a particular attribute value.

Why do this through a Query? Because just as for Text Search, you can *scope* the query to just the items you want to ask about.

1. Select **New Query>Coding**. The Coding Query dialog opens. Note that its tabs are very similar to those for Text Search queries.



2. Now click **Coding Criteria**, and specify the simple search. You can search for either **content coded by** a node or (as below) **Any case where** a specified attribute has a specified value.
3. **In** what data? Set the scope, just as for Text Search, by choosing to search **All sources** or just the items (which can be sets) or folders you want to focus on.

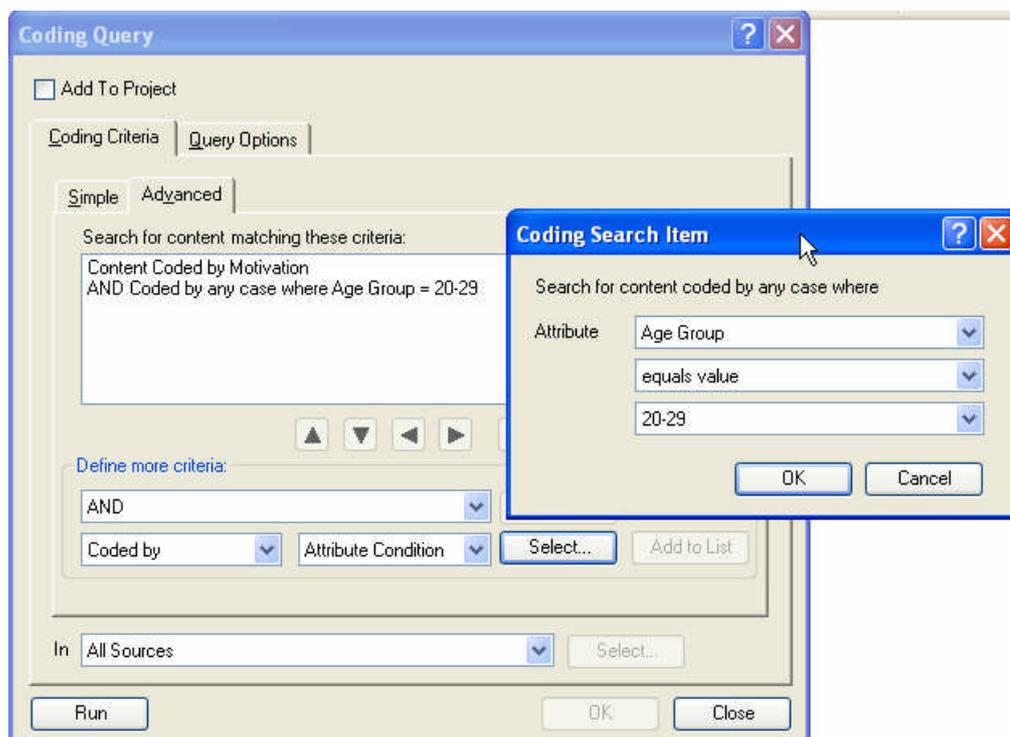


4. Just as for Text Search, click **Query Options** to specify whether you get a **Preview Only** or save as coding at nodes or save items in sets
5. Now decide whether you wish to **Spread** the finds to a wider context. (Revisit **Using the results of your search** for revision on **Query Options**.)
6. In the **Coding Query** window, just as for Text Search, you can specify if you want to keep this Query. To do so, click **Add to Project**. The **General** tab opens: name the Query.
7. Click **Run**. And check what happened.

To make an advanced coding query

Now to the more subtle ways of questioning your data.

1. Make a new Query as before, click **Add to Project** and name the query.
2. Click **Coding Criteria**, and click the **Advanced** tab.
3. As with **Advanced Find**, build up requirements for what content is coded by. Specify the requirement, select the project item, and click **Add to List**.



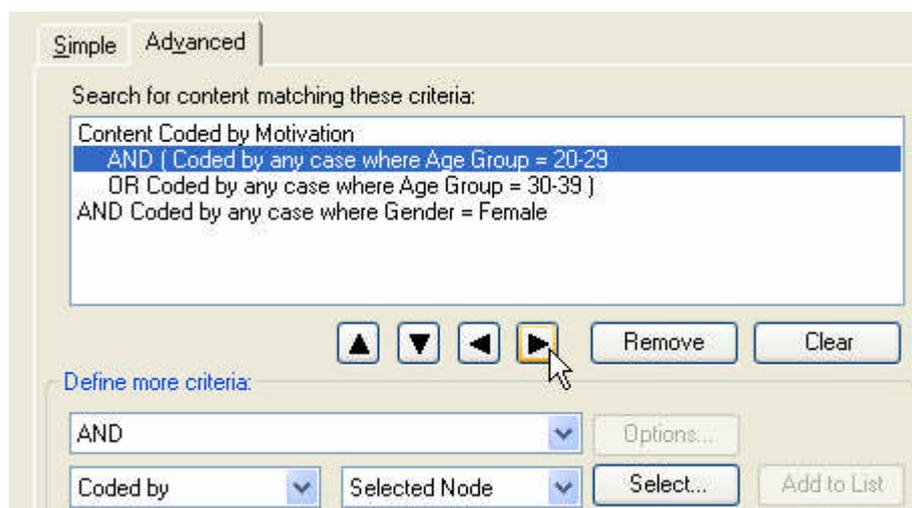
Note that in coding query you can combine requirements about coding at nodes AND requirements about the values of attributes of cases – for both, you specify that content must have the required coding. Think through the question you are asking, such as: *I want everything about motivation if speaker is in their 20s – that is, if the content is coded at motivation and at any case node where Age group=20-29.*

4. When you have added the required specifications for your query, check that the *scope* is as you wish. The default is **In All Sources**. Narrow the search by selecting items, or sets or folders.
5. Click the **Query Options** tab to specify, as before, how the results will be delivered – preview only or coding at a node or nodes or saving in a set.
6. Click **Run**.

To build an advanced coding query

Return to that Coding Query and build more requirements into it.

Note that as you specify conditions and **Add to List**, you can move conditions up or down, and use the sideways arrows to bracket conditions that you wish to operate together.



As your project progresses, you will return to the Query Tool for very many different purposes. This is where you find occurrences of words, check who is using them, look for patterns in your coding, test hunches and seek new ideas.

Interpreting your coding query

NVivo can conduct searches of your coding that would not be possible by manual methods. These are very powerful, but must be properly interpreted. Note that you can't claim from the search above that you now know everything that motivates women in under 40. The node codes only what *you* saw and *coded* in those documents. You are the weak link in any such search!



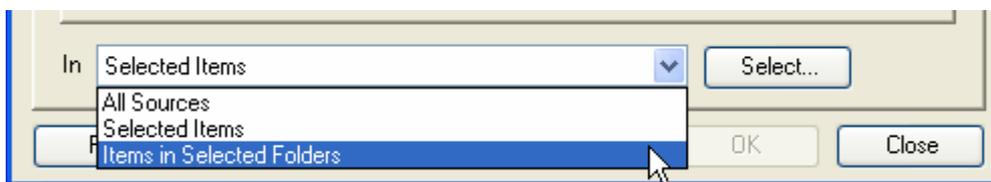
I know this is sounding repetitious, but please, **be careful!** It is essential to interpret these mechanical searches and use their results with great care. Check the warnings in *Handling Qualitative Data* Chapter 8.

5. Scoping a query

An important feature of the Query Tool is that you can always ask where you would like this search to “go” – what data records do you want to focus on? Using the ability to *scope* is critical for qualitative research, so it’s worth taking time to learn the tool. Query without scope is a blunt instrument.

You can set the scope for any query to any item(s) or any folder – or to any existing set of documents and/or nodes. In two searches, scoped differently, you might compare two parts of your project. (If you have different folders for interviews and focus groups, run a search through documents in each. Now you can see if the issues were discussed differently in the focus groups.)

For text search query you can also scope the search to text and or annotations. (This option is not in coding queries, since annotations can’t be coded.)



To narrow the scope of a query

1. Return to the Query Tool, and **Text Search Query**. Open the query you saved earlier.
2. Check the **Query Options** tab: if you left the defaults, you asked to **Search In Text Of All Sources**.
3. Select to **Search In Text and Annotations**. You have broadened the scope of your query to look for the words specified in annotations as well as main text.
4. Now to get Text and Annotations “**Of**” just some particular data. In the dropdown list, select **Selected Items**.
5. In the **Select Project Items** box, select a set (e.g. your set of sources and nodes containing the name Mary).
6. Run the query again and check the results. You have found all occurrences of that text in any project items whose name contained “Mary”.

Using Sets in Query work

The scoping of query processes is a very important role for Sets. Particularly if you are doing a series of searches for text or queries about your coding across part of your data, you will be assisted by making a set of the items to be searched. The set can be selected immediately from the Query Tool.

Note, sets can be the **input or output** of a query.

- You can scope your text search or coding query to a set;
- You can save any or all of the items in any list view to a set.
- Results of any Find or Query can be saved as a set. This means you can scope a new search to what you found in the previous search.

Remember, Sets can contain sources and/or nodes (which code parts of sources.) Simply create a set to identify the records you want to search.

6. Using Query for your project

No tutorial can lead you to the searches you need for *your own* project. Now that you know the basic tools for searching text or coding, you need to set out in plain language the searches you would like to do at this stage in your project.

For advice on framing and conducting searches in plain language, and logging what they find, see Chapter 8 of *Handling Qualitative Data*.

As a final exercise for this tutorial:

1. Make a table whose first column is of plain language questions to ask using Find or Query.
2. In a second column, record the Find or Query to be used. Use the online Help to locate the operators that will get at the answer to your questions.
3. In a third column, record the scope to be set for the search.
4. Run these searches, and record in a fourth column what you learned.



Of course you must back up your project, but this time, before you do so, tidy it up. You probably have many search results nodes from playing with the Query Tool.

Remember that Results nodes cannot be altered, so the only reason for keeping them is to return to examine the result of that query, or compare with a subsequent query. If you don't expect to need them, write in a memo about what you learned and delete these records of searches you don't need to keep. If any results nodes are to be kept and developed, by adding more coding, they must be moved into the Trees or Free areas. Move them (using cut and paste, as in Tutorial 6,) and rename them sensibly. Add a description to record how each was made – it's all part of your project's log trail.

This concludes Tutorial 8. For considerations of using these specialist tools, and interpreting them, go to Chapter 8 of *Handling Qualitative Data*.

You now have data, linked to other material and to ideas via coding, and know how to make catalogs of nodes and models to show logical and theoretical relations, and how to search the records and their coding.

The next task is to use the ability to search your documents and your coding for different purposes, to show and interrogate patterns. So the next tutorial is about matrices.

NVivo 7 Tutorial 9:

Exploring Patterns in Matrices

As a qualitative project develops, researchers need a range of ways of seeing the “big picture”, an overall “story” or a pattern. Many of the software techniques in earlier tutorials will be used at this stage, and your writing in memos will be all important. But one search technique is often critical for seeing or exploring synthesis or patterns.

This tutorial teaches just that one technique – making qualitative matrix displays – and how to use them in your project.

For a wider discussion of the challenges of seeing the “big picture” of your project, either in an overall “story” or a pattern, and for discussion of matrices in the qualitative literature, go to Chapter 9 of *Handling Qualitative Data*.

To review the uses of matrix queries, go to the online Help.

The idea of a qualitative matrix.

Tables are a very familiar way of showing the relation of one lot of features to another. In your project, you may be looking for a pattern of how people’s ideas vary by a demographic characteristic, for example, or how one group of nodes pattern “onto” another, as represented by your coding.

Start this tutorial by asking which of the “seeing” processes you are exploring in your project could be assisted by matrix display. Write the question in plain language first.

My question here, (in this highly inadequate early stage in my project) might be: “does education pattern the images of volunteers?” I’ve an attribute for education and all cases have values allocated (return to Tutorial 3 if you need to revise attributes.) And there are nodes for the images of volunteers.

Matrices in NVivo

Matrix coding queries create tables to compare multiple pairs of items you specify, in ways that you specify. Like any other Query (see previous tutorial) a Matrix coding query can be restricted to a scope you specify. And like any other query, it can be saved.

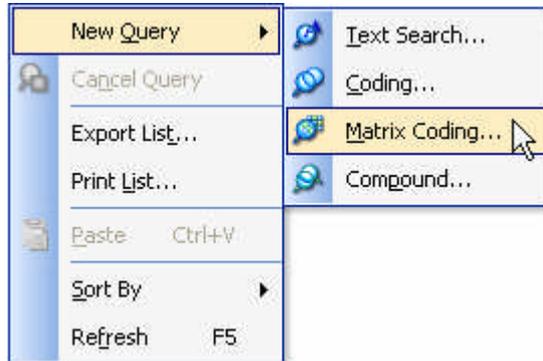
It’s called a matrix *coding* query because matrices are made of nodes that code data. The items you specify for rows or columns are nodes, and the cells of the table will contain data coded at the combination of those nodes you specify. *For example if you ask for the AND operator, the cells will contain content coded at cases with this education value AND this image node.*

Columns or rows can be coding categories of any sort – free or tree nodes that represent concepts, or relationships – or cases, chosen for their attribute values. *I wish to compare images (nodes) by education (an attribute) I specify the nodes for images, and the nodes for cases that have the required values of the attribute.*

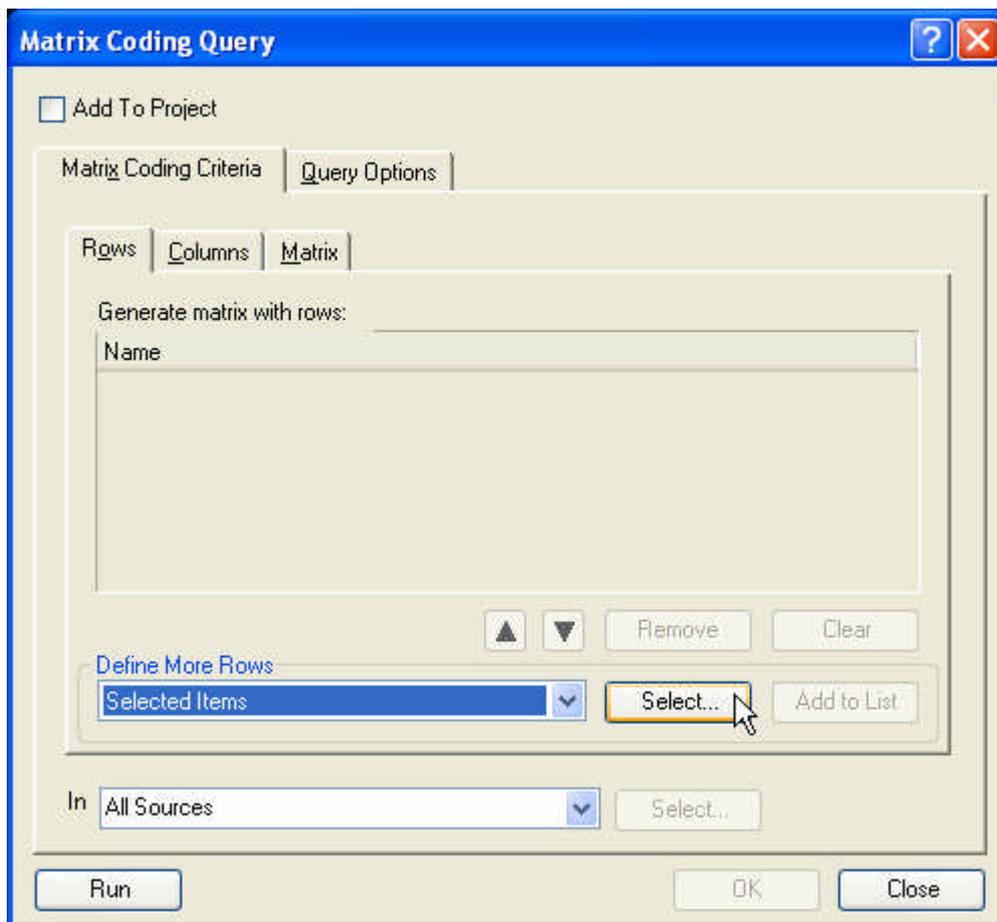
And the result, the table, is also nodes. A new node is created for each cell in the matrix. You can open the node and explore all the material gathered there.

1. Making a matrix

1. In Navigation View , click on **Queries**. Click in the **List View**
2. Use the **New** button, or from the **Project** menu, **Context** menu, select to make a **New Query.> Matrix Coding**.



The **Matrix Coding Query** dialog box is displayed with the **Matrix Coding Criteria** tab in focus. This dialog is different from those in the previous tutorial because a matrix has rows and columns – and a relation between them.



To set Rows and Columns

In the tabs for **Rows** and **Columns**, you specify the items to display as headers in your matrix.

In the **Matrix** tab, you will specify how these are to be related. Click through the tabs to get familiar with this process.

1. In the **Rows** tab, you will define the items to be displayed as row headers, and click **Add to List**.
2. In the **Columns** tab, you will define the items to be displayed as column headers, and click **Add to List**.

(See below for advice on selecting the nodes for rows and columns.)

3. In the **Matrix** tab, you will specify the relationship between rows and columns.

Finally, as in every query, you can set a scope. Select to search **In** all Sources or just selected items or folders.

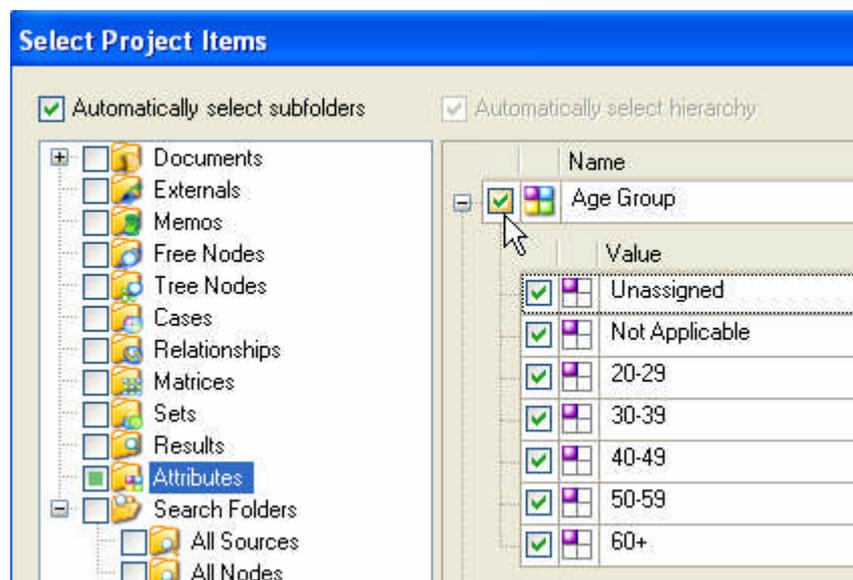
4. As for other queries, to save it, you can click the **Add to Project box** and the **General** tab will appear for you to name the query and add a Description.
5. Then to run the matrix, you click the **Run** button. The matrix will be displayed in **Detail View**.

Now that you know the steps to a matrix, here's how to specify what will appear in the rows and column headers.

To specify attribute values

You can choose from two ways:

1. In the **Matrix Coding Criteria** window, for either rows or columns, choose **Selected Items** from the dropdown list and click **Attributes** in the **Select Project Items** window.
2. Click the box beside the attribute whose values you want as rows or columns. *All* values of that attribute are selected. Unclick any you don't want.



3. Click **OK**.
4. Back in the **Matrix Coding Criteria** window, click **Add to List**.

Note, if you don't want all the values, it may be quicker to select them individually:

1. In the **Matrix Coding Criteria** window, for either rows or columns, choose **Attribute Condition** from the drop-down box then click Select.

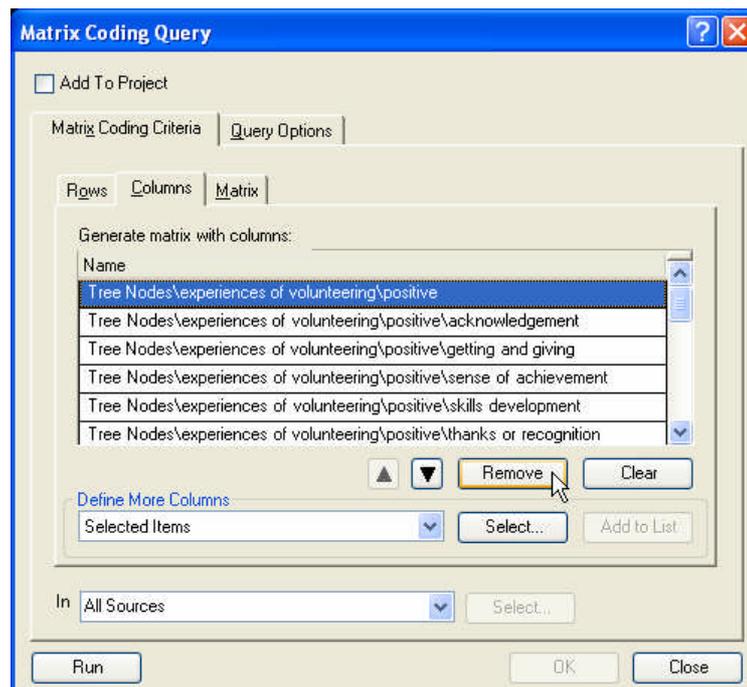


2. Choose in turn each value of an attribute you want as a row or column, and **Add to List**.

Note the wording: in the example below I am asking for *content coded by any case where Education=primary*.

To specify Tree or Free Nodes

1. In the **Matrix Coding Criteria** window, for either rows or columns, choose **Selected Items** from the dropdown list.
2. Click **Select**, and then select the nodes you want.
3. To select all the nodes in a tree or subtree –click **Automatically select hierarchy then select the parent node and all the descendents will be automatically selected**. You can then unclick any child nodes you don't want, or Remove them from the **Matrix Coding Query** list.
4. Click **OK**.
5. In the **Matrix Coding Criteria** window, click **Add to List**.

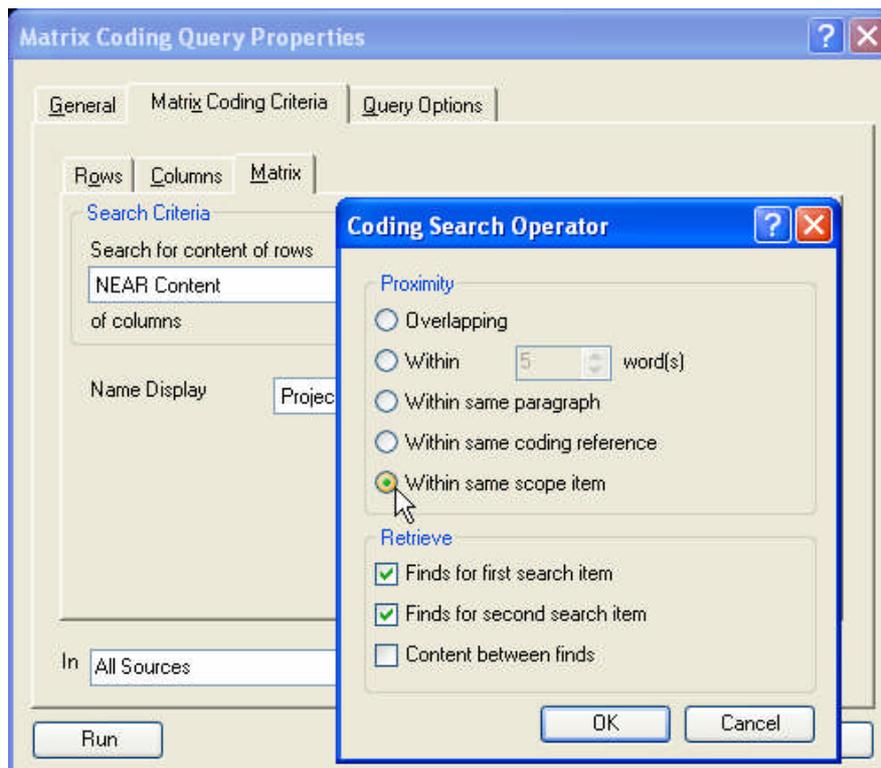


To specify the relation between rows and columns

1. In the **Matrix** tab, set the **Search Criteria**. For example, **Search for content of rows AND of columns** if you want the intersection of the two.

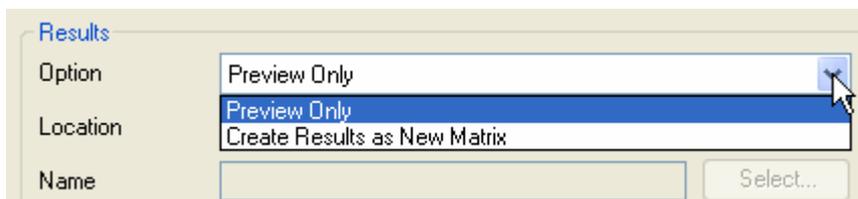
You can choose from three Boolean operators – **AND**, **OR** and **NOT** and three proximity operators – **NEAR**, **PRECEEDING** and **SURROUNDING**.

2. If you chose a proximity operator, select from the Options – e.g. how near is NEAR? Below, the specification is **Within same scope item**. It will find for example, for each cell everything coded at the row item if there is something coded at the column item in the same document or node if they are part of the scope you specified.



To set Query Options

1. Click the second tab, **Query Options**. As for any Query it provides options to preview or save. But for Matrix, there is only one save option.
2. Select whether you will preview or **Create Results as New Matrix**.



A matrix is saved as a node for each cell. If you create results as a new matrix, it will appear in the **Results** folder. You can move it to the **Matrices** folder in **Nodes** if you wish to keep it. Or if you wish to alter the nodes that code the cells separately, move it to the **Trees** area.

2. Using your matrix.

For most qualitative research, the critical purpose of building such a table is to return to the data and try to understand and interpret the pattern.

To save a previewed Matrix

If in the **Query Options** tab, you asked to **Create Results as New Matrix**, it was saved either in **Results** or in the **Matrices** folder of **Nodes**. But if you selected **Preview Only**, and now wish to create the matrix, it is not lost.

1. In the **Detail View** of the matrix, right mouse and select **Store Query Results**.
2. Locate and name the matrix and if relevant, store a description.

To work with the matrix

1. In the **Detail View**, first adjust the table so that the row and column headings can be seen. (Go to Help for advice.)
2. Right mouse click and select **Matrix Cell Shading**. The matrix appears with shading indicating density of coding.
3. Now explore the options to show in the cells – number of sources, or cases, words, or coding passages represented there, and a choice of percentages. Select the one appropriate to your purpose – the shading changes.
4. Right-click on a selected cell. Remember, it is a node, so you can open it in the **Detail View** to see all the content coded at that cell's node.

	A: acknowledgement	B: getting and giving	C: sense of achievement	D: recognition	F: emotions
1: Country = Aust	1	4	5	6	3
2: Country = US	1	2	1	3	2

Thus the cell being opened in the illustration above will show you everything coded at “sense of achievement” if it was said by a participant from Australia.

country by pos atts - Results Pre

<Documents\Interviews\Bernadette> - § 1 reference coded [100.00% Coverage]

Reference 1 - 100.00% Coverage

Q.1 Current use of time

*In an “ordinary” week, how do you currently spend your time?
(What takes most time, how much time spent on work, family, leisure etc...?)*

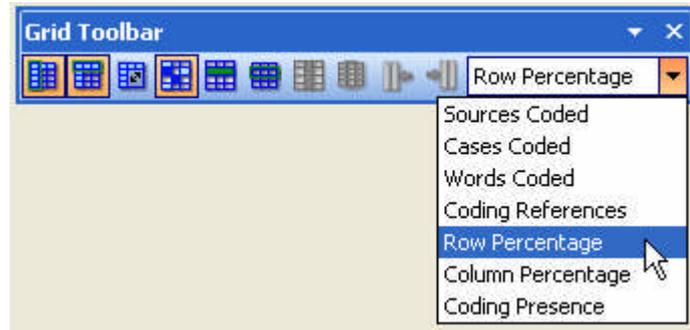
Work? I’m retired now. But no, I guess I see my volunteer work as work

Family? Now my children have all grown up my family responsibilities are fairly small. All my grandchildren live in other cities, so I’m not roped into baby sitting and the like. Yes – there’s still shopping, housework etc – keeping a home. But I’m not too fussy about that. Maybe amounts to 1 – 1.5 days per week.

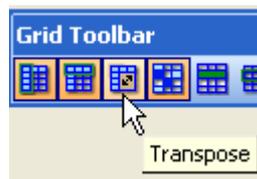
Leisure? Well now I have two free days a week just to do whatever I want. A lot of reading,

The contents are coded at a node for that cell, and you can code on from it just as you would in any other node.

- Now, another toolbar. The **Grid** toolbar allows you to use buttons for common tasks in any grid or table. As for any toolbar, check what the buttons offer and tailor it if you wish. Or look for them on the right mouse button Context menu.



In the example below, the table is transposed, so attributes are columns.



The toolbar option to hide columns is being used to hide cases with primary education, whilst the researcher concentrates on the difference between what is said by the more numerous secondary and tertiary educated participants.

The image shows a screenshot of the NVivo interface with a data grid titled 'Images of Volunteer'. The grid has columns for 'A: Education ...' and 'B: Ed...'. A context menu is open over the 'Education' column, showing options like 'Export Result...', 'Open Cell...', 'Copy', 'Links', 'Sort By', 'Row', 'Column', 'Transpose', 'Reset Settings', 'Matrix Cell Content', and 'Matrix Cell Shading'. The 'Column' option is expanded, showing sub-options: 'IDs', 'Hide' (highlighted), 'Unhide', 'Filter...', 'Show All & Clear Filter', 'Move Left', and 'Move Right'.

	A: Education ...	B: Ed...	
1: adventurous	1		
2: commitme...	2		
3: community ...	3		
4: elderly, reti...	4		
5: energetic	1		
6: financially ...	1		
7: free of com...	1		
8: have spare...	3		
9: helping the...	2		
10: lonely	3		
11: outgoing	0		
12: passionate	2		
13: politically i...	1		
14: privileged	0		
15: respected	0	0	0
16: self indulg...	3	0	3
17: social tour...	2	0	1
18: young	3	0	1

3. Saving and exporting the matrix

Like Results nodes, Matrix nodes can't be altered by you – to do this would be to falsify the matrix. A matrix remains unalterable whether it's in Results folder or the Matrices folder of Nodes.

But if you move it to Matrices, this is a way of ensuring it is safe in your project. Like any nodes, it can have a linked memo to describe the pattern you are seeing.

If you are interested in any cell or cells, and want to keep working with them as nodes, copy them and paste into the Trees area, where they become “ordinary” tree nodes, and you can code more at them or delete coding from them.

Using the matrix in reports

As you move through the processes of “seeing” the project, matrices may be very important. You can keep them as nodes in your project, and view them on the screen at any time. But you also can copy and paste them into a word processor report or PowerPoint presentation.

- To view and use the content coded at any matrix cell, you can copy or print it from the Detail View, or make a report on it as for any node.
- To print the whole matrix, from the **File** menu select **Print**. (Check first the dimensions of this table: you might waste a lot of paper on a long thin table.)
- If you want to include it in a written report or a PowerPoint presentation, or to import this data into another package, simply copy all the content and paste into a Word document. you need to Export the matrix. In your class report or project write-up, you can include this table since it can be opened in Word or Excel.

To export a matrix

1. Select the node that contains the matrix (either in **Results** or **Matrices** folder, as you specified) or select the matrix in the Detail View
2. Right-click and select the mode of export you wish (a text file or an Excel spreadsheet file). The file will be saved where you specify.



3. Open the file in Word or Excel to use as you wish.

	A	B	C	D	E	F	G
1		acknowledgement	getting and giving	sense of achievement	skills development	thanks or recognition	emotions
2	Country = Aust	5%	20%	25%	5%	30%	15%
3	Country = US	10%	20%	10%	10%	30%	20%
4							



You can very quickly build up a large node system by running matrix searches, since each cell in a matrix is a node!

Ensure that you do some node housekeeping after running these searches. A good habit is to move all matrices out of **Results** and into the folder for **Matrices** in **Nodes** if they are of lasting value - and delete them if they are not.

This concludes Tutorial 9.

For more on showing and interpreting patterns in your data, go to Chapter 9 of *Handling Qualitative Data*.

The final tutorial covers other aspects of reporting, ways of getting the results of your analysis “out” of NVivo and into the report.

NVivo 7 Tutorial 10:

Reporting and Showing Your Project

An important process in any project is the “telling” of your project, informally, then formally in a written report. This is needed throughout, not merely at the final stage. Researchers need to be able to report on and demonstrate each stage of a project, and do so clearly and convincingly.

Properly accounting for and assessing your project requires a systematic record of the data relevant to each stage in your analysis and the processes that are significant for each small arrival at a hunch or a conclusion.

Qualitative research moves to creation of explanations or theories in a series of steps and discoveries, building on previous steps and discoveries (*Handling Qualitative Data*, pp 149-150). So these must be carefully logged, their justification must be demonstrated and the accounts of the data supporting them must be thorough.

This final NVivo 7 tutorial suggests ways of using the software tools to report on your data and analysis, extracting the appropriate material for use in your accounts of your data and showing your conclusions and how you arrived at them.

Most software tools suggested here are familiar from earlier tutorials. (In each section I introduce few new techniques). But researchers often fail to put them together to make convincing reports.

In this tutorial you will learn how NVivo can help you:

- Keep and report a “log trail” of your project
- List and review the project items, their content and coding
- Take “out” data content into reports to illustrate or discuss
- Make formal reports on the state of the project
- Show the patterns of analysis in models

The final chapter of *Handling Qualitative Data* is on the “telling” of qualitative research, including advice on doing a writing “stock-take” to learn from your logs and memos and assess any weaknesses or gaps revealed, reporting results, appropriately using quoted material to illustrate and strengthen your argument, and making the all-important case that it is convincing.

The bringing together of your results will involve every part of your NVivo project. To review what you need to know about the ways of seeing documents, nodes, models and results of your searches, revisit Help.

1. Keeping a log trail

To make your log trail as valuable as possible, explore the software processes that can contribute. Your project log trail could use many of the techniques in earlier tutorials, for example:

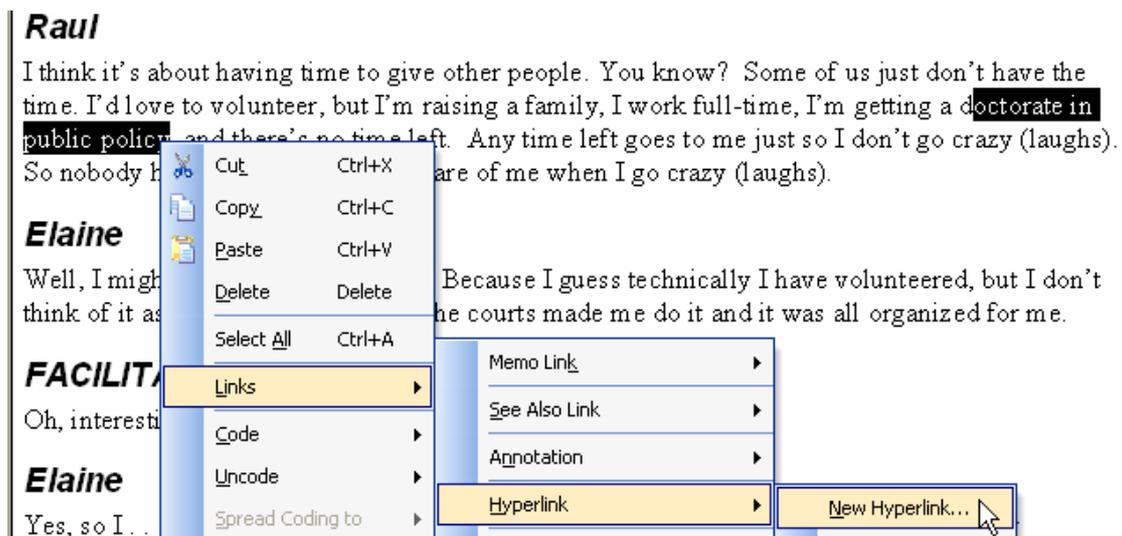
- A Project Journal, edited at various stages in your project to show the progression of ideas, concepts and the state of your data. Use **Links** to other data to keep in touch with the development of those ideas.
- **Memos** on key concepts or significant data sources. You can create memos to capture your thoughts about data, concepts, research procedures and so on. When a memo is related to (or inspired by) a particular source or node, you can create a **Linked Memo**.
- **Static models** of important categories at various stages in your project. These will remain as a record after project items or your interpretations are altered.
- Details of the results of the queries you have run at various stages of your project and their contribution to your analysis. Store descriptions at the **Results** nodes or memos if you move them into the **Nodes** areas.

Consider the following further techniques:

To link your trail to the data

Qualitative reports present a web of evidence. Webs are well kept on computer with hyperlinks.

- Use See Also links to point from your memos or logs to the evidence they refer to.
- Familiar hyperlinks are a simple way of keeping the threads of evidence available to be followed. Hyperlinks can be imported in a Word document, or added (and of course removed) in a source in NVivo.





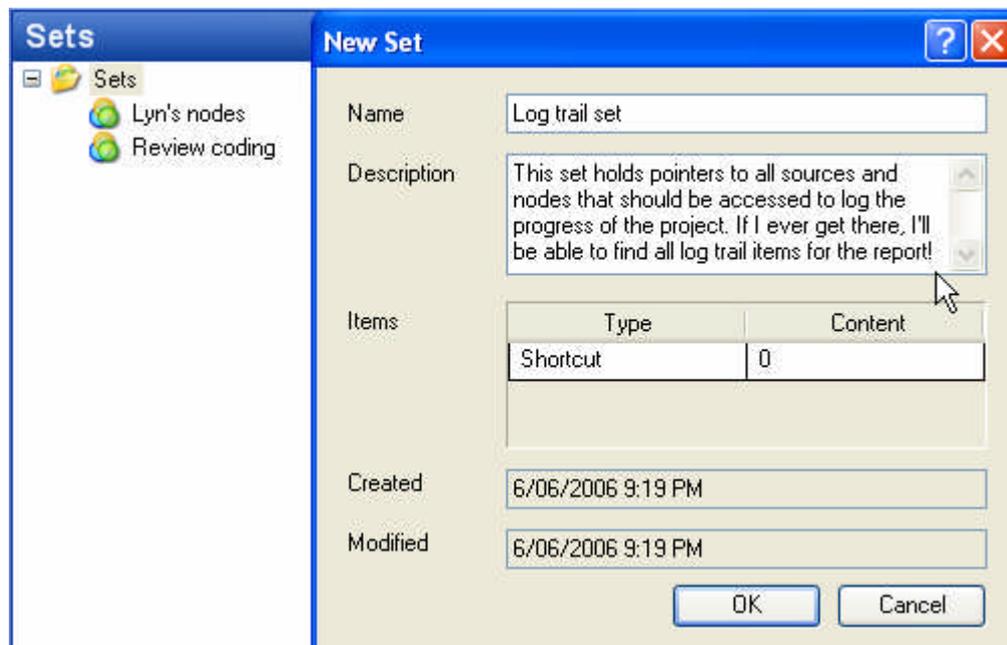
Warning: of course if web site addresses change or files are moved, hyperlinks are broken. If you are linking to files that are stored on your computer and are central to the project, create a special folder on your computer for those files, so you can move them together with the project.

Consider using **Externals** to handle hyperlinks, especially if you are linking often to the same site. An external can represent a web site (and contain your ideas about what is there) and every time you want to link to it, you link to the external. If the hyperlink is broken, you need only update it once, by changing the external file address.

To keep access to all materials for your Log Trail

Find and **Query** are tools you will use many times on the trail of hunches or hypotheses. To keep a record of that trail is very valuable. It can be a memo on the hunch or an entry in your Project Journal. Use the following techniques from earlier tutorials:

- Make **memos** for significant results nodes. Use the fact that NVivo dates their creation to keep the story of this search trail.
- Archive your plain language record of what you were asking via **Query**, and what you found. Save Queries to rerun and assess their results in different bodies of data – and keep a record of what you found.
- Store **matrices** in their own folder in the Nodes area and write memos for them.
- Use the ability to make a **Set** of any sources or nodes to keep in one place pointers to all the “log trail” items you will wish to access as you write up your report.



2. Listing and reviewing the project items

The project changes every time you have an idea. How to report adequately on this shifting material?

The **List View** of any project items is the first place to go. In any **List View**, you can

- View and review all the items, opening them in **Detail View** as needed;
- Click at the top of a column to sort the items according to any column (here, which interviews are coded at fewest nodes – should I revisit those?)

Interviews	
Name	Nodes
 Nick	51
 Sunil	56
 Ken	61
 Phoebe	69
 Grace	89
 Mary	 113
 Anna	120
 Fredric	144
 Bernadette	147

- If the items in a **List View** are sources and/or nodes, save the items as either a set or a node or add them to any set or node. Use this to build another query – how do *these* cases respond to a different question....?

To print or export a list

From any **List View**, you can print or export a list of the items in that window. To do this regularly is a useful way of logging the development of relationships or nodes.

The list can be exported to Excel or Word as a table – and columns selected and saved as a text document.



If you wish to print or export a list of all tree nodes, not only the ones currently showing, open the parent nodes so the child nodes show in the **List View**. **Alternatively, click on the folder All Nodes and print from the list view.**

3. Printing, Reporting and reviewing your sample

You can print or export the Casebook that provides, in table form, the list of all cases in your project and the values of all attributes that apply to that case.

1. From **Tools** menu, select **Casebook>Open Casebook**
2. The Casebook opens in **Detail View**. Use the **Filter** icon on any column to show or hide cases to suit your reporting needs.



Note that only attributes whose values are numerical can be filtered with requirements including "greater than" and "less than".

3. In the **Casebook Filter Options** window, select which cases you wish to show or hide.

	A : Age Group	B : Country	C : Current pai...	D : Currently v...	E : Education
1 : Cases\Anna	20-29				
2 : Cases\Annette	40-49				
3 : Cases\Annie	20-29				
4 : Cases\Bernade...	60+				
5 : Cases\Elaine	30-39				
6 : Cases\Grace	20-29				
7 : Cases\Marie	30-39				
8 : Cases\Mary	60+				
9 : Cases\Olivia	50-59				
10 : Cases\Phoebe	30-39				
11 : Cases\Roberta	30-39				
12 : Cases\Rosa	40-49				
13 : Cases\Stepha...	20-29	US	None	No	Tertiary
14 : Cases\Ther...	60+	US	Retired	Unemployed	Primary

4. From the **File** menu, select **Print Preview** if you wish check the dimensions of what you are about to print. Either transpose the table or select Landscape layout if the table is too wide for a page. Then select **Print**.

To list all cases with an attribute value

For many sample review purposes, you may require a detailed list of the numbers and names of cases with a particular attribute value – e.g. how many women in your study and who are they? This is a job for an Attribute Summary Report.

1. From **Tools** menu select **Reports>Attribute Summary Report**
2. In the **Customize Attribute Summary Report** window, select the attributes and cases you want a report on. Click **OK**.
3. The Report opens on the screen. See below on handling Reports.

4. Taking content “out” of NVivo

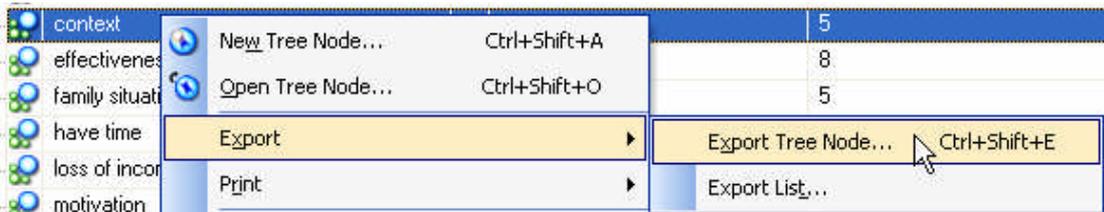
The usual edit tools apply in a source or node **Detail View**: **copy** and **paste**, using icons or fast keys. Note hyperlinks remain live in pasted text if you copy and paste from an NVivo source to a document in Word. But annotations are lost. If you want the full detail of the text, it is better to export the item. You can export to a Word (or .txt or .rtf) file.



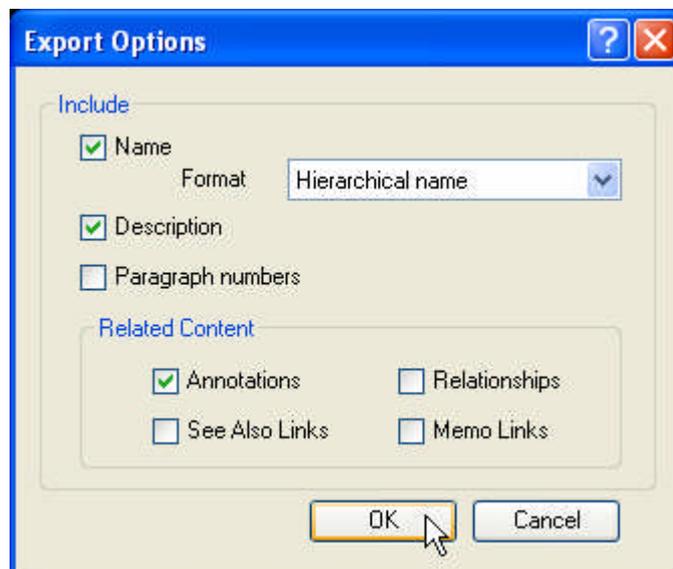
A qualitative report should not be merely a patchwork of quotes. But of course you do need appropriate quoted material. You also need to know where quotes came from – context may be all important. Consider using a node for this purpose, coding there for example “material to quote in current report”. The node Detail View shows the source, and from the node you can jump to the context. You can export the node when you come to write the current report.

Exporting project items

1. Select the source or node you wish to export.
2. From the **Project** menu, select **Export Item**.



3. Select the options you want. Click **OK**.



4. In the **Save As** dialog, specify name, location and type of file. Click **OK**.
5. Find and open the file. If you asked for Annotations or See Also Links they will appear as endnotes.

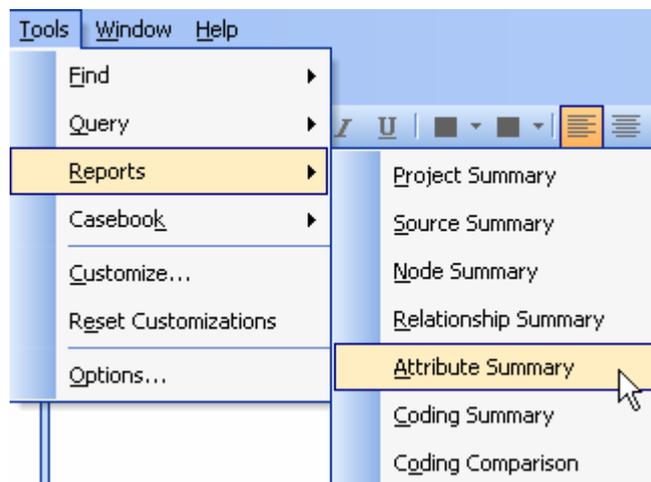
5. Making Reports

You can make more formal reports from NVivo on any aspect of your project.

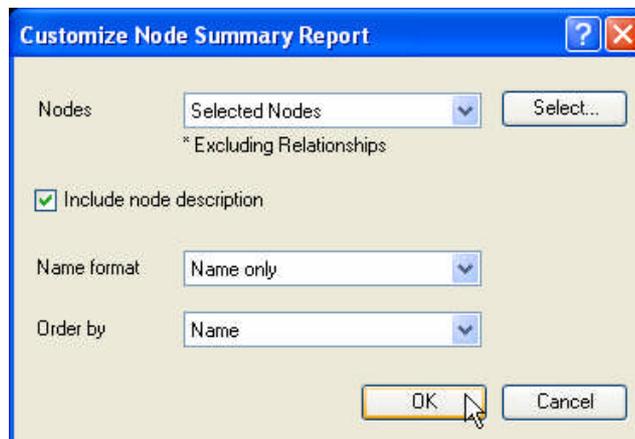
These appear on the screen as formatted documents, and can be printed. If you want to save and edit them, they can be exported as Word files, to be opened in your word processor and incorporated in your writing report.

To make a report

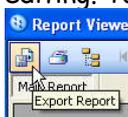
1. From the **Tools** menu, select **Reports**.
2. Select the report you want: you can make a Project, Source, Node, Relationship, Attribute or Coding Summary Report. And also the Coding Comparison report described in Chapter 5.



3. In the **Report Options** window select – *carefully* – what is to be included.



The report appears on the screen and can be printed or exported. Note, the reports generated from the Reports menu are not freely editable. for saving or editing. To get an editable version, click the top left corner icon to Export Report,



and select to export to Word.

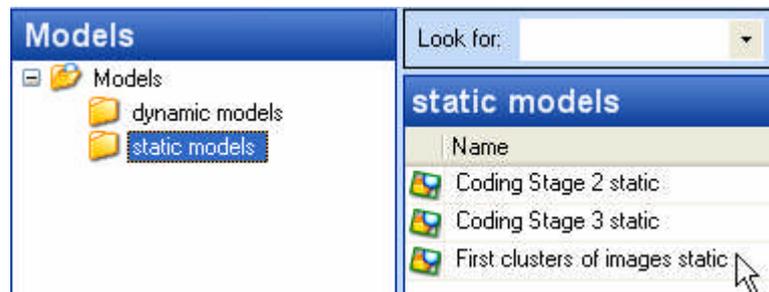
6. Showing with Models

Finally, as you move towards a final report, use the visual ways of showing the project in part or as a whole in static and dynamic models.

To use static models

Saved static models allow you to show visually the stages in your analysis. The model made last month may contain nodes you have since merged or deleted, or relationships that proved insignificant. They will not appear in a dynamic model, since they are not in the project. But they are still there in a static model.

1. Click in the **Detail View** of the model you wish to save as static.
2. From the Project menu select **Create As>Create As Static Model**.
(Remember the advice in Tutorial 7 to make a special folder for static models.)
3. Name your model and describe it – so you'll find it again and know why you saved it as static. (Note its icon is different from the dynamic model's icon.)



4. As you save static models, write a memo for each, summarizing why you saved it, what it shows, and the changes between this and other models.
5. Use these models to display and discuss the development of your project.

To use dynamic models in NVivo displays

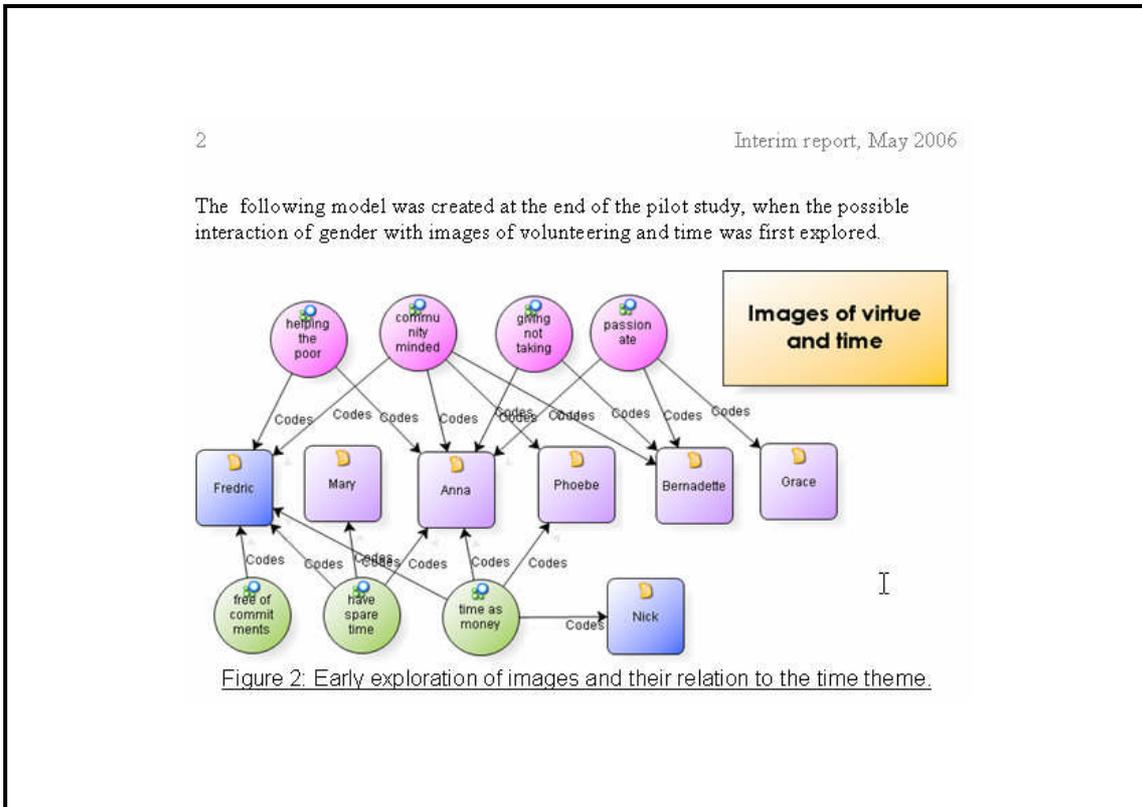
For an onscreen display, or a projected illustration of a report, consider using NVivo, rather than the standard format of PowerPoint.

1. Make a model that summarizes the aspects of your project you wish to address.
2. Make groups to represent the stages or parts of the project, and display them separately, then together, as you tell its progress.
3. Place in the model a node that codes critical quotations; open that node from the model when you want to show the data behind your conclusions.

To copy models into other applications

1. Select all of a model (Ctrl+A) or part (select just the items you want) and from the right mouse context menu or the **Edit** menu or toolbar, select **Copy**.
2. Go to the location in another file – a word processor document, PowerPoint slide, etc, and there select **Paste**.

- The model appears in the new location with color, shading and detail as it was in NVivo. (Note it is not dynamic – the items are not live to the data, and can't be moved around.)



This concludes the final tutorial in NVivo 7.

Go to Chapter 10 of *Handling Qualitative Data* for advice on logging your project, reporting your progress and justifying your conclusions.

Go back to the introduction to this series for advice on further sources of information about research processes using the software, and ways of working further with it.

**Happy researching –
and please don't forget
to back up your project!!**