



Shaping your project

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Shaping your project

A major message of the previous section was that NVivo's tools can be used concurrently, so the process of exploring data need not be a process of picking up one tool, then putting it down and starting with another. Rather, as you become familiar with the toolkit, many things can happen at once. Moving now to detailed analysis of a second, and probably a third data document, you will find it easier to integrate these processes. The discipline of careful reading, memoing and coding establishes a framework for considering further documents. This process is greatly helped by good “housework,” as documents and/or nodes start fitting together. Documents can be grouped to differentiate different sorts or sources of data. During the routine established with your first data document—annotating, linking, memoing and coding—a coding system begins to “emerge”. This involves no magic: it is simply the result of your synthesis, as you see categories and subcategories going together. You may also want to group some nodes—ones often used in combination during coding, or to facilitate viewing coding.

In this Part you will begin to use NVivo's tools for organizing nodes in Trees and documents and nodes in Sets, to manage and shape them as a support to the processes of coding and reflection.



Creating more documents

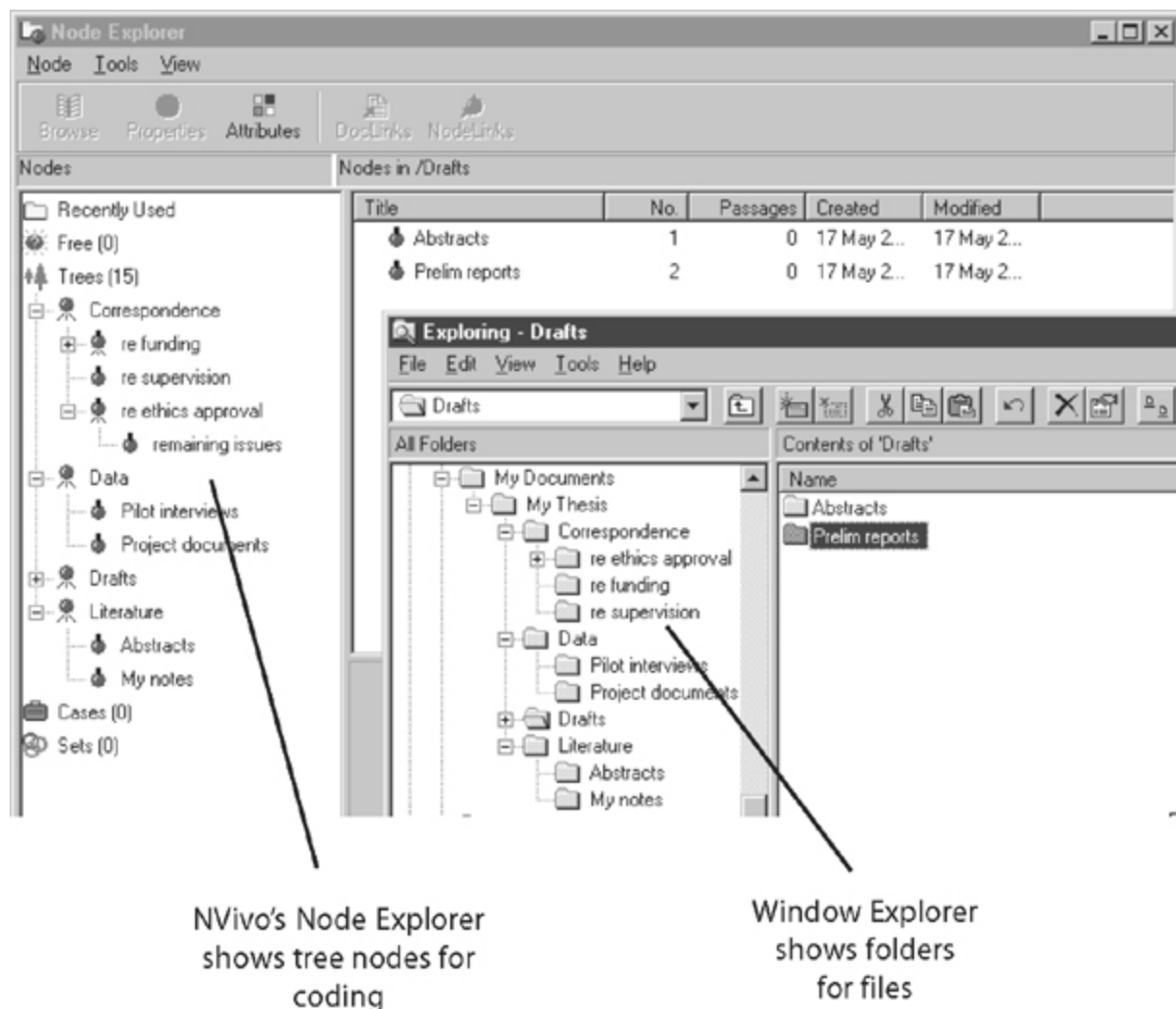
For the tasks in this Part, you need at least two documents! You may have been concentrating until now on only one or two documents or have created or imported several. Researchers (and methods) differ in the pace of data making. For some methods it is appropriate to undertake detailed examination of each data document, building up ideas from it, before deciding where to go next and how to interpret the next data items. For other methods, rapid accrual of data can accompany broad-brush coding and later revisiting of patterns. (Check which your method requires.)

Create or import a further document, or more than one, noting its attributes, as relevant for your project. If you wish, record any insights gained from a rapid reading of the document in a document memo.

Nodes in Trees

As you work with the detail of a further document, as well as creating new Free Nodes you are likely to find that you want to create a node as a subcategory of another node, or to place it under a more general concept. Free Nodes have no subcategories, but can at any time be moved into places in Trees. In the Researchers Project, references to education or past work experience were each references to aspects of the speaker's background. If they are brought side-by-side under that more general category, the researcher will be alerted to different dimensions of background experiences, possibly adding further subcategories. Again, in the data explored so far, Elizabeth and her family were seen to view research activity in different ways: research was seen as discovery, and as something that really affected people's lives. These could be seen as two dimensions (or subcategories) of images of research.

NVivo allows for the creation of Tree Nodes which can be hierarchically structured with categories, subcategories and any number of sub-, sub-categories. Just as directories and subdirectories in your computer filing system help you to organize your files, Tree Nodes help to organize your categories into conceptual groups and subgroups.



You can use the hierarchical organisation of nodes for any purpose. (In the example above, node trees indicate sorting of categories exactly like those managed in folders). NVivo, like NUD*IST 4, uses the languages of horticulture and of the family to describe these relationships between categories. (Pat reckons this is because Lyn is a family sociologist who likes gardening! Lyn retorts that this language is regularly used in index systems.) A tree has branches and, in horticulture or library index systems, the points at which it branches are termed nodes. A node and its subcategories can also be referred to as a *parent* with children. Thus, in the Researchers project, background would be referred to as a *parent* node, and education as a *child* of that *parent*. Work experience also is a *child* of background, and a *sibling* of education. In NVivo, the way of recording the full family (hierarchical) title of education, in this case, is /background/education. Every node is therefore identified by both its specific title and its family location.

In Part 7 we return to ways of organizing concepts in tree-structures. For now, the emphasis is on managing nodes as you need them for coding.

Coding with Tree Nodes

Most researchers are greatly helped by working with trees to make the nodes easy to find and logically

ordered. The arrangement of nodes is, of course, flexible, so that the trees can be rearranged to reflect changed perceptions and growing understanding. At first it can be useful to make generous use of Free Nodes, so as not to jump too early to a structure, but there are times, too, when structure is more obvious. Location of nodes in Trees often occurs when you go beyond a descriptive category to think about why you are interested that category—the broader concept becomes parent to the particular.

When you use Trees in NVivo, they help clarify the logical relations of concepts. Such clarification is helped by a principle of one-code-one-concept. So, for example, if the text is about a researcher's encouragement from colleagues, it is clarifying to code this text at two nodes, expressing that these are two different *sorts of concepts*, colleagues and encourage. These may later be organized in two separate trees. Colleagues are people (or actors), while encouraging is something people do, so might go into an actions tree. Perhaps, if you are focusing on the issue of encouragement as you write a paper, you will want to see all of the text to do with encouragement (from anyone) together. Or you may want to search for occurrences of another theme, for example conflict of roles, anywhere that the text is also coded for encouragement. With separate nodes for each concept *and the application of multiple nodes to the text*, you can use the Search Tool to answer those questions, or to find all the times it is, indeed, colleagues who provide encouragement (and when they don't!). By contrast, if one code had carried the two concepts (e.g. “encouraging colleagues”), these more subtle questions could not be asked. Perhaps, even, the possibility that not all colleagues encourage would be overlooked!

At first it is challenging to remember all the tools you can use while still thinking about the data, but there is no requirement to make use of all of them yet. As you code, keep in mind that you can also use memoing, internal DataBites and coding as ways of recording your thinking about what it is saying. With practice, helped along by a little patience and a lot of inquisitiveness, you will find you reach for the tool you need for each purpose. And the coding tool will become easier to use as your growing list of ideas becomes organized into Trees of nodes.

Create a Tree Node in the Speed Coding bar



- Having imported a new document, open it in a Browser.
- Highlight the passage to be coded.
- Type /parent/child (substituting your names for parent and child, e.g. /background/ education), and press Enter.

As with Free Nodes, your typing will appear in the Speed Coding slot, and NVivo will create a new node and code the highlighted passage to it, but this time it will be a Tree Node. The node icon in front of it is blue, rather than violet.

- To check out where the new node is located, open the Coder.
- Scroll down to where you see Trees. Double-click there, and it will expand to show the new “top-level” Tree Node you have created.
- Click on the + next to that and the subcategory, or child node, will show underneath it. (If you select that node, the text coded there will be highlighted in your document.)

Create a Tree Node without coding

- Highlight Trees in the Coder or Node Explorer.
- From the right mouse button menu, select Create Tree Node. A new Tree Node will be listed under Trees.
- Click on the title of the new node (Tree Node) and type in a new title for it.
- To make a child of that node, highlight the node and from the context menu, select Create > Child Node.
- Rename the node, as before.

Coding at existing Tree Nodes

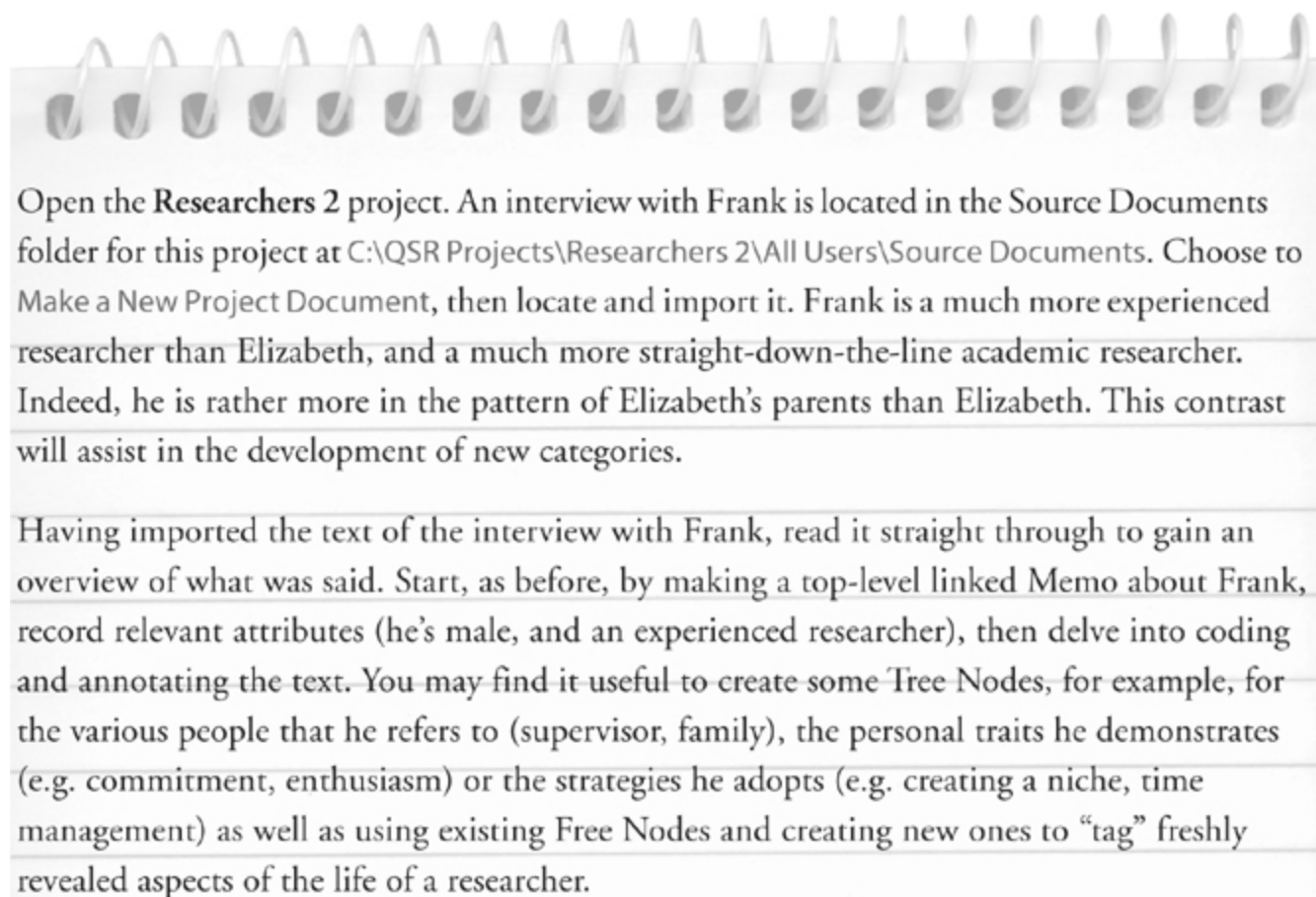
- Highlight the passage to be coded.
- Select the Tree Node in the Coder or the Node Explorer, or from the list of Recently Used Nodes in the Speed Coding bar. *Or*, type its full hierarchical title into the Speed Coding slot (including slashes).
- If you can't find the node wanted, type the first few letters of its title into the slot near the base of the Coder, and click on Find. The node will be shown, highlighted.



Don't press Enter during this process. Highlighting text and typing into the slot then pressing Enter is a quick way of creating a new node!

- In the Coder or in the Speed Coding Bar, check the desired node is selected, and click Code. *Or*, in the Coder or Explorer, drag the node to the highlighted text, or the text to the node.

You can, of course, continue to make and use Free Nodes during this process, and you *may* choose to do so exclusively until you have finished working through several documents and developed a strong “feel” for the structure of the data. Or even, if your nodes are few, forever! If you find you've created the same node as both Free and Tree, don't worry too much—they can be moved around and merged without loss of coding as you continue to work.



Open the **Researchers 2** project. An interview with Frank is located in the Source Documents folder for this project at C:\QSR Projects\Researchers 2\All Users\Source Documents. Choose to Make a New Project Document, then locate and import it. Frank is a much more experienced researcher than Elizabeth, and a much more straight-down-the-line academic researcher. Indeed, he is rather more in the pattern of Elizabeth's parents than Elizabeth. This contrast will assist in the development of new categories.

Having imported the text of the interview with Frank, read it straight through to gain an overview of what was said. Start, as before, by making a top-level linked Memo about Frank, record relevant attributes (he's male, and an experienced researcher), then delve into coding and annotating the text. You may find it useful to create some Tree Nodes, for example, for the various people that he refers to (supervisor, family), the personal traits he demonstrates (e.g. commitment, enthusiasm) or the strategies he adopts (e.g. creating a niche, time management) as well as using existing Free Nodes and creating new ones to "tag" freshly revealed aspects of the life of a researcher.

Moving nodes

Inevitably, with the creation of Tree Nodes, you will want to move some of the Free Nodes already created. Perhaps in seeing that this category belongs with that, you will have created the same category as both Free and Tree Nodes, while other existing Free Nodes clearly have a place in the new Trees (colleagues belong alongside family and supervisor as a sub category of people, for example). Nodes can be merged or moved to allow for flexibility and development in thinking about them, as well as to maintain clarity. Cutting and merging a node will remove a duplicate by combining the text references that are at the source node (say, at the Free Node) with those that are at the target node (the Tree Node). Cutting and pasting a node allows for a Free Node to be moved into a Tree while retaining all the coding at it.

The Node Clipboard will hold only one node at a time, so make sure you have placed the node you cut before cutting another! If you feel insecure, use Copy rather than Cut, but then you will need to go back and delete the original after you have successfully placed the copy.

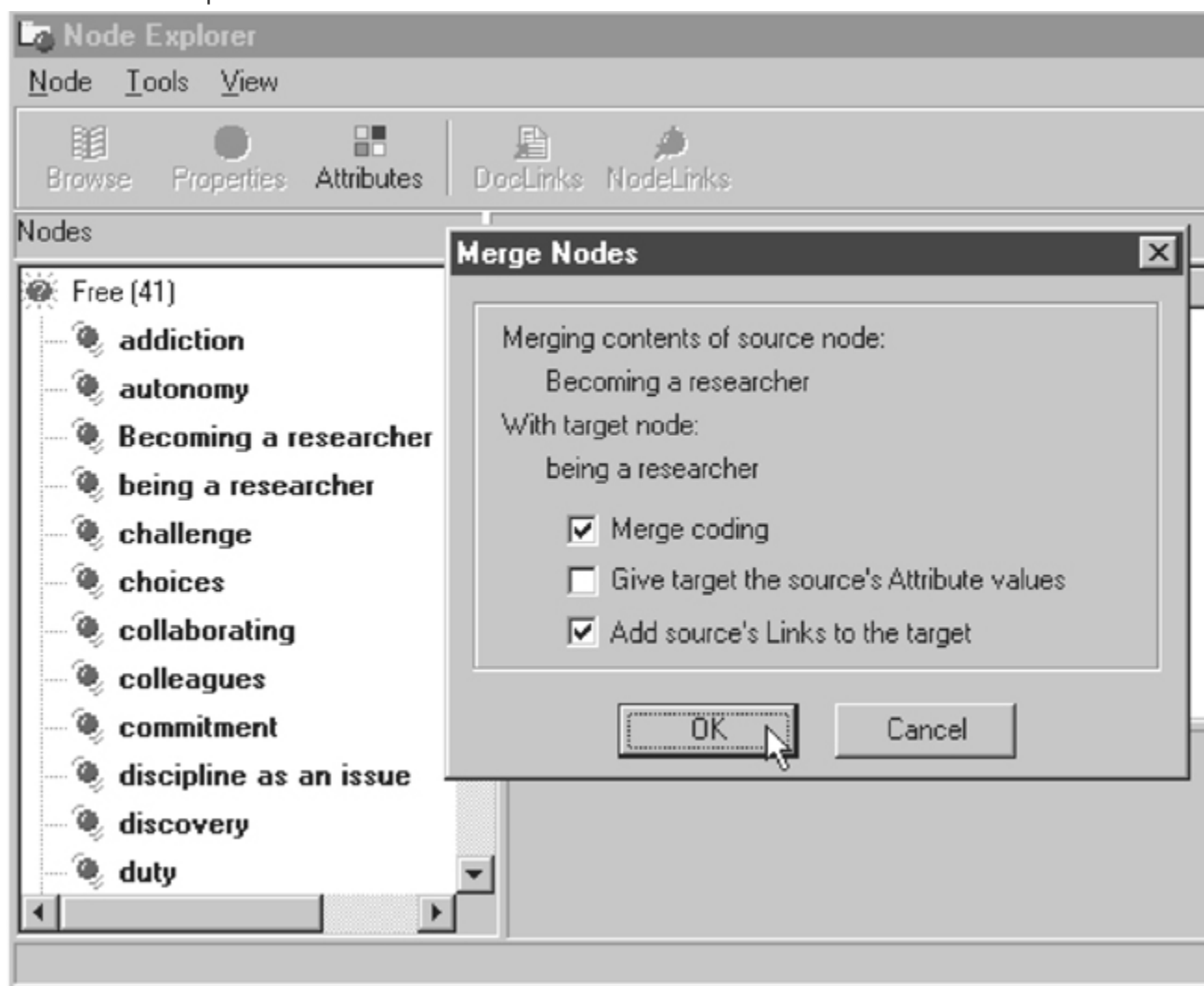
Cut and Merge a node



- Working in the Node Explorer, select (highlight) the node you wish to merge with another (the “source” node).
- From your right mouse button (context) menu, select Cut.
- With your left mouse button, select the node you wish to combine it with (the “target” node) by clicking on the node's icon.
- From the context menu, select Merge Node. Check in the Merge Nodes dialogue that you have identified the correct nodes. Click OK to indicate that you want to transfer the coding and links of the node you are merging.

Cut and Paste a node

- Working in either the Node Explorer, or the Coder, select the node you wish to move.
- From the context menu, select Cut.
- Select the tree (or branch) you wish to move the node into, and from the context menu, select Paste. It will be placed as a child of the selected node.



Sets of documents

Most projects have heterogeneous documents—this is the nature of qualitative data. Document Sets help in organizing and managing data sources by grouping documents that share common features. Sets provide a quite different way of managing data from coding. Whereas coding brings together *segments* of documents about a topic to enhance understanding of that topic, sets bring together documents that share some feature. You can filter sets, changing them at will, you can work with sets to shape your research processes. Sets are particularly useful when it comes to searching data, making it possible to limit the scope of a search to just the required documents.

Sets can be part of the research design, planned for use throughout the project. Or they can be quite temporary—constructed, perhaps redefined, then deleted, according to the need of the researcher. It is likely that any document will end up being in more than one set. For example, a field researcher, or an archivist, may wish to create sets of documents relating to particular sites. In team research, different team members may wish to create sets of the particular documents they have been working with, to allow for separate analyses later. In the Researchers project, early data was derived from existing interviews with researchers and notes from the literature, so Document Sets to hold each of these will distinguish them from each other or from, say, focus group or survey documents that may be introduced later in the project.

NVivo automatically creates two sets—memo and non-memo documents. When you make a memo document, it is automatically placed in the memo set. Other sets are established by the researcher—and added to quite simply—in the Document Explorer. Or they can be created much more subtly at any time by using the Set Editor to filter and select documents. The Document Explorer is adequate for now.

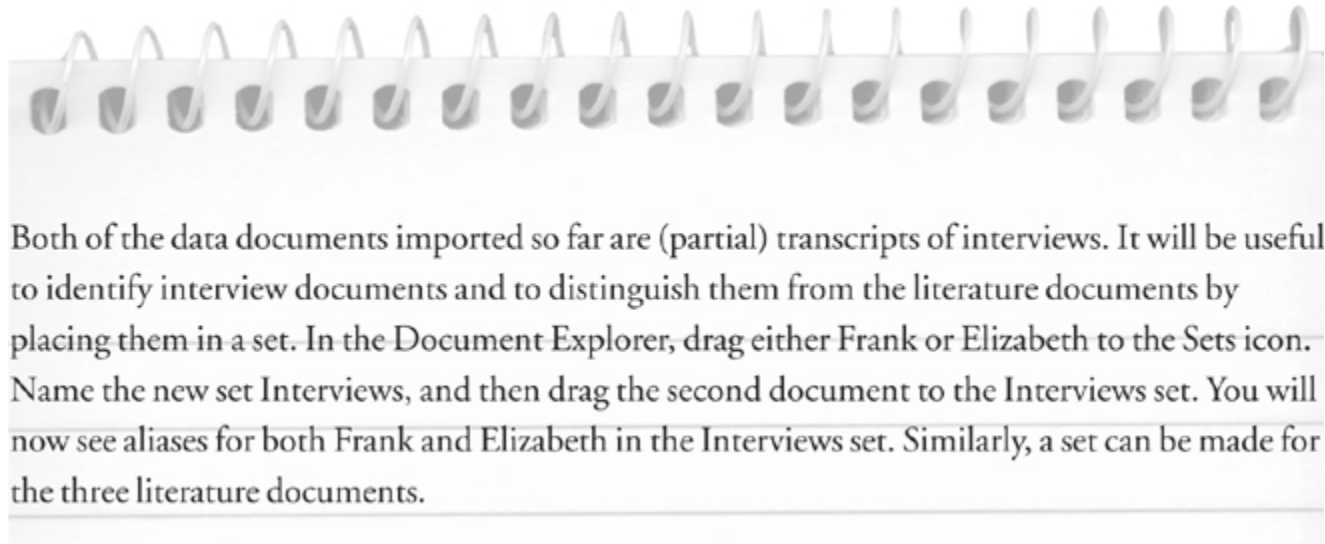
Make a new set in the Explorer



- Open the Document Explorer, and expand the list of All Documents (or have them showing in the right pane of the Explorer). You will see there is now quite a collection of several sorts of documents—your Journal, the document(s) you have already coded, literature or field notes you recorded, memos you have created.
- Highlight an interview (or another kind of document you have been working with), and drag it to the Sets area, below All Documents. Confirm that you do want to Create a new set using [document].
- Double-click on Sets, to see your new [Untitled] set. Click on Untitled Set, and name it, e.g. “Literature” or “Interviews”. Note that the set contains not the document you dragged to it, but an alias for it. The document itself is still listed under All Documents.
- If other documents belong in the set you have just created, highlight them and drag them there.

Otherwise, create a further set for those documents.

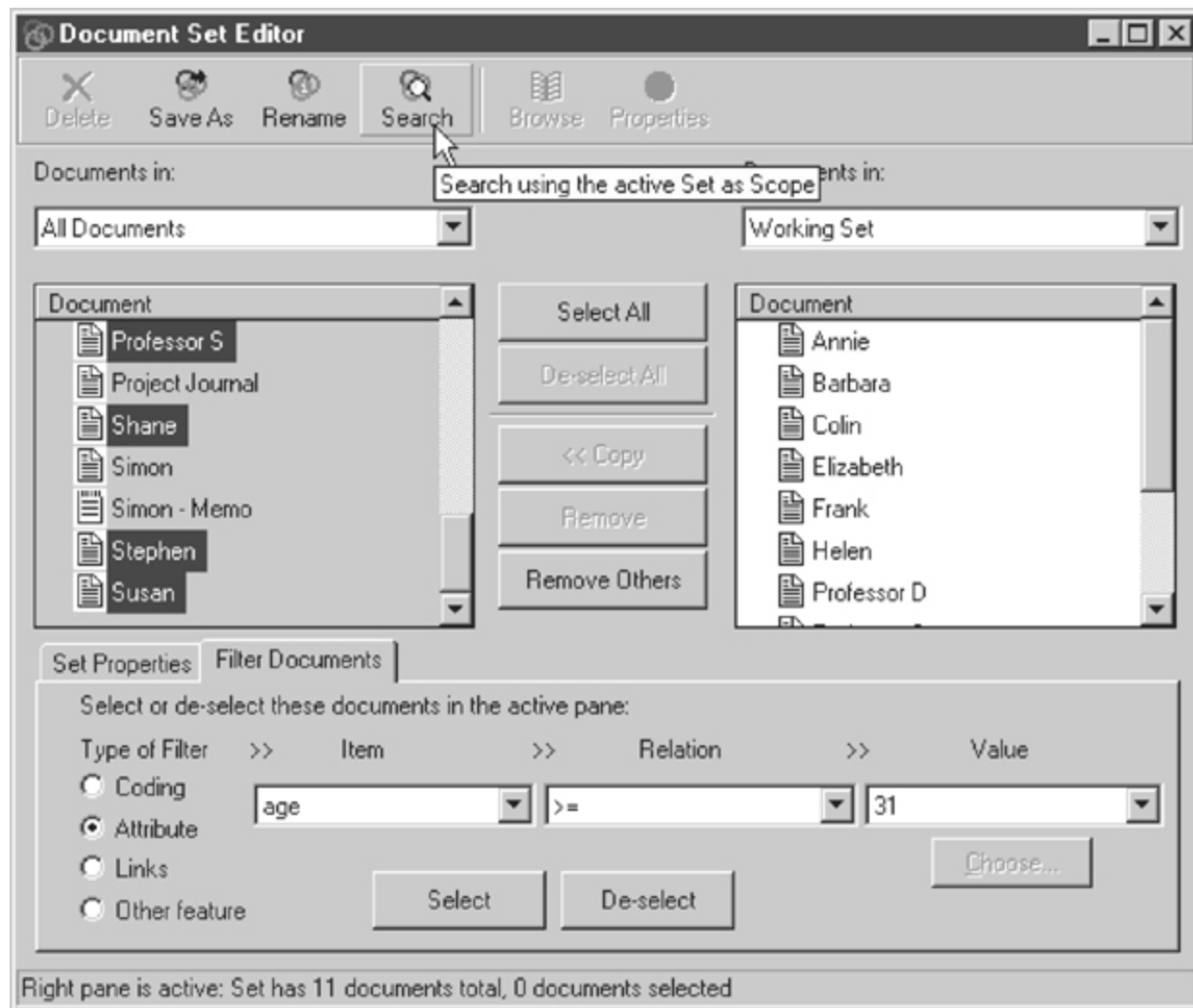
New documents, or others you create, can be added to this set when they are brought into the project, simply by dragging them to the set icon. The same document can be in any number of sets. You can multiple select documents listed in the right pane of the Document Explorer.



Make a new set in the Set Editor

You may wish to make a set by more subtle processes of selection. Qualitative work may involve bringing together, for example, all of the documents with a certain feature, or those not coded at a category.

- On the Project Pad, select Documents and Make or Change a Document Set. The Set Editor for documents opens. It has two panes so documents can be copied from one set to the other. The left pane will show the set of All Documents by default while the right pane will display the Working Set.
- If necessary, click on the right pane to make it the active pane (white, not grey), then Select All and Remove to empty the Working Set.
- In the left pane, select any documents that you wish to add to a new set and Click Copy ≥ to add them to the Working Set. Those documents will appear in the other pane.
- To make a new set of the items in the Working Set, click the Save As icon at the top of the Set Editor and name the set.



Using Sets to direct a Search

Sets of related documents can be used for many purposes. One of the most useful is to restrict the scope of questions you might ask. This is most important in qualitative work, since it allows you to point a search to just some data. For example, you might want to ask, “What do I have on a topic in my own notes (or from the literature), and how does it compare with what is said in the interviews?”

To ask what you have on a topic usually requires simply browsing the node. But even early in a project, you might like to ask the subtler question of what you have in a particular body of data. To set the scope for any question, you go to the Search Tool.

Meeting the Search Tool



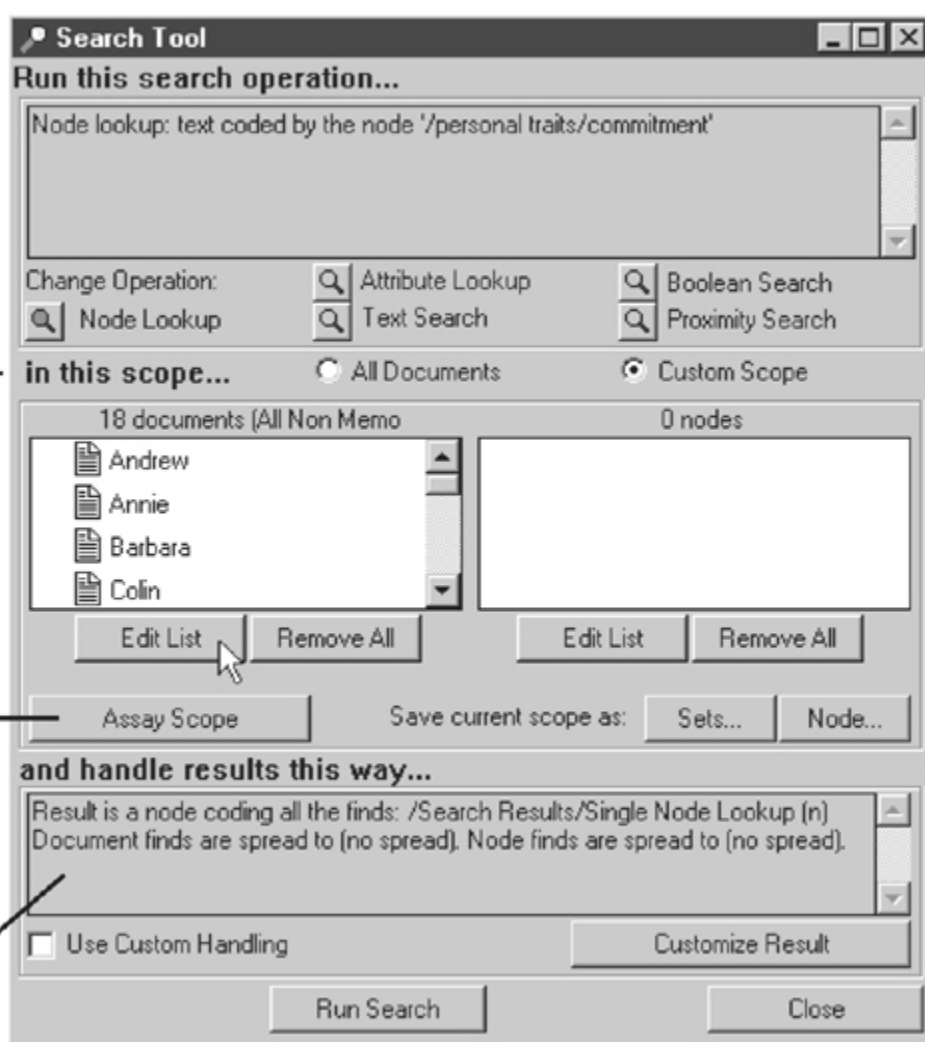
- From the Project Pad, choose Search Project Database to open the Search Tool. It has three panels, in which you can specify three things; the operation, the scope of the search and how the results should appear.
- Click on the search operation buttons . The first three are simple—just looking up a node, an attribute or particular text. The two on the right side offer a range of more subtle searches, the logical Boolean ones or ones about proximity.
- Click on the buttons in the second panel. NVivo allows you to “scope” a search to particular documents or nodes. When you ask for a Custom Scope and choose Edit List, you are taken to the Set Editor to edit a special set of documents or nodes for the search.
- Click on the ‘Customize Result’ button in the third panel and you will see that NVivo will code the results of your search at a node you select, with any “spread” of context you request.

What do
I want to
ask?

Where do
I want to
ask it?

What have I
got here?

What do I want
to do with the
results?



Specifying and scoping a search

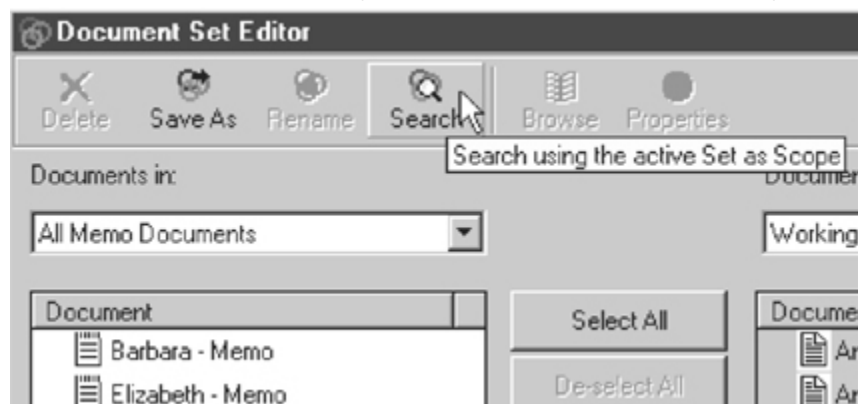
For now we need the simplest search, just the text at a node. But we want it only in memo documents.

Run this search operation...

- From the operations, select Node Lookup. You are asked to Choose a node. (Choose one where you have coded material from your own notes.) Click OK.

...in this Scope

- Choose Custom Scope. Below the list of documents, choose Edit List.
- You are taken to the Document Set Editor. Here you could make a working set for your scope, choosing just the documents you wish to search. But if you already have a set of documents for the scope you want, you can simply select it. From the pull-down list above the active pane, select the set of All memo documents. Only memos now show in the active pane. (If there are none showing, it is because none of your documents have the property of being a memo!)



- Click the Search icon at the top of the Set Editor. You are returned to the Search Tool, with your node lookup still specified but the scope now showing only your memos.

...and handle results this way

No need to change this; the default is that NVivo will code the results at a node it will create under Search Results.

- Click Run Search. A Search Completed dialog indicates how much text was found, and that those finds have been coded for you at a node. Click OK to Browse Node and you will be shown everything from your memos coded at the node you looked up.

To check what's in the interviews, you can simply alter the scope of the search. Select the appropriate set (e.g. all non-memos) in the Document Set Editor. Then, click Search to be taken back to the Search Tool with the new search ready to run.

Sets of nodes

During the early stages of a project, in particular, you will find you are constantly rethinking your nodes, sometimes prompted by modeling and often by new text. A node captures a particular thought, and then as

you work on you find a related theme or concept. Should it be placed in the same node as the first, or in a new node? Or should it be a subcategory of the first node? Often the answer is neither—these nodes merely have “something to do with” each other. To organize them in the catalogue-like Trees is inappropriate. You need a node set.

Like documents, nodes can be shaped into Sets, for any purpose. The set expresses no necessary equivalence or logical relationship. It may merely be a way of keeping together all codes to do with a particular issue or context, or all nodes created on Tuesday or by a team member. Node sets can be used for coding, to scope searches, or perhaps to define a set of nodes to be shown as selected coding stripes. The processes of making them are symmetrical with document sets.

Make a new set



- Highlight one of the nodes you wish to use in your set and drag it to the Sets icon.
- Expand Sets to see your new Untitled Set. Highlight it, click again, and type in a name for the set.
- Drag further nodes to the set as required.



If the document you are coding repetitively requires a particular combination of nodes, you can use the Coder to make a node set for coding. Coding at the set will then code at each member node. Keep them as a Working Set just for the course of that document, and then click on Remove All in the Coder when coding is completed. Once a set is named, the only way of removing it is to open the Node Explorer, select it, and choose Delete Set from either the Tools or context menu.

Use a node set to view coding of selected nodes

Perhaps you have already created a number of nodes around a particular theme, and you want to see how they relate to each other. If these are in a set, you can easily gather (copy) all the text coded by them into a new node. The new node can then be displayed with coding stripes to show what has been coded by any or all of the target nodes. This will help you decide whether to keep these as separate nodes, or whether to combine them as one.

Construct the search

- Use the Node Explorer to create a set of the nodes you intend to include in your search.
- From the Project Pad, choose Search Project Database to open the Search Tool.

Run this search operation...

- Select Boolean Search. From the dialogue's dropdown list (next to Operator:) select Union (Or).
- Click on Choose Nodes. In the dialogue find the set you have just made, then click on Members to Add the nodes to the pane on the right of the dialogue. Click OK. The nodes you have selected will now show in the Boolean Search dialogue. Click OK. Details of the search operation you have set up now show in the top panel of the Search Tool.

in this scope...

- Click on Custom scope. Choose to Edit the list of documents.
- In the Document Set Editor, choose All non-memo documents, or a particular set of data documents you wish to use for this search.

and handle results this way...

- You will not need custom handling.
- Click Run Search.

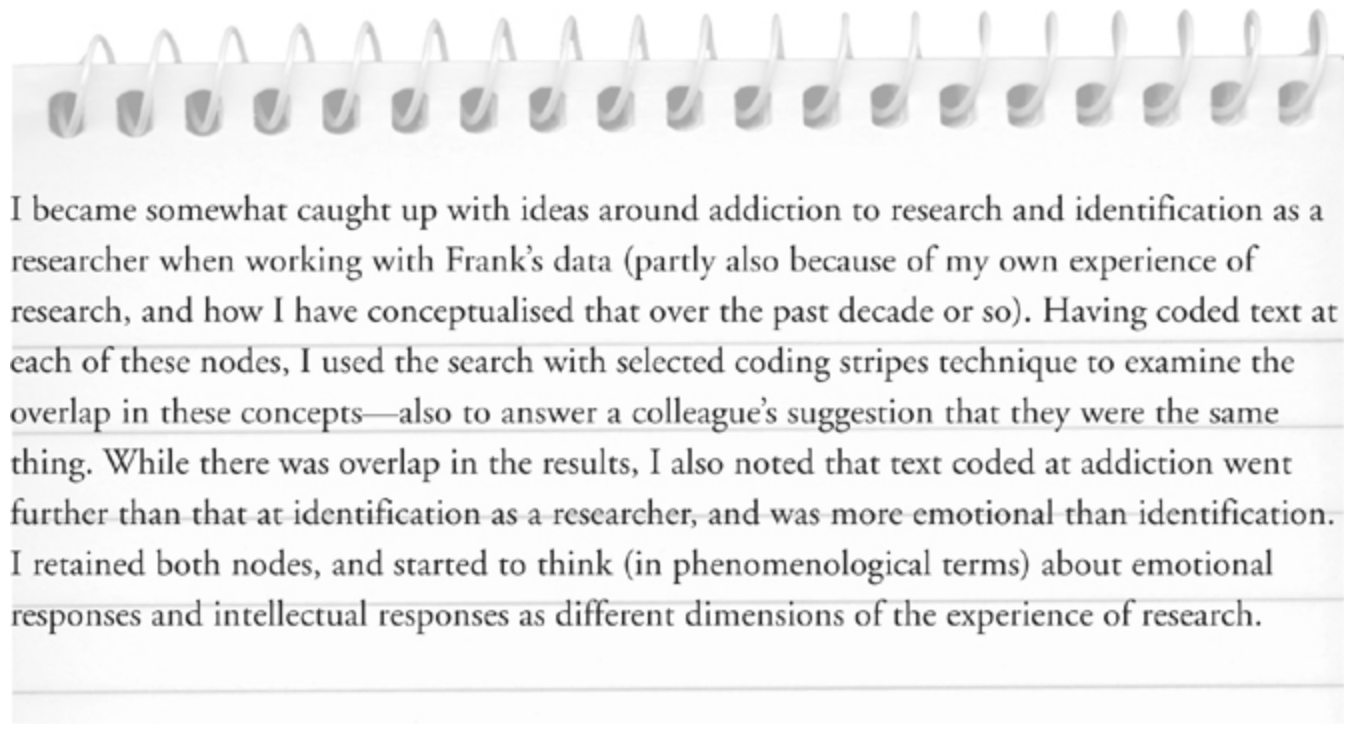
View the results of your search

- Choose to Browse Node. All text coded at any of the selected nodes will be shown.
- From the View menu, choose Coding Stripes. Stripes for all nodes will be shown.
- From the View menu, click on Select Coding Stripes... then double-click on Sets, then once on your new node set to select it. NVivo will now show only the stripes for nodes in that set.

Now you can clearly see whether one node codes entirely different text from the other, or whether, where and how much they overlap. It is then up to you to decide whether the nodes should be maintained as separate entities, or combined—or treated in some other way.

Print the results of your search

- As an alternative to printing a text report of a node, print directly from the Node Browser, with the coding stripes shown on the page next to the text.
- Have the Node Browser open and showing selected coding stripes.
- From the Browser menu, choose Print. Click OK. (Note: you will not be given options about how much you wish to print).



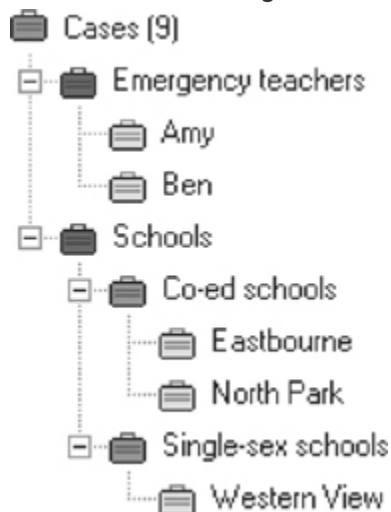
Cases shaped in nodes

It is becoming apparent that NVivo often gives access to data via nodes and sets. To shape the project, gather material up or distinguish different sorts of data, the choice of tools is usually between coding at a node, and gathering material in a set.

A final shaping task may remain if your sources of data come untidily across more than one document. For example, speakers in a focus group are scattered across a transcript, yet you may want to identify all the text belonging to a particular speaker. Case studies in education will include multiple documents or bits of documents about particular schools (where a school is defined as the case), or each class being studied, or students being followed through a course (where students are the cases). If the data for each case was a clear group of documents, you could make a set for each, but it isn't, so how to link all these sources of information for each case being studied?

Rather, identifying cases and viewing these as belonging to case types allows you to gather together everything about a case *and* to have your data organised in several different ways, if that is appropriate to the study. So, if your study does involve repeated interviews with children going through school, you might have Pupils as a case type, with each interview for each pupil coded at a case node for the pupil under that, perhaps along with their teacher's comments about that child, the researcher's observations, and samples of their work. And you may also have Schools as a case type, with the pupil data from each school coded, along with curriculum and policy documents, to a case node for that school. Pupils could be treated either as an entirely separate case type, or as cases within specific schools (thus making school X a case type for the individual pupils of that school).

If data for cases are spread throughout parts as well as whole documents, code each case's data at a node, where it can all be brought together. This is the reason for having a special area in the Node Explorer for Cases. Coding everything about each case at one node will facilitate asking questions not only about that particular case (within-case analysis) but also about all the cases of that type (across-case analysis). A further advantage of this arrangement is that attribute information can be recorded for both Case Type nodes and Case nodes, allowing attributes to be recorded for part documents as well as whole documents.



Creating case nodes



- In the Node Explorer, click on Cases. From the context menu, choose Create Case Type. A node with a blue “case” icon will be placed in the Cases area.
- Click on Case Type to edit its title (e.g. to Participants, or Schools).

If you are working at just one level of case analysis (e.g. for participants), then:

- Highlight the Case Type node (Participants) and select Create > Case from the context menu. A green case icon will be placed under the case type node. Edit its title so that it is named for one of the cases in your study.
- Repeat this action for as many cases as you have in your study.

If you are working at more than one level of case analysis, (e.g. at both the level of schools and of particular classes or pupils), then:

- Highlight the Case Type node (Schools), and select Create > Case Type from the context menu. A node with a red “case” icon will be created. Repeat this action for as many cases of that type (schools) as you have in your study. Edit the title of each red case type node to name the cases at

that level.

- Highlight a red case node, and select Create > Case from the context menu. Edit the title of this (green) case node to the name of the particular case within that case type. Repeat for each case within each case type.

Note: You cannot create further nodes under a case node. If you find later that you want to reorganize your cases under an intermediate case type, this can be simply achieved:

- Create the new case type nodes.
- Click on a case node, then drag and drop it in the case type node where it is to be located. It will be moved so that it now appears under that case type.

Coding at case nodes

If the node is already created:

- In the Document Browser, highlight the text and code in the normal way (use Ctrl A to select the text of a whole document) using the Coder.

To create the case node at the same time as coding at it:

- Highlight the text and type the name of the case type and case nodes in the Speed Coding slot using periods and colons to identify the level, thus. Case Type.Case Type:Case (e.g..Schools.Penrose:Julie).

Giving attributes to case nodes

Revisit the ways of creating attributes and values (Part 4). Nodes are given the values of attributes in exactly symmetrical processes to those used for documents. If you are using case nodes, you may wish at this stage to give them attributes representing what you know of the cases (e.g. gender, age).



If you have a lot of cases, it may be better to concentrate on the detail of your data for now, and P defer organizing it into case nodes until later (Part 8), when we show you ways of working faster with your data.

Taking stock

Each of the ways of shaping data so far explored creates changes in your project. The database changes when you place documents in sets, and nodes in trees or sets. These changes can be used in further working

with your data. None of course are permanent; sets can be rapidly deleted, altered, filtered or re-formed. Trees can be shifted and reshaped. Each shaping tool gives you a different sort of access to data. (Compare with modeling, which offers an opportunity to explore your data visually, to see how your picture changes when you move, hide or group ideas, without impacting on the project database.)

At this stage in a project, the tools available can be used to make it yours—not in a sense of ownership but in a sense of familiarity and belonging. By shaping the data the way you want it, you can become more sure-footed as you explore the increasingly messy and sometimes alarmingly burgeoning data. The goals are variously (for different research styles) familiarity and control, elegance and symmetry. Whatever your metaphor, shaping should bring the data together, in ways that encourage ideas, rather than smother them.

The tools in this Part are tools for synthesis and order, but they should promote, rather than prevent, the development of the data and the emergence of ideas from it. Use the shaping tools all the time, not in dramatic occasional campaigns to win dominance over the data, but in constant conversation with the emerging themes and their relations. Aim for a sense that you know your project, can **see** and **tell** its shape. (Lyn thinks in terms of being able to put your arms round it.) If documents are hard to access, or you forget a group of nodes, shift to shaping again for a while. Now if someone asks you what your project is about, you are likely to be able to answer in less than an hour!

<http://dx.doi.org/10.4135/9780857020079.n5>