NVivo 8 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.*

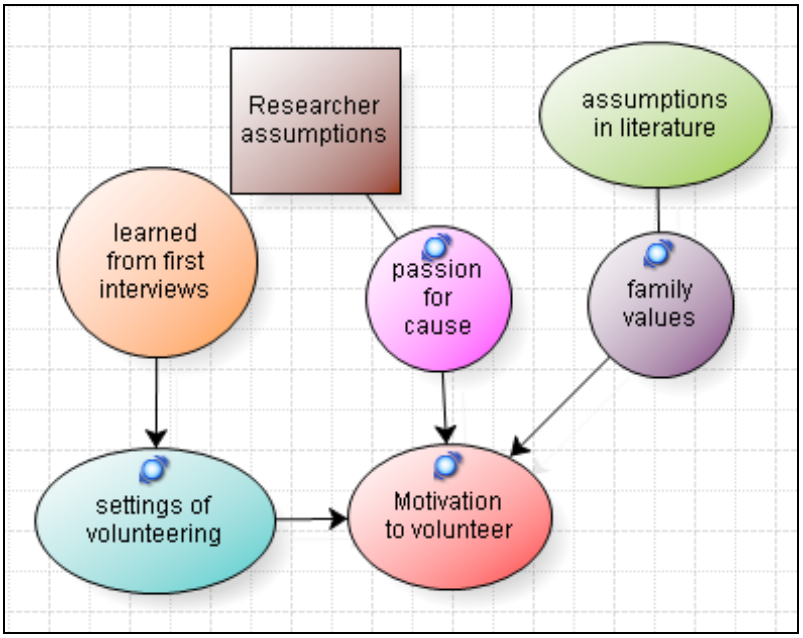
For full instructions about making and shaping models, go to the online Help.

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.



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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.

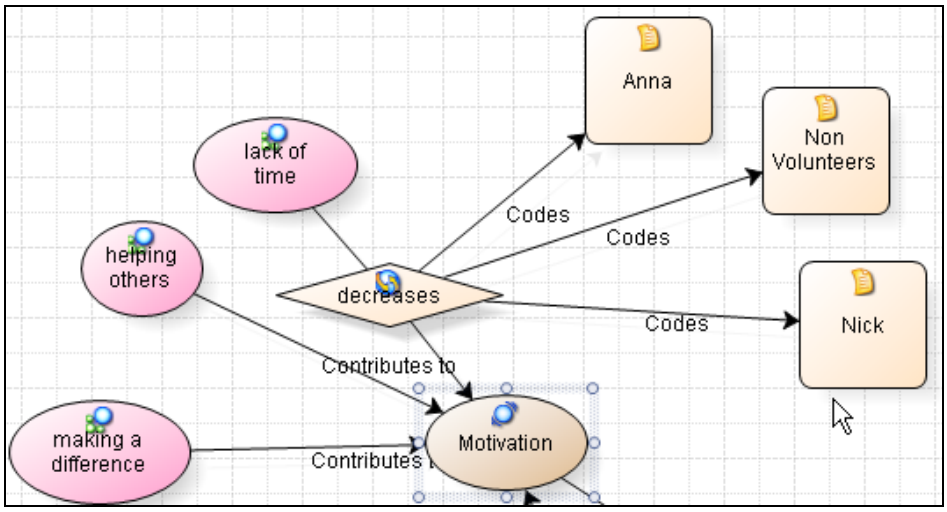
If appropriate, place links by selecting two items to be linked, (Ctrl + Click + Click) then from the right mouse context menu select New Connector.

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

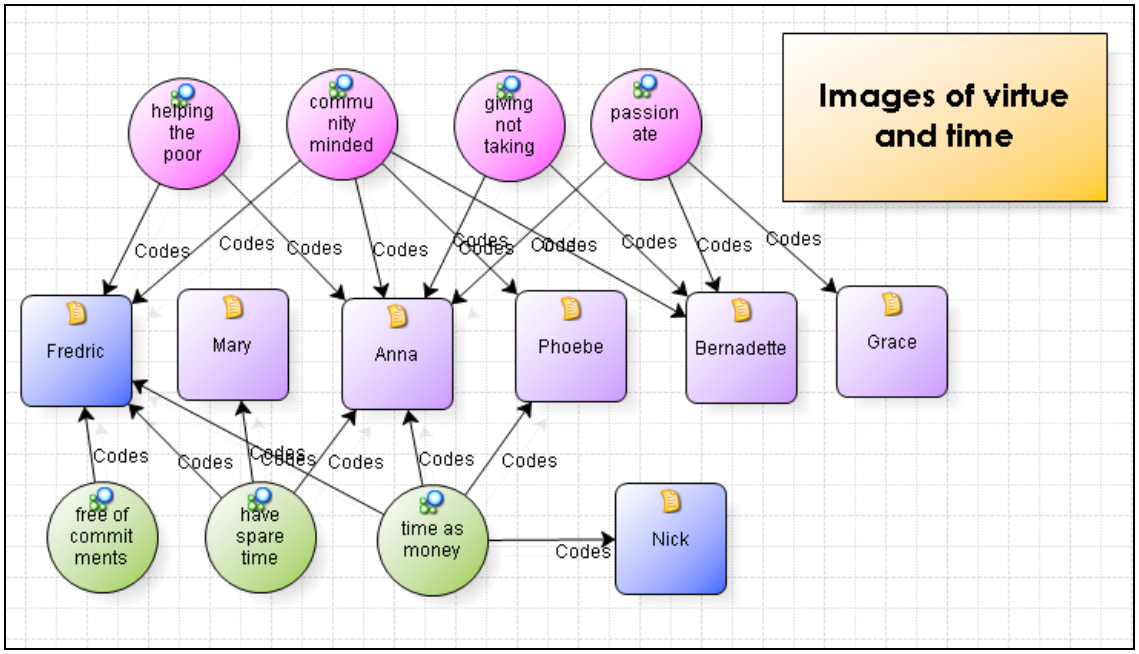
You can also add associated data. What documents are coded at this relationship, for example? Experiment with the effects of asking this for different nodes and watching the ways the patterns of coding are pictured. In this simple example, I have asked which documents are coded at the relationship "lack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

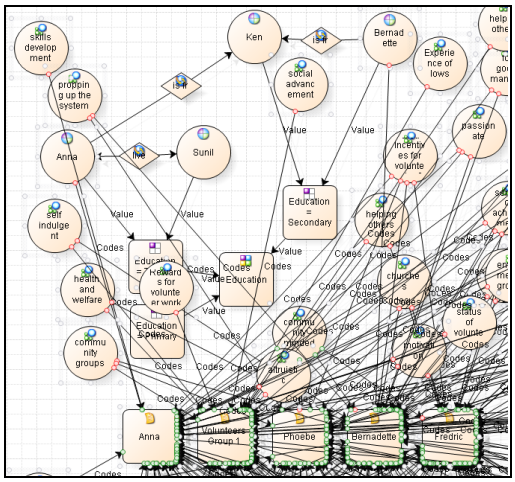


5. Now use the modeler to clarify a pattern. Add to your model the nodes which code contrasting ideas – here, the positive and neutral or negative images of volunteers. Use color to display the contrast (select line or fill color from the format menu).
6. By adding items coded by these nodes, I explore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



7. 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.

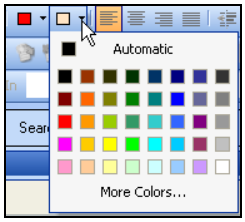
2. Designing the model

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.



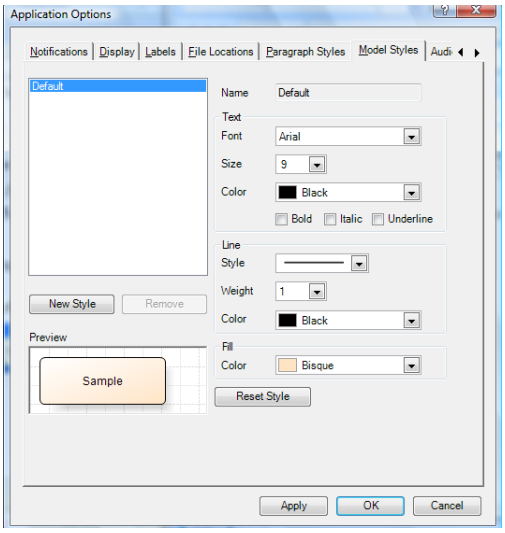
2. From the **Format** menu, you can select font, line, fill or model style. (Note that one Fill option is an image – but beware of inserting very large images in your model!)

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.

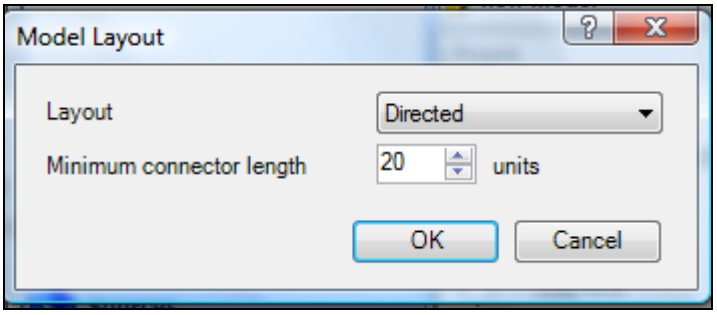
1. In the Welcome window, select **Tools>Options.**
2. Click the **Model Styles** tab.
3. To edit an existing style (including the default style), select it and set the required options.
4. To add a new style click **New Style**, and choose the options you want.



5. Click OK.

To set and change your Model's Layout

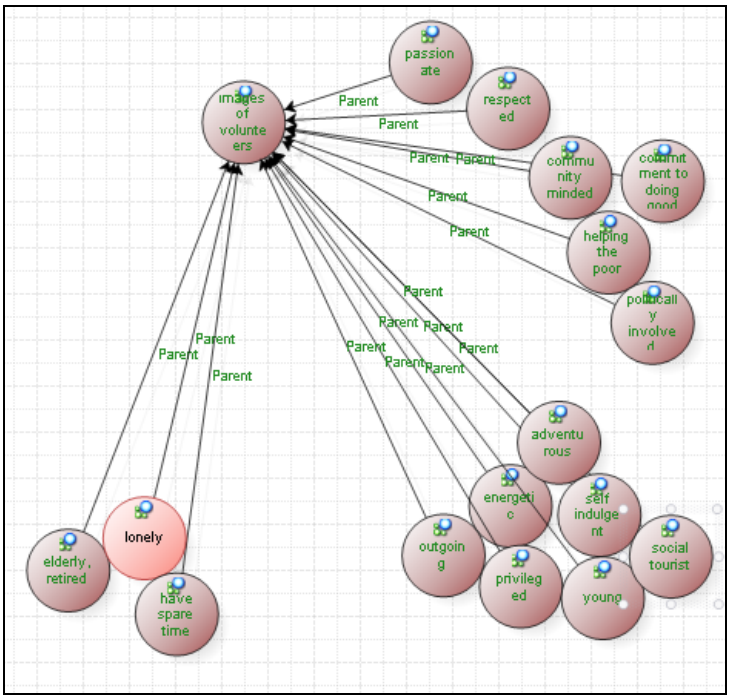
1. Click in the model.
2. On the **Model** menu, or the context menu, click **Layout**. The **Model Layout** dialog box is displayed. Select from the four options. Note you can also set how long the minimum length for connector lines is.



3. 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

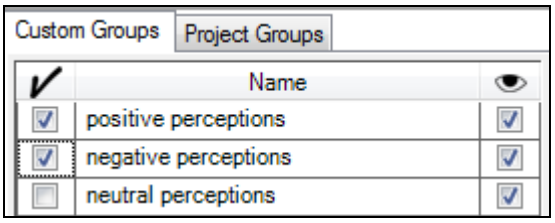
You can make a model that is accessible in groups, so can be shown layer by layer, to tell the story of your interpretations of the data, or to compare different views.

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.

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

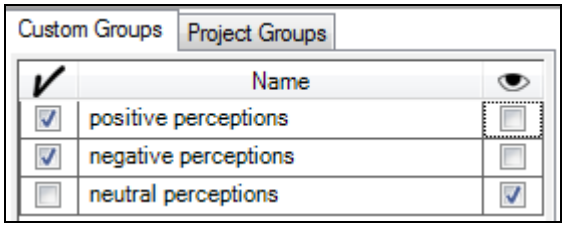
1. On the **Model** menu, click **Group**> **New Group**.
2. In the **Model Group Properties** dialog enter a name and if you wish a description and click **OK**.
3. The group is created and displayed in the **Custom Groups** tab.
4. In your model, select the shapes and/or connectors you want to include 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 ✔).



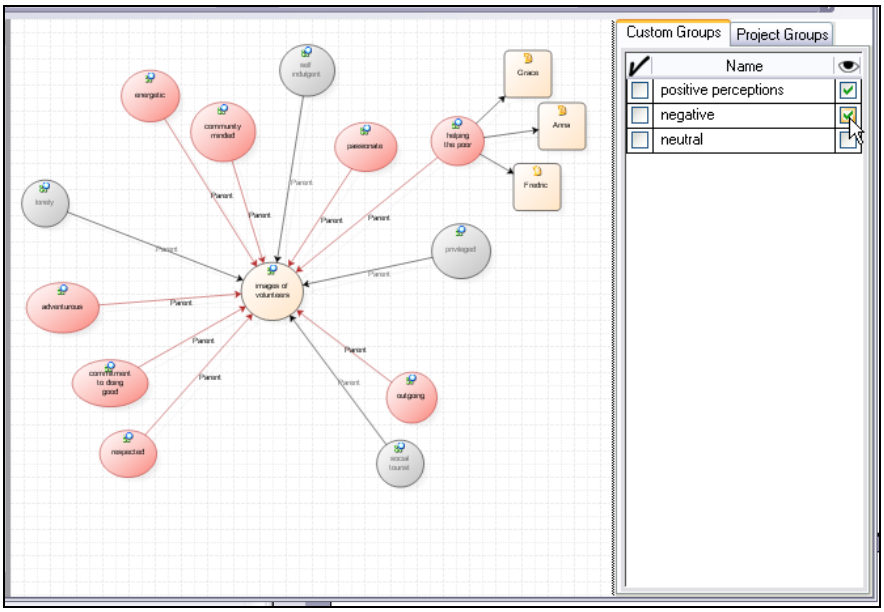
All selected items are now members of the group.

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).



2. 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

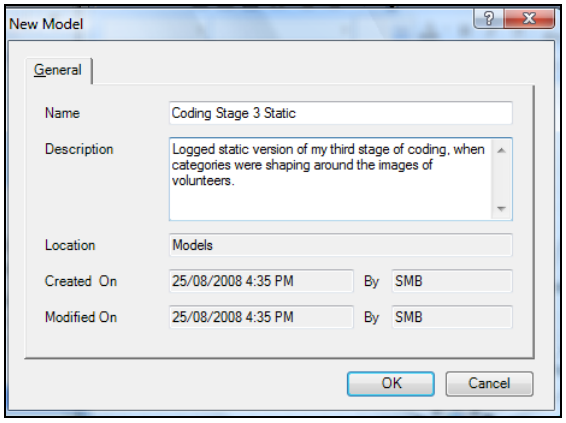
Models can be saved in the project either as dynamic models (linked to the data) or as static models (no longer linked, so they remain a record of an early stage of your analysis. These have very different uses.

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.

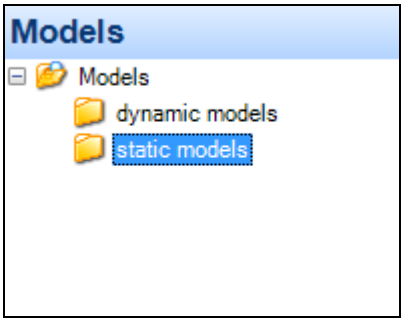
To save a static model

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.

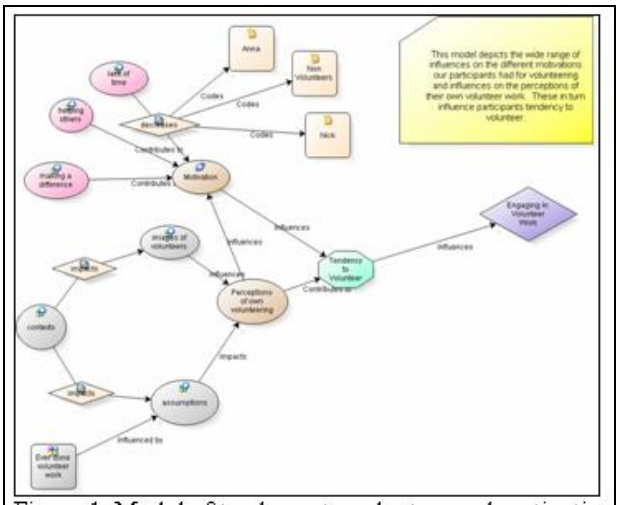


Figure 1: Model of tendency to volunteer and motivation

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.