

Introduction to NVivo 9.0

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1. Preface to the NVivo-guide

NVivo is a program for handling qualitative data. Compared to typical software for analysis of quantitative data, NVivo does not provide you with unambiguous and clear-cut results of your analysis. Since qualitative analysis is not founded on mathematical formulas but instead on the interpretive abilities of the researcher, the program cannot think for you. Therefore, NVivo should not be seen as an analytical software program. Instead, NVivo provides you with an advanced workplace in which you can organize, classify and sort your data and it should therefore be perceived as a data-structuring and -organizational program. The program can, thus, help you maximize the profit of your data by providing you with an overview of your data and a systematical approach to qualitative data handling.

Because of this, NVivo has the greatest yield when the magnitude of your data is large. Since there is a certain amount of work connected to setting up NVivo for your project, this burden should be weighed against the immenseness of your data. As a rule of thumb, you should at least have five 20-minut interviews before the program is of great use.

However, NVivo has certain advantages which do not depend on the size of your data. Firstly, NVivo is a great way of documenting your analytical process in your research. Therefore, NVivo can help you achieve a greater degree of replicability which historical has been one of the downfalls of qualitative research. Secondly, the (correct) use of NVivo can help socialize you into a very systematical approach to qualitative data analysis and thereby help you to avoid the analytical pitfall of only seeing the result that you anticipated.

This manual seeks to be neutral with concern to the choice of analytical approach and the walkthrough of the program therefore retains a focus on the technical aspects of the analytical process. This fits with the nature of NVivo since this does not specify a certain analytical approach either. However, in order to increase the understanding of the underlying intuition of the program, the analytical purpose of certain applications will be presented.

The manual will first present an overview and description of the overall possibilities of the NVivo after which a more hands-on walkthrough of the different phases in your analytical process will be presented.

When completing the manual, you will receive an introduction to the basic possibilities with NVivo. This introduction does, however, not complete the entire spectra of tools in NVivo but it will provide with the skills needed to benefit greatly from the program. A manual is also provided by NVivo, which you can download through the link:

<http://download.qsrinternational.com/Document/NVivo9/NVivo9-Getting-Started-Guide.pdf>.

Furthermore the *Help function* in NVivo can often be very helpful. If a more thorough manual is needed, we can refer to the Danish manual, "Guide til NVivo 9"¹.

You can acquire a 30 days free trial version of NVivo by following the link: http://www.qsrinternational.com/products_nvivo_free-trial-software.aspx

However you have to keep in mind this version is only going to last 30 days and by that time you have to be finish with your project.

In the NVivo program you can right-click your way to almost everything and alternatively you can use the toolbar to reach the desired function. In the manual there will be switched between the two ways according to what we think is most simple. Sometimes both ways will be showed.

¹ Andersen, Lotte Bøgh and Anne Binderkrantz (2011). *Guide til NVivo 9*, Hans Reitzels Forlag.

2. Introduction to NVivo

The purpose of the following section is to familiarize you with the basic setup of NVivo. It seeks to demonstrate and explain the basic logic in the programs interface and briefly describe the content and purpose of the different sections. A more thorough explanation of these subsections will be presented as you proceed to more 'hands-on' sections later in the guide.

2.1 NVivo 9 – What's New

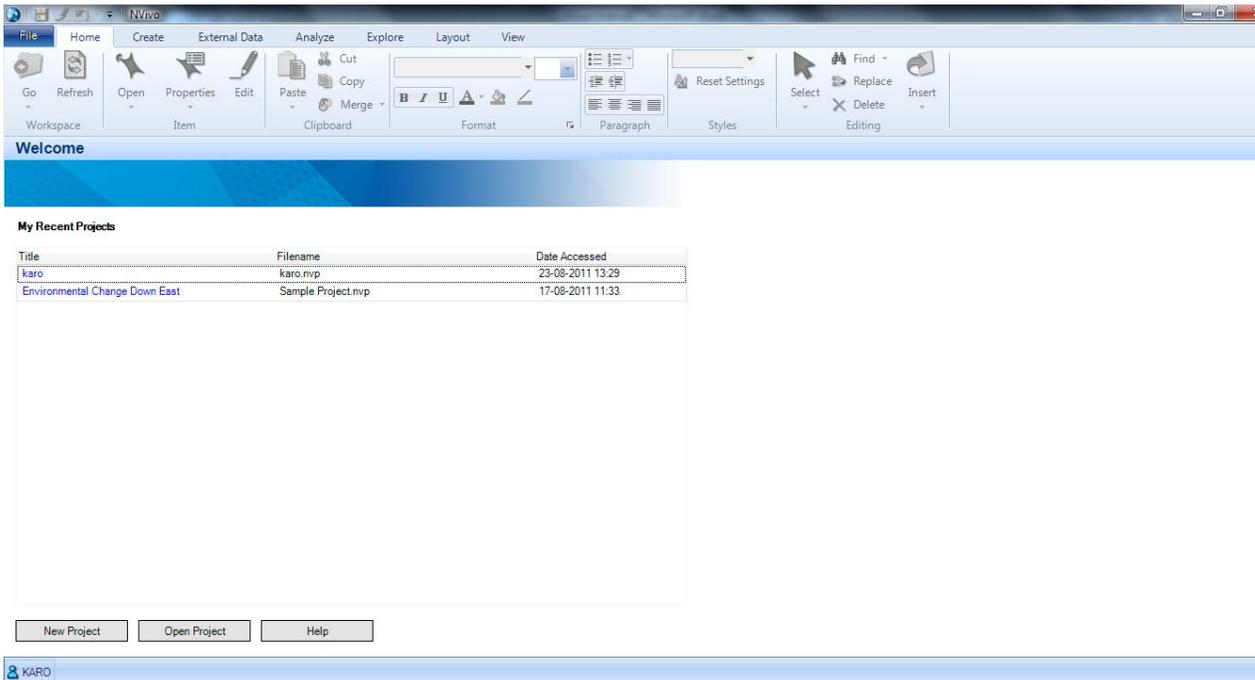
Besides visual changes in NVivo 9, there has been made a lot of changes to the structure of the program and to the functions of the program. Some extensive changes are listed below:

- Import Excel Spreadsheet and Access Databases
In NVivo 9 it is possible to import datasets and thereby work with quantitative data, including Excel spreadsheets, database tables, and delimited text files. For example you can easily import informations about your respondents from an excel sheet and then use the informations in the *classification function*.
- Import a Literature Review from EndNote and RefWorks
- Create several Classification Categories
This gives you the opportunity to classify your sources to different categories, wherein there are different attributes. For an example it could be helpful to use different attributes according to if the source is a respondent or a firm or you could classify respondent into different groups.
- You cannot divide nodes into free Nodes and Tree nodes anymore
All nodes in NVivo 9 are gathered in the folder Nodes. You can still create 'free nodes'—they are simply nodes that do not have any subfolder-notes. If you want to save these nodes in another folder you can do that by a right-click on the folder *Nodes – new Node*.
- Visualization of Sources and Nodes
A cluster analysis can reveal patterns of similarities or dissimilarities in your sources and nodes. While a tree map shows you visually how your coding is distributed, thereby it is possible to see if some sources are coded more often than others or to see the distribution of attribute values. It is also possible to visualize your data via graphs and connection maps in NVivo 9.

2.2 The Welcome Screen

Every time NVivo is launched, your initial page will be *The Welcome Screen*. This page will display the previous projects that have been working on at this computer.

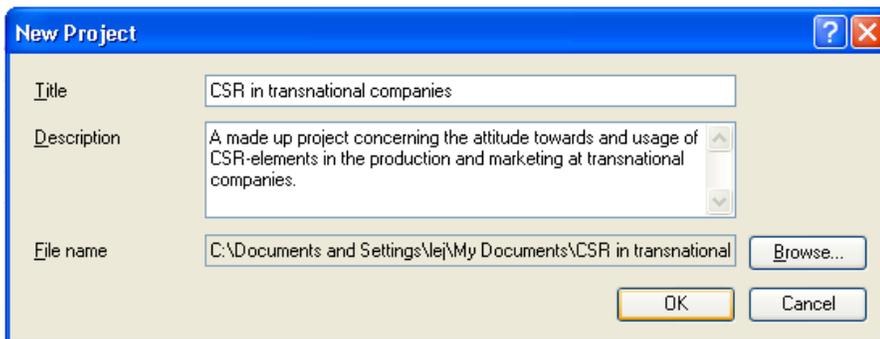
If the project you need to work on is not displayed under *My Recent Project*, you can find your project via the *Open project*-button in the bottom of the screen.



2.2.1 Creating a New Project

To create a new project

- Use the *New Project*-button in the bottom of the screen
- Type in a proper title and description of your project.
- Notice that unless you specify otherwise your project will be saved under *My Documents* on your computer. To select a more proper location, use the *browse*-button.
- Click *OK*.



2.2.2 Working Together on a Single Project

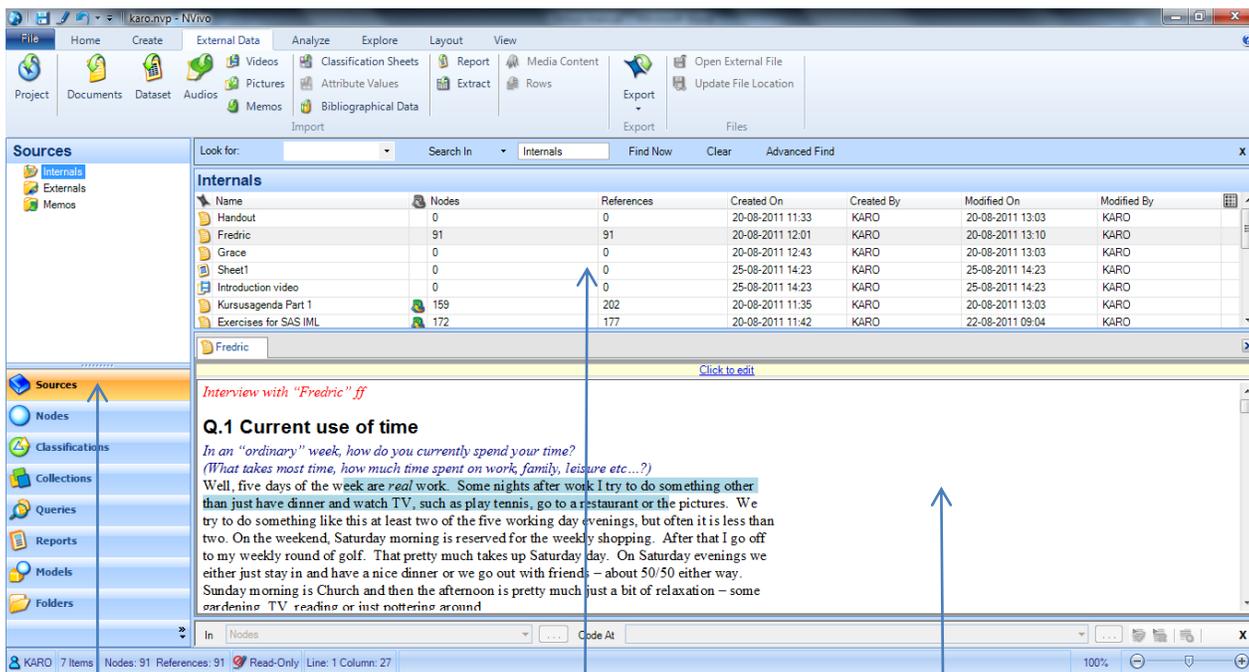
It is only one person at a time who can work on a standalone project. To do that you need to use an NVivo server connection, which is not provided at ASB. It is possible for more than one person to work on a project by establishing a “master”

project and thereafter give copies of this to each team member. At intervals you can import your team members work into the master project by a click on “Project” under the tab External data.

2.3 The logic of the NVivo-interface

If you are using MS Outlook, the interface looks very familiar: It's meant to do so! The entire screen is based on the same interface principles as Outlook.

The screen has three basic interface areas: *The Navigation view, the List view, and the Detail view.*



Navigation view

List view

Detail view

In the navigation view select the folder you like to unfold, which are showed in the window above. In the picture it is showed how a click on sources gives you an opportunity to choose between Externals, internals and memos, wherein sub-folders can be made. The material inside these folders can afterwards be shown in the list view. Finally in the list view you can choose a desired object, which will be showed in the detail view.

Just as in Outlook, this means that there is a clockwise hierarchy in the interface, starting in the lower left corner, moving up to the folders, and over to the *list view*. At the bottom of the NVivo-food chain we find the singular elements in your project (whether it is documents, nodes or results) in the detail view. If you keep this simple hierarchy in mind, you will soon feel at home in the set-up of the program.

2.4 The elements of the *Navigation view*

To get a deeper understanding of the interface, a short description of the different main folders of the *Navigation view* follows.

2.4.1 Sources

In *Sources* you store your data documents, pictures, videos, audios, external links and memos. It is, so to speak, your storage folder for all your original data.

- *Internals* contains the different documents that you analyze in your project. It can e.g. be personal interviews, focus group interviews, project notes, photos, audio recordings and videos.
- *Externals* contains the material that is not possible or that you do not wish to import into NVivo. It could e.g. be references to webpages. The purpose of *externals* is that they allow you to gather all relevant material from your project in one single place – regardless of the type of material.
- *Memos* are used to gather your own thoughts. That means that the folder contains documents that you yourself have written. You might see *memos* as a substitute for the numerous post-its of 'brilliant' impulses that you have during your analysis.

Try open different sources and view the content. Notice, that you can close the document by clicking on the small 'x' on the top-right side of the Detail View.

2.4.2 Nodes

Nodes make it possible to code one's material and thereby organize it. The *nodes* are in this way references to people or topics, which make it easier to assess and understand one's data. It is up to one's preferences and theoretical basis which words or text sections that are to be used as a *node*.

- *You can make codes* which do not stand in a hierarchical relationship with other nodes. This form of *nodes* is often used during your *open coding* where you open-mindedly seek to unravel the content of the data. Later on, you can convert these notes into a hierarchy of nodes.
- In NVivo you can make a hierarchical tree-structure. This is useful when you discover different subtopics within a bigger topic. Often a tree-structure is used during one's *focused coding*, where the *code book* is already known. If a *node* has minor *nodes* within it, it has a small '+' in front of it. By clicking on the '+', you can unfold the *node* and see the minor nodes.

2.4.3 Classifications

Classifications make it possible to add background information about your sources. This can be very helpful when you wish to compare different types of respondents or wish to look at one specific type of respondent, e.g. a 30-39 year old Indian woman who does volunteering work. You can make as many classifications as you want, wherein you can have different attributes. For example you might need to attach different attributes to the classification *respondent* and *organization*. The classifications make it possible for you to work with theoretical groups. This means that you are able to analyze your data from a more abstract point of view.

2.4.4 Queries

Queries allow you to ask questions to your data. It enables you to question your data, find patterns and to thoroughly investigate ideas that may have appeared during your work with the *nodes*. Roughly said: where *Sources* and *Nodes* regard preparing your data and setting up your project, *Queries* are the first step in your actual analysis. If you were to compare NVivo with SPSS, *Queries* would be regarded as the different analytical operations that are available. Having said that, you must not forget the important analytical process that takes place during your coding.

The *Queries*-folder contains two elements:

- 1) *Queries* contain your operation commands. You might compare this with your SPSS syntax.
- 2) *Results* contain the output of these operation commands.

3. Importing and Preparing Data in a New Project

The following section will display how you import data into your project and prepare it for analysis.

3.1 Importing Documents, pdf's, Audios and Videos into Your Project

Below it is listed how to create a new folder to insure a certain level of order and structure in our data and how to import a source, which are to be placed in that folder. It could for example be an interview, which was to be placed in a folder called interviews.

- Click on *Sources* in the *Navigation view*.
- Right-click on the *Internals*-folder and select *New Folder*.

Now we are ready to start importing data into our project.

- Select the data you wish to import e.g. documents, pdf's, audios and videos under the tab *External Data*.
- The *name*-option produces a small description of the file from the first paragraph of the file. This is not always a good idea since the first paragraph may contain irrelevant information. However, in this example, it produces a reasonable description.
- Under the folder *Attribute value* you can give the source a classification wherein you can enter the attributes which belongs to that classification.
- If you choose *Classification* in the navigation panel and choose the classification you have assigned to your source, you will see your source here.

If you like to Edit the content of a source you press "Click to edit" in the yellow information bar. Press the X when you are done.

3.2 Importing Excel Sheets

Datasets are imported the same way as showed above - *External Data* in the toolbar. Once you have imported the content of a dataset it is not possible to edit the content. Therefore you have to prepare your data and consider how you will use it in NVivo.

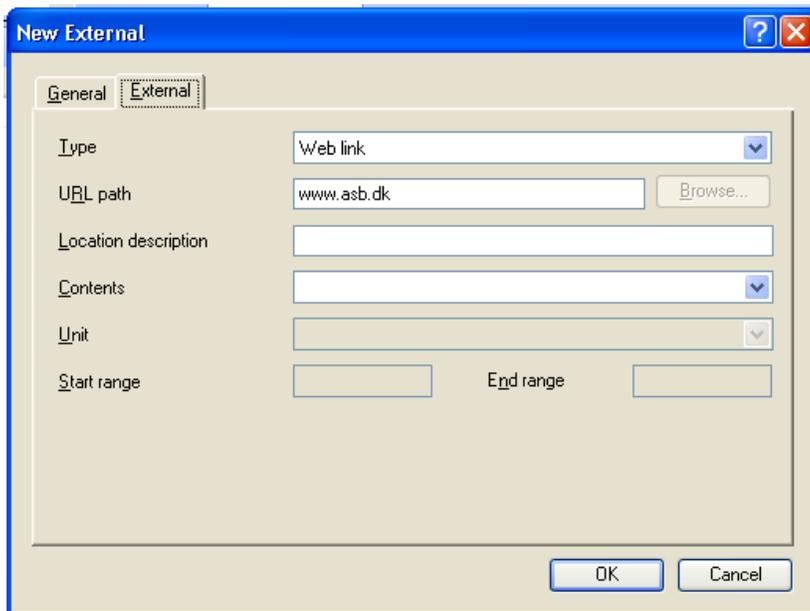
3.3 Importing Bibliographical Data

You can export a literature review made in the following bibliographical applications: Zetero, RefWorks or Endnote. The data can be exported from the application as an EndNote XML or RIS file and can be imported to NVivo afterwards. The records are shown as a *source* in your project, while the bibliographical details are saved as *source classification*. You can import bibliographical data by clicking on the *external* tab in the toolbar and then choose *bibliographical data*. You can also add bibliographical details manually by classifying your sources.

3.4 Importing Externals

As mentioned in section 2.3.1, *Externals* are files or webpages that will not be imported into the project but which you can access by using the link in the *Externals*-folder. In the following we will create a link to ASB's webpage.

- Select the folder *Externals* under *Sources* in the *Navigation Panel*.
- Right-click in the *List view* and select *New External*.
- Name and describe the link in the *General*-tab, e.g. 'ASB's webpage' and 'Contains information about Aarhus School of Business'.
- Switch to the *External*-tab.



- Select *Web link* in the *Type*-option
- Click *OK*.

Notice that if you double-click on the new file in the *Externals*-folder that you have just created, an empty file opens. This happens because you merely have created a shortcut to the webpage, you have not imported the webpage itself. To open the shortcut, you therefore have to right-click on the file in the *List view* and select *Open External File*.

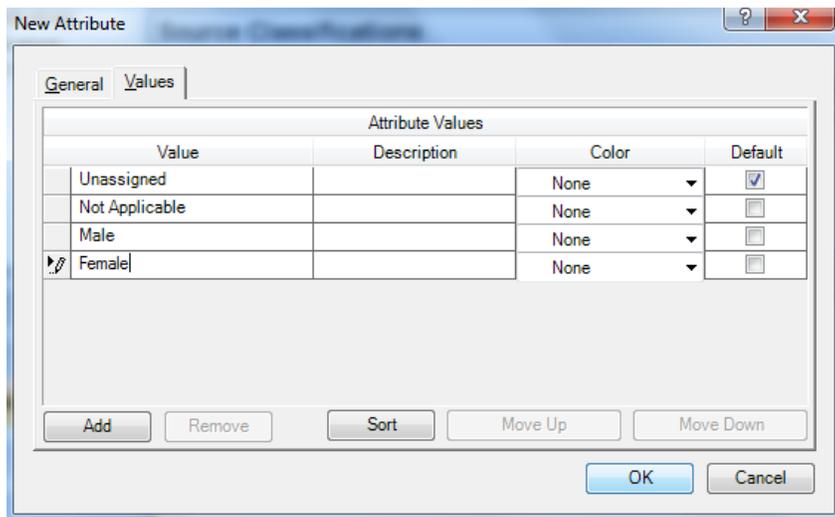
3.5 Making Classifications and Attributes

By adding *Attributes*, i.e. background information about your sources, to your classifications you can analyze characteristics across the sources instead of only analyzing specific respondent characteristics. This can help heighten the level of abstraction of your analysis.

You can make a classification by choosing *Classification* in the navigation view and afterwards right click in the detail window and choose new classification. It is a good idea to do this before you import your sources, because when importing your sources you are given the opportunity to attach the source to a specific attribute. You can also attach a source to a classification afterwards you have imported it by selecting the source, right click and choose classification or choose *properties* under the tab *home* in the toolbar.

You can give attributes to your classification by right click on the desired classification and then choose *New attribute*. In the tab *general* the attribute are given a name. For Example it could be the classification *respondent* which is given the

attribute *sex*. Under the tab *Value* you press add and add for example *male* and *female*. You can now attach attributes to the sources which belong to the specific classification.



You can also change the classification of a source to another, but be aware that a source can only belong to one classification group.

4. Creating and Using Nodes

The following section will enable us to explore and systematize our data via *Nodes*. These will help us to assess the data by reducing the complexity of the data via topic classifications. In this way we can get an overview of the content of our data and thereby focus our analytical attention to the relevant part of our data. However, even though NVivo can simplify the usage of your codes, it cannot help you code correctly. The ability to conduct qualitative analysis is one you must possess yourself.

Since the coding process is a continuous process, where new aspects in the data can reveal itself at different phases of your research process, you should be prepared to code the same data several time. NVivo is well suited for this iterative process since you are able to do several 'layers' of coding on the same text while still being able to separate the different coding phases into different folders.

4.1 Coding in NVivo

Below it is showed how to make a new node.

- Highlight the text you wish to create a node from.
- Right-click on the marked text and select *At New Node* under the *Code Selection*-option. If you instead like to save your node under an existing node then select *At Existing Nodes* under the *Code Selection*-option.

The screenshot shows the NVivo 9.0 interface. On the left, the 'Nodes' panel is visible, showing a new node named 'Phoebe' being added. The main window displays the node's content, including a title 'Q.1 Current use of time' and a question 'Q.1a Feelings about current time use?'. A context menu is open over the text, showing options like 'Code Selection' and 'Code In Vivo'.

Name	Sources	References	Created On	Created By	Modified On
Phoebe	1	1	09-07-2009 10:39	LEJ2	09-07-2009 10:39

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, school then get home with them and work around the house. At weekends I take the kids to sports practice and go to the gym. I guess most of my time is spent for the kids.

Q.1a Feelings about current time use?

(How do you feel about your time use now? Does it fit you'd like to fit in?)

I'd like to have more time to pursue my career as I feel moment because I am living for my kids. I feel as though anyone else, its seen as 'lower' than if I was in an office find that hard as I love my kids and want to spend as much time as I can with them. I don't want to grow so fast - but it doesn't make me feel so good about myself and what I am achieving in my

- Give the node a proper name and e.g. description
- Notice that the node is saved under nodes in the panel view, which are placed in alphabetic order.
- If you double-click on the new node you will see the content.

Alternatively you can use NVivo Coding. In vivo coding is a particular type of coding in which you use an actual word or phrase from your data as a node. 'In vivo' is Latin and means 'within the living', i.e. it is taken directly from the lips of your respondent and applied within an analytical context. In vivo coding is often used if the respondent uses a metaphor or expression which is both telling and theoretical interesting for one's research question.

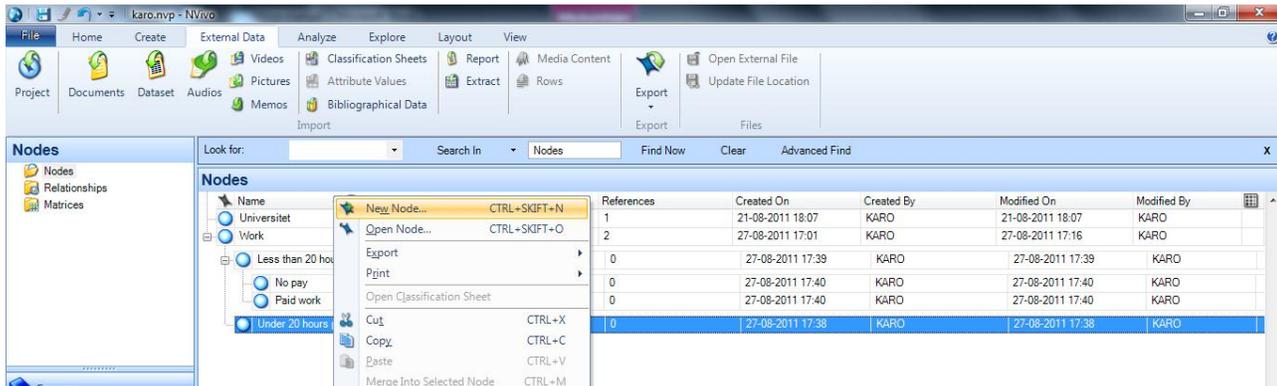
- Highlight the desired text
- At the end of the bottom-toolbar press 

If you like to save your node under an existing node instead of making a new node you can do that by pressing the button  also situated in the bottom-toolbar.

4.2 Tree Hierarchy

Often you need to structure your nodes according to different topics. This can be done by making a tree hierarchy containing your nodes.

- Right click on the node where under you want to place a new node and then choose new node, afterwards you can do the same in the new node if you want to enlarge the hierarchy.



4.3 Auto Coding

If your data is structured you can take advantage of NVivo's auto coding features. For example you can use auto coding to code all the answers to the questions in a given survey. To use auto coding your documents have to possess consistent paragraph styles, like the default headings you can make in Microsoft Word.

Right-click on the relevant source and then select *auto code*. If you select paragraph styles you can make coding according to your headlines

4.4 Node content, Highlights, and Coding stripes

Both during and after your coding process, you may wish to get an overview of the sections that you have coded. This can be done in several ways.

4.4.1 Node Content

When you have completed your coding process, you often need to see the data within a given node to get an immediate impression of the content. To do this, you can simply open the node which you are interested in.

- Double-click on a given node and the content of the node should be displayed.

4.4.2. Highlights and Coding stripes

If you are simply interested in the amount of text you have coded or interested in getting an overview of which sections of a text you have coded, highlights are a useful tool. Highlights will mark the text sections that you have coded with a brown color. This can be used if you are uncertain whether or not you have already coded a text or if you simply wish to see if some sections of a text were coded more intensely than others.

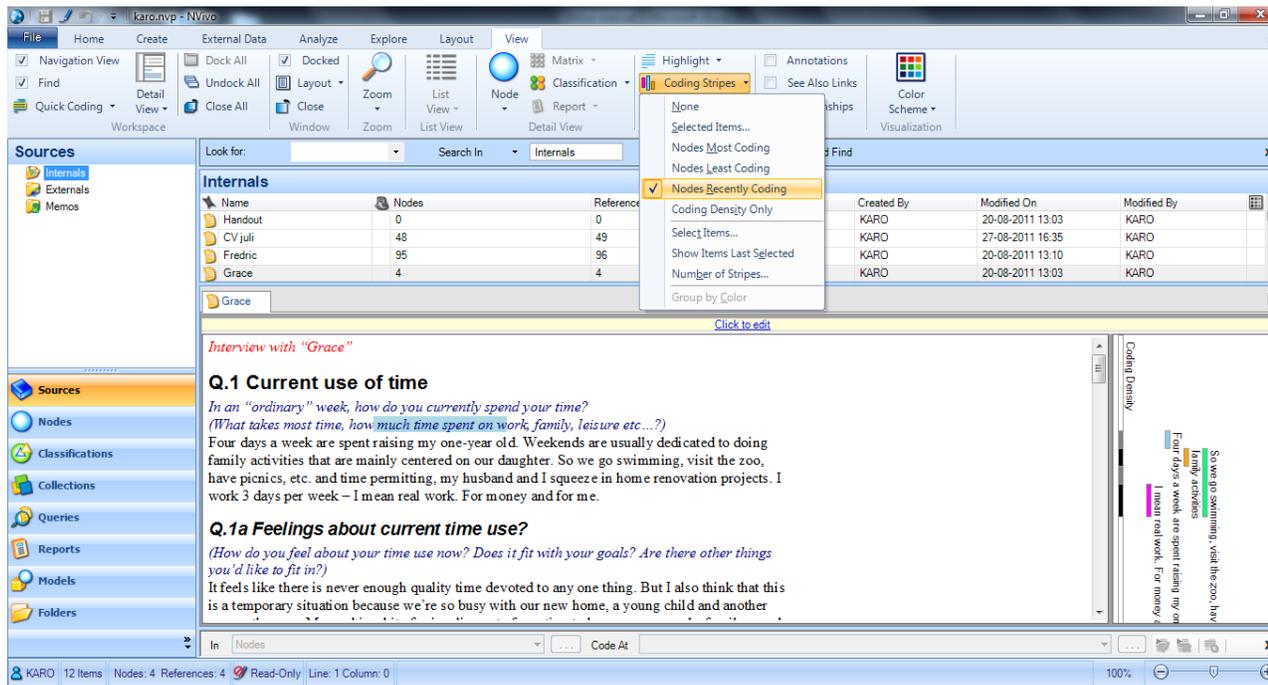
- Click on the source wherein you like to highlight the nodes.
- Open the *View*-tab and select *Coding for all Notes* under the *Highlight*-option

If you wish to remove the *Highlights*, simply select *None* under the *Highlights*-option.

4.4.3. Coding Stripes

The *Highlights* have the downfall that they do not show you which *Node* has been used on the given section. Moreover, they do not show you if the same section has been coded by several *Nodes*. The *Coding Stripes* can help you with that.

- Open the *View*-tab and select *Nodes Recently Coding* under the *Coding Stripes*-option.



This option will show you a bar at the right-hand side of the screen. In this you can see color markings of the individual nodes coded in the given text section. If you hold the mouse over a *Coding Stripe*, additional information of the *Node* will be displayed. The coded section will also be highlighted if you click on a *Coding Stripe* one time. Finally, the entire *Node* will open if you double-click on the *Coding Stripe*.

The *Coding Density* bar on the screen tells you how many times a given text section has been coded. The darker the color, the more codings.

The *Nodes Recently Coding*-option has been selected in this example. If you instead wish to look at specific *Nodes*, you can select the *Selected Item*-option just as you could with *Highlights*.

5. Queries – Answering your Research Questions through Systematic Inquiries

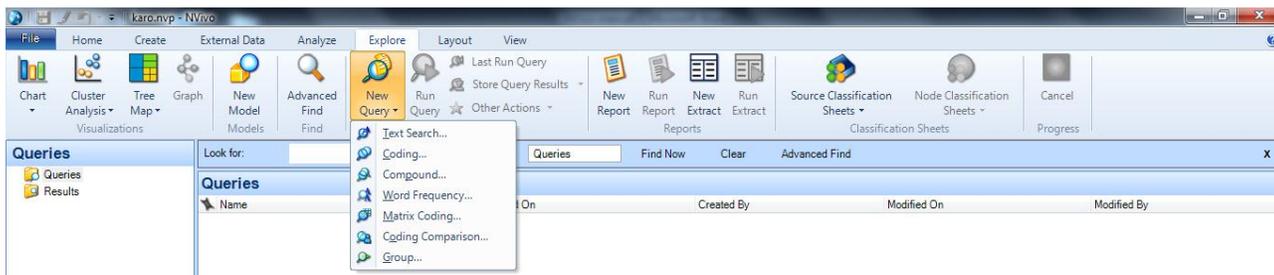
As you have coded your data you might wish to conduct more advanced inquiries to your data. *Queries* can help you with that. They enable you to question your data, find patterns and to thoroughly investigate ideas that may have appeared during your work with the *nodes*. In this way, *Queries* often help answering your research questions: E.g. what is the attitude towards volunteering among Austrians? Do men and women see differently on the importance of volunteering? Is there an age difference in the image of volunteers?

The different types of *Queries* all have a similar format which you will soon be familiar with. They consist of three steps:

- You specify the *Criteria* for your data search: *What* do you wish to inquire to *what* part of the data?
- You specify the *Options* for your results: Do you wish to save the results of your *Query*?
- You specify whether or not you wish to add the *Query*-command itself to your project

After these three steps have been determined, you can *Run* your *Query*.

All the different types of *Queries* can be accessed through right-clicking in the *List view* in the *Queries*-folder and selecting the *New Query*-option or by choosing *New Query* under the folder *Explore* in the menu bar.



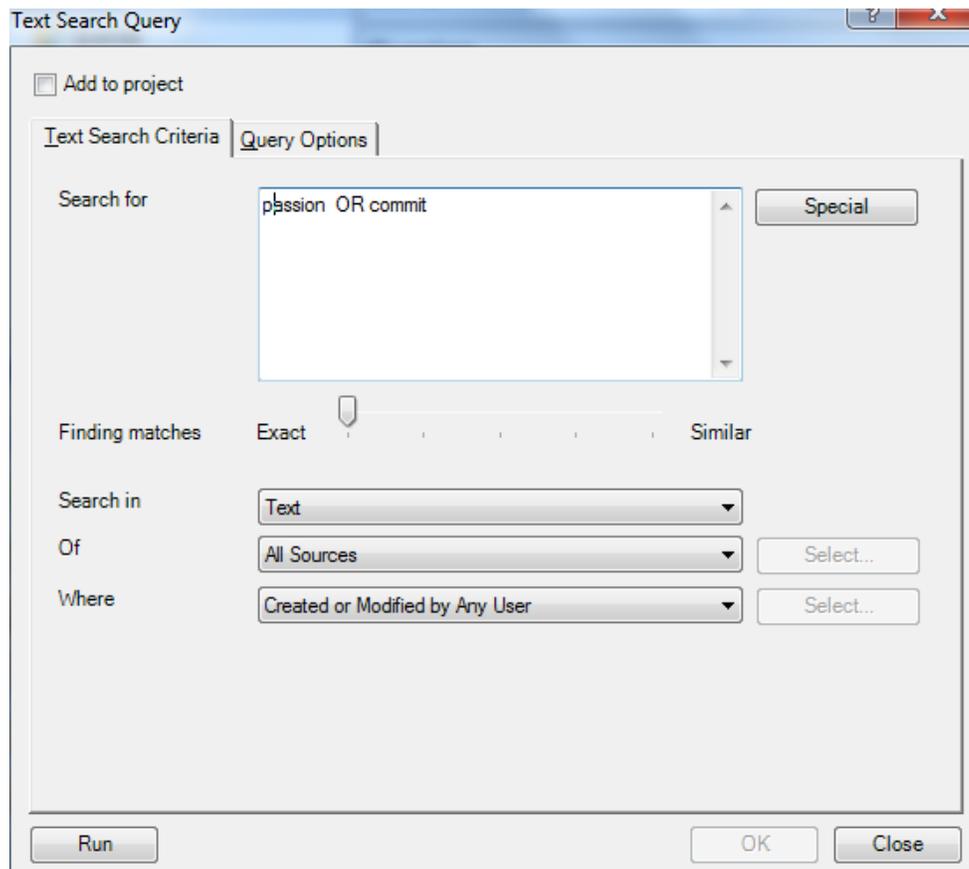
The available *Queries* are:

- Text Search Query
- Word Frequency Query
- Coding Query
- Matrix Coding Query
- Compound Query
- Coding Comparison Query

5.1 Text Search Query

A *Text Search Query* can be used for doing a search for specific words within your data. This is a useful operation if you have a set of well specified keywords that sum up your area of interest.

- Open the *Queries*-folder within the *Queries* menu.
- Right-click in the *List view* and select *Text Search Query* within the *New Query*-option.
- Write the word you want to use in the search in the *Search for*-box.
- The *Special*-button can be used to design more complex searches where you use several words. Here we use the *OR*-option to specify that we wish to see where either 'passion' or 'commit' is mentioned.
 - Notice: You could also add a '*' after your search words to allow the search to include words that have a different ending.
- Under the *Of*-option you can select where you wish to do the search.



- Switch to the *Query Options*-tab. Here you specify what is to be done with your search results
- If you wish to add your *Query* command to your project make a check mark at the *Add To Project*-possibility at the top-left of the *Text Search Query*. This is especially sensible when you only create a preview from your search. When using the option, a third tab will emerge that require you to specify a name and description of your *Query*.
- Click *Run* to execute your *Query*.
- Examine the results of your *Query*.

The possible problem with this operation is that the respondents might speak of the theme that you are interested in without using the actual theoretical term. Therefore your *Text Search Query* – though quick and easy – may be incomplete. This is the reason why so much time is spent on coding your data.

5.2 Word Frequency Query

This *Query* can be used to examine which words are the most used in your data, i.e. it can be used to perform a quantitative content analysis. You could use this operation if you for instance had collected 100+ articles from *Børsen* and wished to see which companies are mentioned the most, or if you had collected 100+ companies' descriptions of themselves and wished to see which buzzwords occurred the most.

The operation is really simple since all you have to specify is the data in which you wish to perform the query. It can be found at the same location as the *Text Search Query*, cf. section 5.1.

5.3 Coding Query

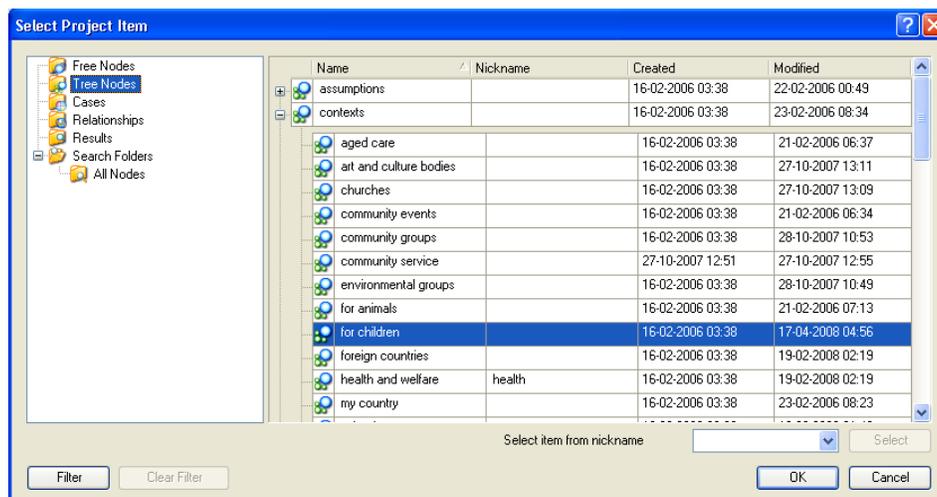
The *Coding Query* can be used to ask question about your coding. Since these queries (hopefully) include all the relevant material from your data, they are a good way of examining your data.

It is possible both to do simple and advanced *Coding Queries* and an example with both types will be illustrated in the following.

5.3.1 Coding Query – simple

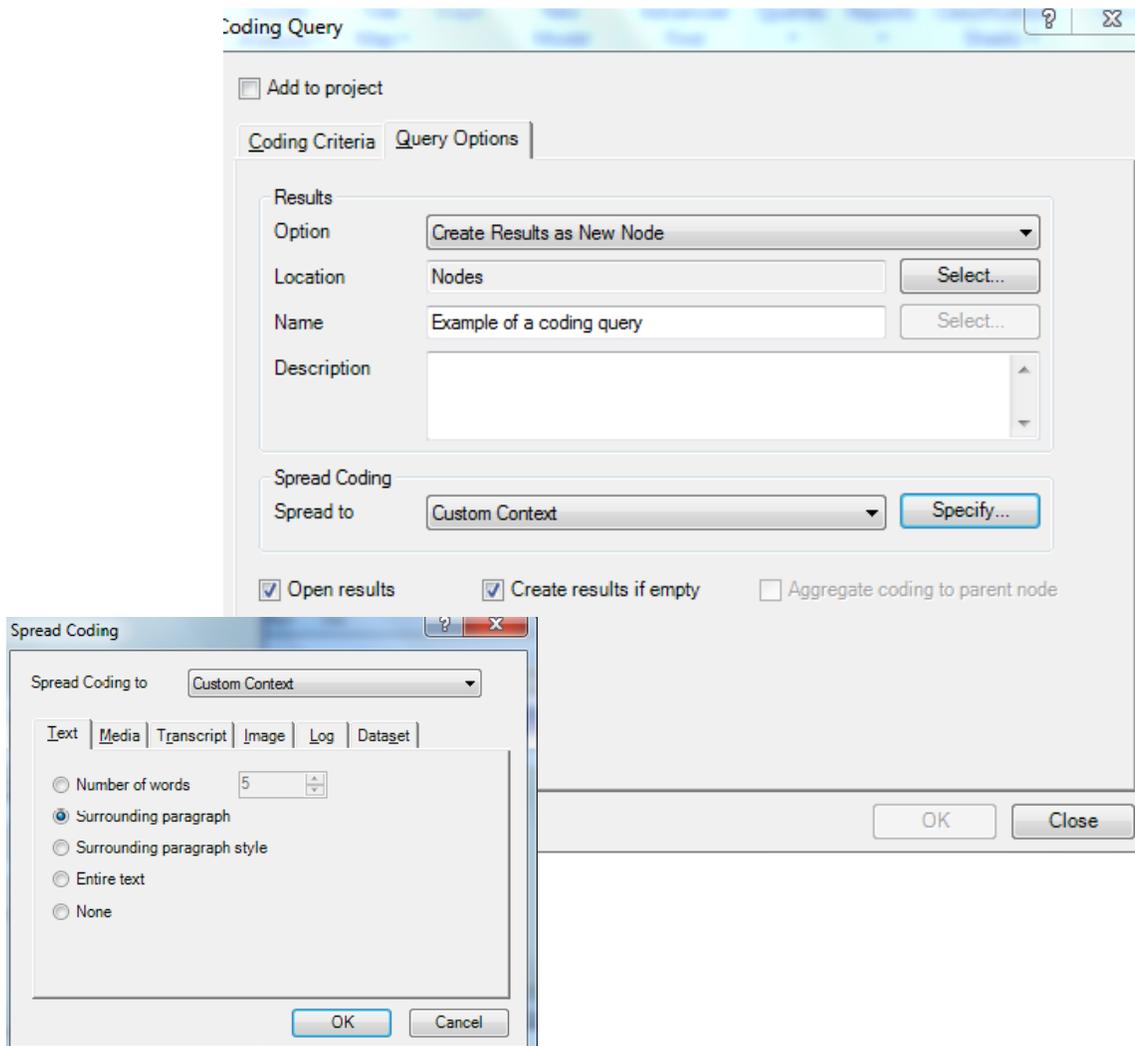
In order to do more than just displaying the content of the node – which could be done by just clicking on the node itself – you can e.g. create a new node which includes the entire context in which the node has been made.

- Open the *Queries*-folder within the *Queries* menu.
- Right-click in the *List view* and select *Coding Query* within the *New Query*-option.
- Alternatively select the tab *Explore* in the toolbar and select *New query* followed by selecting *Coding Query*.
- Click the *Select*-button at the *Node*-option and choose the node you like to use.



- Click *OK*.
 - Notice: You can also specify your search with one criterion from your attributes (e.g. search only within the cases that belong to the age group 20-29 year olds).
- At the *In*-option you can define the scope of your search and at the *Select*-button you can choose where to run the query.
- Switch to the *Query Options*-tab.
- Under *Query Options* you can change the *Results Option* from *Preview Only* to *Create Results as New Node* to indicate that you wish to save the results of the query as a node.
- By clicking the *Select*-button at the *Location*-option you can decide where to place your new node. It can be placed under *Results* or *Nodes*.

- The *Spread coding*-option defines what is to be coded. By selecting *Custom Context* and afterwards clicking on the *Specify*-button you can define what is to be coded.
- Select e.g. *Surrounding paragraph* and click *OK* to return to the *Coding Query*- dialog box.

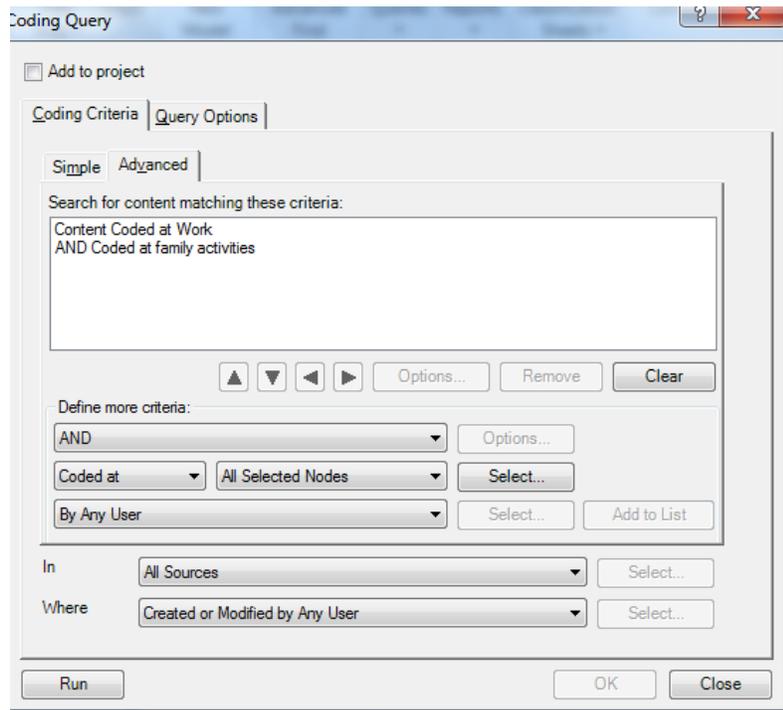


- Choose whether or not you wish to save the *Query* command - Add to Project button
- *Run* your query.
- Explore the results of your query.

5.3.2 Coding Query – advanced

In the *Advanced*-tab you can add several criteria to your *Coding Query*. This is useful if you wish to explore what a very specific respondent group has said about one topic (e.g. what do 50-59 year old men with high education levels who have never done volunteer work think about the motivation of volunteers). The following example will only extend the example from section 5.3.1 with one criterion, but the approach can be extended to include more criterions.

- Open a new *Coding Query*, cf. section 5.3.1
- Switch to the *Advanced*-tab.
- Click the *Select*-button and choose a node
- Click the *Add to List*-button to transfer the node-criteria to the criteria list.



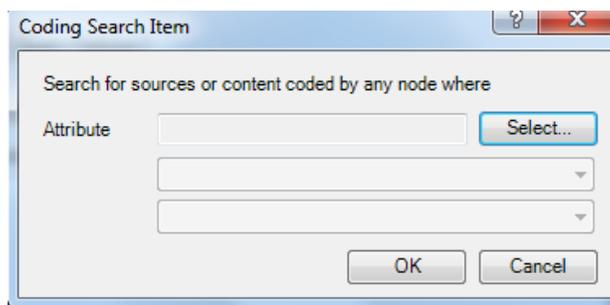
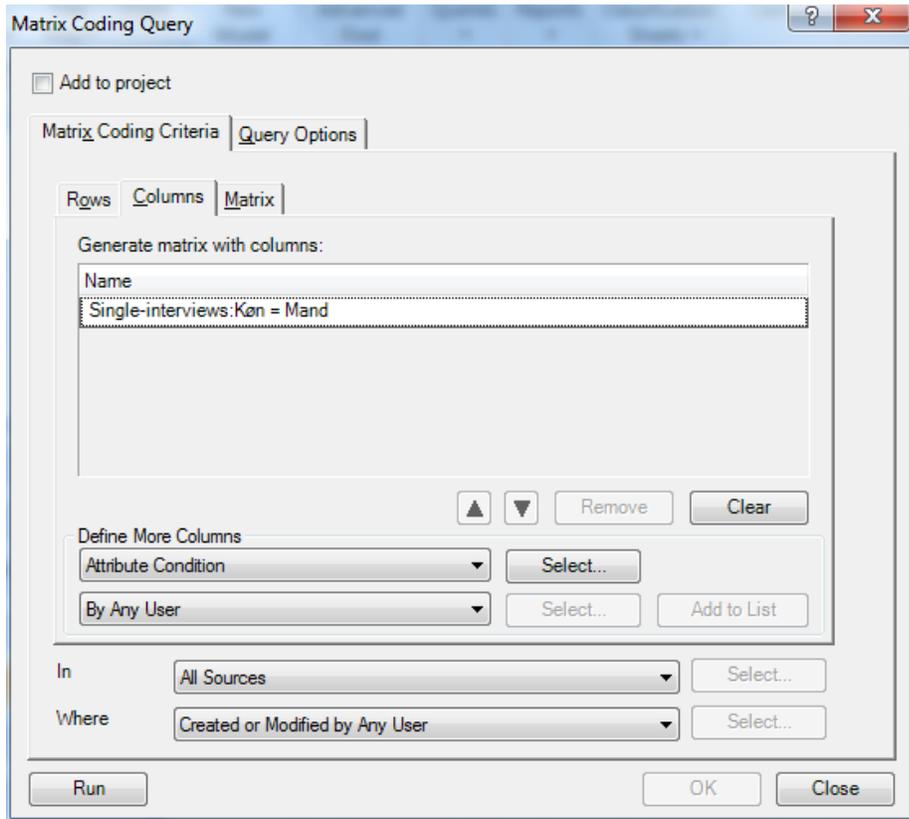
- Define the scope of your search via the *In*-option.
- *Run* the query.

Notice: The *Coding Query* is a powerful tool in exploring your data and allows you make inquiries to your data which would be very difficult – if not impossible – manually, but the results must be carefully interpreted. The queries are based on your coding and therefore cannot improve a poor coding process. You are the weak link in the search!

5.4 Matrix Coding Query

The *Matrix Coding Query* allows you to create a table that compares different groups in your data. For example you could use it to explore if there exist a gender difference between one's personal goals for having a student job. Furthermore, *Matrix Coding Query* can be seen as the first step in your process of developing a qualitative display that can tell the overall 'story' of your data.

- Open a new *Matrix Coding Query* by right-clicking in the *List view* and choosing *New Query*.
- Notice that there exists both a *Rows*- and *Columns*-tab which defines what is to be placed on which axis.
- You can e.g. select a node under the tab *Row* by clicking the *Select*-button



- Under the tab *Column* you can e.g. select an attribute e.g. sex.
- Use the *Add to List*-button to transfer the specified nodes to your definition of the row categories.
- Decide whether or not you wish to save the query command (a good idea).
- *Run* the query.

By right-clicking on the matrix you have different options. The *Transpose*-option makes it possible for you to switch the content of the two axes. The *Matrix Cell Content*-option allows you to decide which result you wish to see in the matrix (sources, cases, words?). The *Matrix Cell Shading*-option makes it possible for you to illustrate the coding density via colors.

By double-clicking on cells in the matrix you can open the specific cell and see its content. This will allow you to do analysis on group specific data and afterwards compare the two groups. The output might also be copied into *Word* and be

further condensed so that a qualitative display can be developed. This is useful since it is not possible to command the entire content of the matrix at one time.

5.5 Compound Query

This *Query* allows you to do a query that combines two queries. The query can be a combination of a *Text Search Query* and a *Coding Query*, two *Text Search Queries*, or two *Coding Queries*.

If you master the respective singular queries, you will not have any problem combining them.

6. Advanced Possibilities

As mentioned in the preface of the manual, this walk-through of NVivo does not cover all of the possibilities that the program offers. Three such possibilities will in the following briefly be described so that you can evaluate whether or not you wish to seek out these options: *Memos* and *Links*, *Relationships*, and *Models*.

Andersen & Binderkrantz's manual will be pointed out as a possibility for the more ambitious NVivo-users who wish to seek out these operations (see the preface).

6.1. Memos and Links

Memos and *Links* are a way of assigning small comments to your project. They can be seen as either small notebooks or post-its and can therefore replace the numerous pieces of paper you may have lying around doing your research project.

Though they can exist as small individual comment sheets in your project, they can also be assigned to specific text sections or nodes. In this way, they can capture your immediate thoughts during your analytical process.

- You can create a memo under the tab *Create* and then choose *Memo*.
- The memo will be situated in the folder *Memos* under *Sources* in the *Panel view*.
- You can create a link from a source to a memo by highlighting the source, select *Analyze* in the toolbar and then select *Memo link, link to new memo*.

6.2. Relationships

Relationships are a specific type of *Node*. When creating a *Relationship*, you specify the type of relationship that you suspect exist between two elements in your data, e.g. a causal relationship between two nodes or simply an association between two cases. This *Relationship*-node can then be used to code the data which supports your claim about the given association.

6.3. Models and Graphs

You can create *Models* in NVivo which do not simply depict your theoretical model but also links to the specific data. This means that you can double-click on a given element in your *Model* and thereby open the data which has been coded under that theoretical concept. The advantage of the NVivo *Model* is, thereby, that you get an interactive model which links the data to the model, i.e. the simple image that sums up your entire project.

- You can create a model by selecting *Model* in the toolbar and then select *New Model*.

You can also generate graphs to see how the different items are connected to a selected source or a node.

- Select the source or node you like to graph
- Select the *Explore* tab in the toolbar
- Choose Graph under the Visualization group
- The graph will now be displayed in detail view.

It is also a possibility to create *Tree maps* and *Cluster analysis*.

Tree maps can be used for comparing nodes by the number of references they contain. Select *Tree maps* under the tab *Explore* in the toolbar.

Cluster analysis can be used for identifying sources that contain similar concepts. Select *Cluster analysis* under the tab *Explore* in the toolbar.

Good luck with your project!

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