MANTRA NVIVO 9 DATA HANDLING EXERCISE

Unit 1 : Preparing your Qualitative data for use in NVivo 9

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Contents

Overview – Unit 1

This unit deals with issues you need to consider when preparing your data to work with NVivo 9, covering the following areas:

- informed consent
- Intellectual Property Rights (IPR) and copyright issues
- suggested practices in transcription
- suggested practices in anonymising your data
- recommended structure of folders for your data before import to NVivo 9

1 Informed Consent

When research involves obtaining data from people, it will nearly always require obtaining informed consent from participants. Research projects vary greatly, and consent procedures for a large quantitative survey are different from those for a qualitative investigation. It is crucial to seek consent for **all** aspects of research – not only data analysis and publication, but also the sharing and preservation of data. Many funding bodies (such as the ESRC) mandate that data created from projects they fund be shared, and therefore consent procedures should not prohibit data sharing. Participants should be advised how their data will be stored, used and accessed including information on how confidentiality will be maintained.

Some researchers fear that seeking consent for data sharing can deter prospective participants. However, this is rarely the case as strategies exist that make it simple to incorporate consent for data sharing into standard research practice.

First, **consider data sharing early** and plan for it from the inception of a project. Second, **avoid collecting sensitive or personal data** if you do not really need it. Third, **explain data sharing and its benefits to participants** as part of the project information sheet and recruiting conversations – for a guide see `http://www.data-archive.ac.uk/create-manage/` `consent-ethics/consent?index=7`. A UK Data Archive model consent form is attached in the NVivo 9 Project file included with the data files (under `Memos>Documentation>Consent_form_` `samples`).

There are practical steps to take regarding consent and use of NVivo 9. For example, it is **not recommended to upload signed consent forms** into NVivo 9 as it means unnecessary copying of personal data. However, the consent status of participants can be recorded as an attribute in the classification sheet (see task 2-8 in Unit 2 for an example of how to do this).

2 IPR/copyright

Copyright is an intellectual property right that protects the owner of a work from its unauthorised copying. When data sharing is anticipated, some aspects of copyright require attention. When data are archived, the researcher keeps copyright over data but gives a license to an archive to disseminate the data. However, archives do require that all the copyright holders are identified and give their permission for the data to be archived or disseminated.

Researchers producing data usually hold copyright over such data (but researchers should check if their institutions retain copyright.) Most research materials including spreadsheets, interviews, publications, and reports fall under literary work and are therefore protected by copyright. Types of data that might require further investigation include outputs from collaborative research or "derived" data (data generated from an existing source not created by the researcher).

3 Transcription

Whilst data can be transcribed directly from audio into NVivo 9, the absence of a spell-checking facility may negatively affect transcription quality. It is preferable for any transcription to be carried out using word processing software (such as MS Word) before transcripts are imported into NVivo 9.

Care should be taken to use a uniform transcription format and style for all transcripts (an example transcript is provided in the NVivo 9 project file (`2000-nvivo9-demo.nvp`) appendices under `\\Memos\ExerciseAppendices`). Contextual information of an interview can be included

in an initial paragraph. Researchers need to avoid the use of headers or footers in transcripts, as those are removed when data is imported into NVivo 9.

The sections that follow look into these issues in more detail.

3.1 Formatting and spellchecking your transcript

It is recommended that as much editing as possible is done in your favourite word processing software, as they usually offer more options and tools for these tasks than NVivo 9. Light editing and anonymisation of textual sources is possible in NVivo 9, too (see section section 1 in Unit 2 for more information).

Before importing your **textual data in NVivo 9**, you will need to make sure that they are formatted as described in this section (instructions for Word 2003 – similar steps should apply for other Word versions or word processing software). Note that formatting your transcripts this way will greatly facilitate coding your sources in NVivo 9 (using the **autocode** feature – see section 3.1 of Unit 2 for more information on how to do this).

1-1. Open `2000int016_master.doc`, located in the `2000-NVivo9-raw_data` folder. Following the guidance in this section, format it appropriately as follows, then save it as `2000int016.doc`

a) all headers and footers to be included as part of the main text

b) any speaker tags to be assigned Heading2 style

c) the introductory comments at the top of the interview to be assigned a Heading3 style

---

3.1.1 Check that any topic headings are assigned a Heading1 style

If you have included headings for the major topics discussed in the interview, style them with a Heading1 formatting style. After you autocode all items with this style in NVivo 9, a list of references to the themes or interview questions discussed will be created under a node. To do this in Word 2003, highlight the topic (use `CTRL+left click` in the area to highlight whole lines), then press `CTRL+ALT+1` or click on `Format>Styles and Formatting` then select `Heading 1` style.

The formatting brush () might be of some help here, too (or typing `CTRL+SHIFT+C`) to help you copy heading formatting from one place to the other. Double clicking on the icon will apply the same formatting to multiple places in the document.

3.1.2 Make sure that any speaker tags are assigned a Heading2 style

It is good practice to include speaker tags in your transcripts to indicate turn taking and most transcripts should have speaker tags of the following or similar format:

I	:	First of all would you mind telling me the year you were born?
RJ	:	1882
I	:	Did you have any brothers and sisters?
RJ	:	Yes, I had 3 brothers and 2 sisters.

(from interview 2000int016[1])

---

[1] Thompson, P. and Lummis, T., Family Life and Work Experience Before 1918, 1870-1973 [computer file]. 7th Edition. Colchester, Essex: UK Data Archive [distributor], May 2009. SN: 2000.

For better integration with the autocoding feature of NVivo 9, each speaker tag should be assigned a `Heading2` style, followed and preceded by a line break before and after. Assigning styles and adding line breaks manually might be quite time consuming, so we will be using MS Word's find and replace tool to achieve the following formatting:

I
First of all would you mind telling me the year you were born?

RJ
1882

I
Did you have any brothers and sisters?

RJ
Yes, I had 3 brothers and 2 sisters.

(Again instructions for Word 2003, but other versions or other software should have similar tools): click on `Edit>Replace` (or type `CTRL+H`). Go back to the transcript and copy the tag up to just before the utterance (in this case: "I :"). Paste it into the `Find what:` text box. In the `Replace with:` text box, type the following:

```
I^p
```

Make sure the following options are set before hitting the `Replace all` button:

- (while in the `Find and replace` dialogue box), click on `More`
- Make sure `Match case` is selected
- Make sure `Match whole words only` is selected if available
- Under the `Replace` tab, click on `Format > Style` and scroll down to find `Heading 2` style and click `OK`.

Then click on `Replace all` to replace all instances. Repeat these steps above for all the speaker tags. Do a visual check by scrolling down the transcript to spot any wrongly assigned tags or any tags without the `Heading 2` formatting.
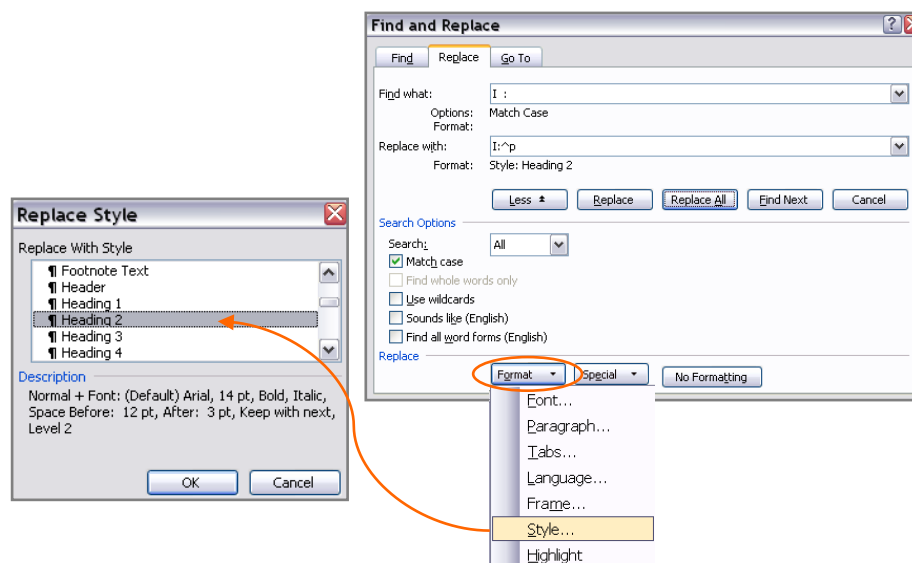

Figure 3.1 Assigning all speaker tags the Heading 2 style in MS Word 2003

3.1.3 Make sure that any introductory comments (i.e. about the interview or the interviewee) are assigned a Heading3 style

Make sure any information or comments about the interview or the interviewee are placed in the main body (and not in the headers or footers), as NVIVO 9 will strip them upon import. Then as with the topic headings, highlight them and assign the `Heading3` style.

Finally, any **non-digital data in PDFs** should be OCRed before importing them as internal sources, to be able to annotate/code them. To do that, you will need some OCR software like *Adobe Acrobat Professional*, *ABBYY FineReader* or you can alternatively try some OCR tools available online.

3.2 Anonymising

Whilst it is possible to edit and anonymise textual data in NVivo, it is preferable to carry out any initial anonymisation that can be done early in the research - such as replacing real names of people, organisations and locations with pseudonyms - before importing textual data files into NVivo 9 (and before any coding is done). Word processing software also enables the use of find and replace tools for possible editing of names throughout a transcript. However, it may not be feasible to fully anonymise all transcripts before coding and analysis is carried out. In that case, further anonymisation can be carried out in NVivo – see section 1 Unit 2 for more information.

Once your transcripts are appropriately formatted, it is recommended that you anonymise the transcripts at this point if possible. Always save a backup copy of your formatted file (next to your originals) before you start anonymising them. The level of anonymisation usually depends on the data you hold and how you plan to make them available at the end of your project, as well as the consent permissions you have been granted from the research participants. For more information, see UK Data Archive's *Managing and Sharing Data Guide.*

1-2.	Open `2000int016.doc`. Find all numbers and words starting with a capital letter. Anonymise All references to Mr. and Ms. Jaggard in the text, replacing them with the speaker ID.

A useful tool while anonymising is again the Find tool. If you type the following in the `Find` dialog box (click on `Edit>Find` or type `CTRL+F`), Word will highlight all numbers and all words beginning with a capital – it is highly likely that it will include most names and place names that are potential candidates for anonymisation:

`<[A-Z0-9]*>`

Make sure the following options are enabled:
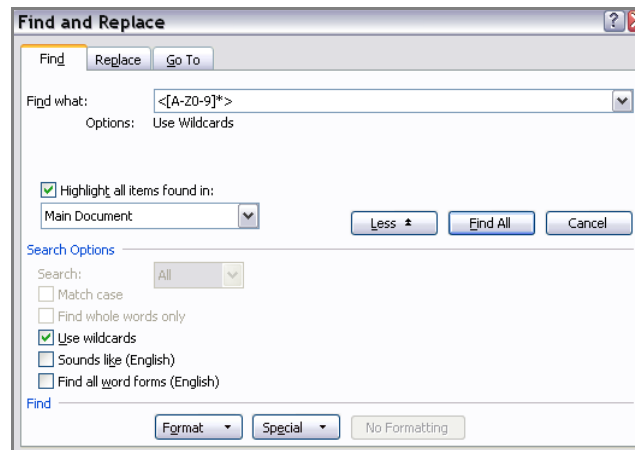
- Use wildcards
- Highlight all

Figure 3.2 Highlighting all Numbers and words beginning with a capital in a document (MS Word 2003)

Any other data you intend to import should undergo similar anonymisation and spellchecking checks. For **quantitative data** (like spreadsheets or tab delimited data), make sure you make any additions and corrections at this point, as NVivo 9 does not let you modify them after import. Make sure any sensitive variables are removed or anonymised if they are not going to be of use in the analysis. Do not forget to include a variable/column about whether consent for the data has been granted by the participants and a variable about the real names of the respondents next to their pseudonyms, if you think that it would be useful for your analysis.

Editing or anonymising any **media (audio, video or pictures)** should take place before importing them to NVivo 9 using an appropriate media editing programme. Note that NVivo 9 does not have any media editing tools – but you can annotate and code (and export any annotations or coding) as a text file.

4 Folder Structure

4.1 Create a folder structure

This may vary from project to project, but a sample folder structure followed for the demo version of this exercise on the Edwardians project (`2000-NVIVO9-demo`), is shown in Figure 4.1.

|	
1-3.	Create a folder named `2000-NVIVO9-demo` in some location, then create the following folder structure (in most cases by right clicking in the folder, then selecting **New>Folder**). Alternatively, unzip the contents of the `2000-NVIVO9-demo.zip` folder in some location. Note that we have allowed for different folders for each type of source and each of the versions of them i.e. whether they are master copies, enhanced/formatted versions or anonymised versions.
	Note that where we wanted the folders to appear in a particular order, we have included a letter or number in the beginning, so that it is listed accordingly.
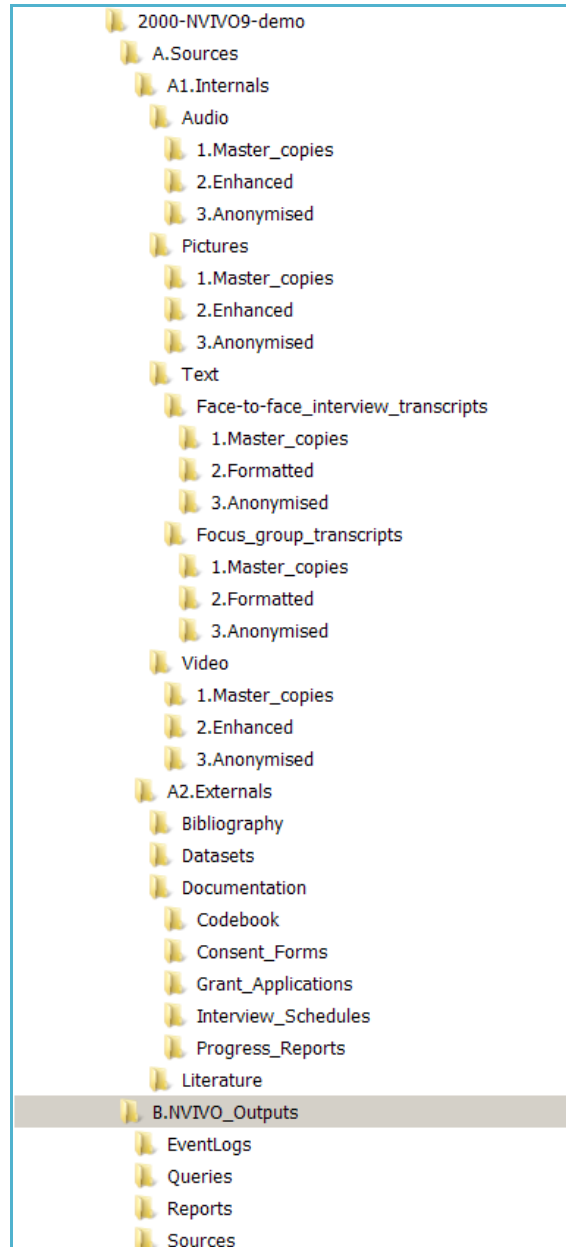
Figure 4.1 Sample folder structure in your local drive

4.2   Ensure your data files have meaningful and consistent names

Again depending on your project you might have established different conventions on file naming – they need to be consistent throughout your project and be applied by every researcher involved in it. It might helpful if these conventions were outlined in a document (which could be included as one of your memos in NVIVO 9 – see section 2 in Unit 2) and if they followed an agreed formula.

An example of that would be:

`Projectname-filedescription-participant_id` (for interview transcripts) or
`Projectname-date-documentationtype` (for documentation files)

In the demo project, our interview data are of the following form:

`2000int001`

Where `2000` is the project ID name, `int` is the abbreviation name for face-to-face interviews and `001` is the participant ID.

Our documentation is of the following form:

`20001961_Grant_application`

Where `2000` is again the project ID name, `1961` is the date of the documentation and `Grant_ application` is the description of the documentation.

For a full list of the files used in this demo, see either the Introduction of this exercise, or the relevant memo under `\\Memos\ExerciseAppendices` in the `2000-nvivo9-demo.nvp` project file.

4.3   Ensure one version of your files are in a preservation-friendly format

1-4.

a) Have a look at the files included in this exercise listed in the Introduction. Which of these files are not in a preservation-friendly file format? What is the file type they should be converted to?[2]

b) Export `2000int16.doc` to a preservation-friendly format file.[3]

c) Export `2000dataset_subset{1,2,3,16}.sav` to a preservation-friendly format file.[4]

NVivo 9 can import from and export to various formats not all of which are preservation-friendly, either because they are proprietary or might become obsolete in the future. It is highly recommended that you store or convert your files in non-proprietary or open formats. These do not have to be the same as the version you use during analysis – you might for example choose to work on `.mp3` files instead of `.wav` files due to their size. This is often done by opening the data file with the default software and **Save As** or **Export** to one of the following recommended file formats, presented in Table 4.1, which lists some recommended NVivo 9 import file formats for different types of data. For a full list you are encouraged to refer to the *UK Data Archive's Managing and Sharing Guide*.

---

[2] *Hint:* `2000int016.doc`, `2000dataset_full.sav`, `2000dataset_subset{1,2, 3,16}.sav` & any `.pdfs` that are to be edited should be turned into `.rtfs` or be OCRed.

[3] *Hint:* Open `2000int16.doc` with your favourite word processing software. From the **File** menu, select **Save as** and choose to save as a **Rich Text Format (.rtf) file**.

[4] *Hint:* Open `2000dataset_subset{1,2,3,16}.sav` in SPSS. From the **File** menu, select **Save As** and export as an **Excel 97 and later (.xls)** file. Make sure the **Write variable names** and the **Save value labels where defined instead of data** options are checked. Click on **Variables** and deselect the **xmltext** and the **context variables**. You might also wish to export it as a `.tab` delimited file.

Type of data	Recommended NVIVO 9 import file formats
Quantitative tabular data with minimal metadata A matrix of data with or without column headings or variable names, but no other metadata or labelling	Tab-delimited file (.txt) Microsoft excel (.xls) format
Qualitative data Or any other textual data	Rich Text Format (.rtf) Plain text data, ASCII (.txt)
Digital Image data	Tiff version 6 uncompressed (.tiff) JPEG (.jpeg, .jpg)
Digital Audio Data	Waveform Audio Format (.wav) (lossless) MPEG-1 Audio Layer 3 (.mp3) (compressed)
Digital Video Data	.mp4
Documentation and scripts	Rich Text Format (.rtf) HTML (.html) Plain text (.txt)
Quantitative tabular data with extensive metadata (tabular documentation) A dataset with variable labels, code labels, and defined missing values, in addition to the matrix of data	Delimited text and command ('setup') file (SPSS, STATA, SAS, etc) containing metadata information

Table 4.1 UK Data Archive recommended NVivo 9 import file formats

4.4 Make sure you have at least 2 backups of your master copies elsewhere

If you have stored your data in an institutional server, it is usually the case that your data are backed up automatically every day, but you might wish to make extra copies of the data to store in different locations such as in multiple external hard disk drives or CDs/DVDs.

> **1-5.**
>
> **a)** Make a backup of the `2000-NVIVO9-demo` folder.
>
> **b)** Schedule an automatic daily backup of this folder into external storage media (see the relevant appendix under `\\Memos\ExerciseAppendices` in `2000-nvivo9-demo.nvp`).

4.5 Populate your folders

> **1-6.**
>
> Populate the folders created in section 4.1 placing your data from the `2000-NVIVO9-demo_raw-data` in the appropriate folders of the `2000-NVIVO9-demo` folder.

4.6 Create a folder structure for your internals, externals, memos within NVivo

> **1-7.**
>
> **a)** Launch NVivo9 and create a new NVivo 9 project (from the `welcome` Screen, click on `New Project`).
>
> Ensure that the `Log Project Events` box is checked and that you save the file in the folder where your `2000-NVivo9-demo` folder is located.
>
> **b)** Recreate the structure of your `2000-NVIVO9-demo` folder in your NVivo 9 project file (see Figure 4.3 for an example)

It is recommended that you replicate the folder structure created in 4.1 as closely as possible in NVivo 9. NVivo 9 is very flexible with regards to the folder structure you can assume within your internals, externals and memos as well as your nodes, classifications, links and relationships. Restructuring your folders in the future will not affect your coding and the links created between sources and other tools will be retained.

To create a new folder in your NVivo 9 project file, right click on the `parent node` and select `New Folder` (or type `CTRL+SHIFT+N` or from the `Create` Ribbon tab>`Collections>Folder`). It is good practice to include a short description about each folder, but this is optional.

You can copy and paste folders by selecting them, copying them and then pasting them under the appropriate parent folder.
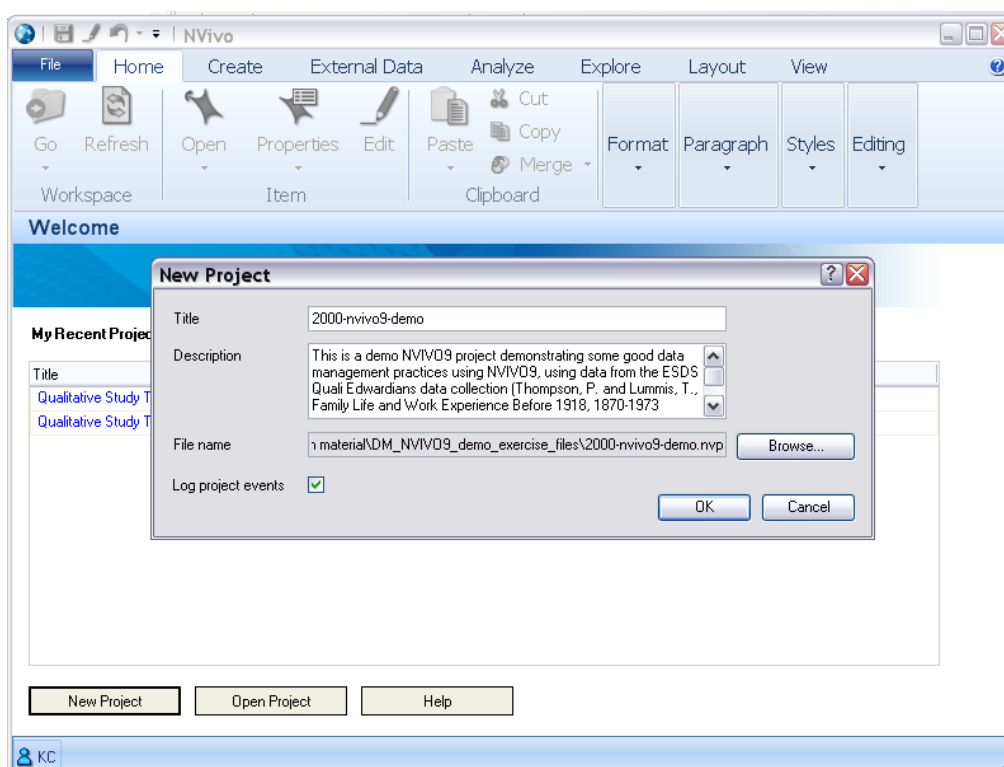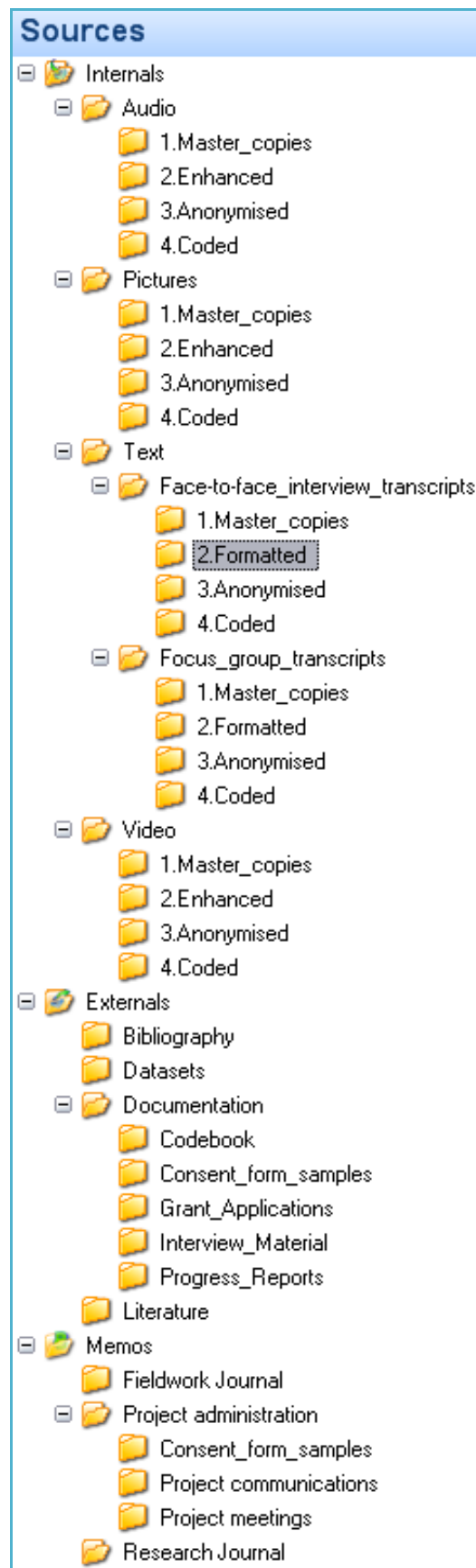
Figure 4.2 Creating a new NVivo 9 project file

Sources

- Internals
  - Audio
    - 1.Master_copies
    - 2.Enhanced
    - 3.Anonymised
    - 4.Coded
  - Pictures
    - 1.Master_copies
    - 2.Enhanced
    - 3.Anonymised
    - 4.Coded
  - Text
    - Face-to-face_interview_transcripts
      - 1.Master_copies
      - 2.Formatted
      - 3.Anonymised
      - 4.Coded
    - Focus_group_transcripts
      - 1.Master_copies
      - 2.Formatted
      - 3.Anonymised
      - 4.Coded
  - Video
    - 1.Master_copies
    - 2.Enhanced
    - 3.Anonymised
    - 4.Coded
- Externals
  - Bibliography
  - Datasets
  - Documentation
    - Codebook
    - Consent_form_samples
    - Grant_Applications
    - Interview_Material
    - Progress_Reports
  - Literature
- Memos
  - Fieldwork Journal
  - Project administration
    - Consent_form_samples
    - Project communications
    - Project meetings
  - Research Journal

Figure 4.3 Sample folder Structure in NVivo 9

4.7   Set default import and export folders for your project

Before you import your data in NVivo 9, make sure you have selected your default working, importing and exporting directory folders for this project, by clicking on `File>Options>File Locations` tab. The default is always the `My Documents` folder, but it is recommended that you assign the appropriate folders to match your sources/outputs structure defined in 4.1. Remember that you will need to set these separately on every computer (except if you are running a server version of NVivo 9).

> **1-8.**
>
> Set the default import and export folders for your projects as follows (assuming you have created a folder structure similar that of Figure 4.1):
>
> **a)** the `2000-NVIVO9-demo` folder as the default location of projects
>
> **b)** the `A2.Externals` folder as the default location of externals
>
> **c)** the `A1.Internals` folder as the default location to import
>
> **d)** the `B.NVIVO_Outputs` as the default location to export
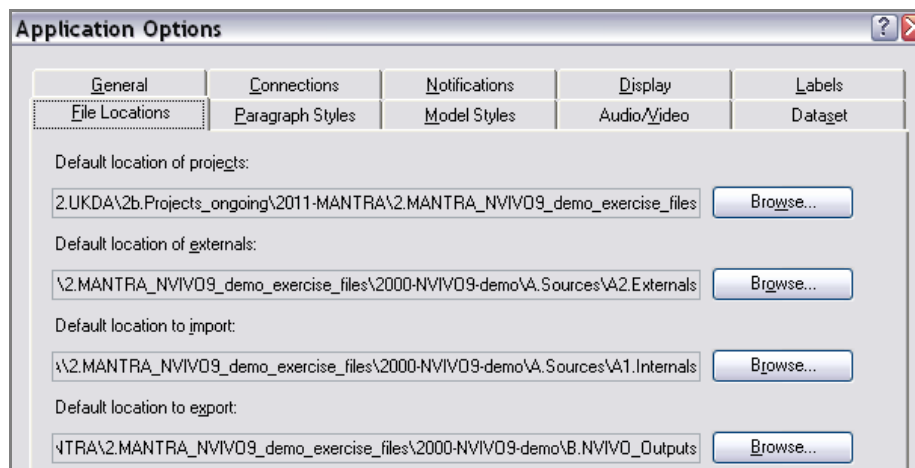
Figure 4.4 Default project, import and export folders in NVivo 9

- *Default location of projects*: where NVivo 9 should look first to open a project
- *Default location of externals*: where NVivo 9 should look for the external sources
- *Default location to import*: where NVivo 9 should look for the internal sources
- *Default location to export*: where NVivo 9 should save your reports

5   Importing your data in NVivo 9

You are now ready to import your data and documentation in your NVivo 9 project! This section will look into how to import different types of data into NVivo 9 and make recommendations on which data are better left as externals.

5.1   Import data (text, spreadsheets, pictures, videos, audio and bibliography lists)

1-9.

a) Import `2000int01.rtf`, `2000int02.rtf`, `2000int03.rtf`, and `2000int16.rtf` in the `2000-NVIVO9-demo_raw-data\transcript_originals` folder to your `Internals\\Text\\Face-to-face_interview_transcripts\\1.Master_copies` folder as internal documents.

b) Import `2000int01.rtf`, `2000int02.rtf`, `2000int03.rtf`, and `2000int16.rtf` in the `2000-NVIVO9-demo_raw-data\transcript_formatted` folder to your `Internals\\Text\\Face-to-face_interview_transcripts\\2.Formatted folder` as internal documents.

c) Import `2000ulist.xls` in the `2000-NVIVO9-demo_raw-data` folder to your `Internals` as a dataset.

d) Import the pictures in the `2000-NVIVO9-demo_raw-data\pictures` folder to your `Internals\\Pictures\\1.Master_copies` as pictures.

e) Follow the links to download and import the audio files in the `2000-NVIVO9-demo_raw-data\audio` folder to your `Internals\\Pictures\\1.Master_copies` as audio.

f) Follow the links to download and import the video files in the `2000-NVIVO9-demo_raw_data\video` folder to your `Internals\\Video\\1.Master_copies` as video.

g) Follow the links to download the files in the `2000-NVIVO9-demo_raw-data\doc` folder. Create externals for the `.pdf` file to your `Externals` folders in the appropriate locations.

h) Import the `.html` and `.rtf` files in the `2000-NVIVO9-demo_raw-data\doc` folder to your `Memos` folders in the appropriate locations.

To import data in your internals or memos sources folder either:

A. click on `External Data tab>Import`, then select the type of data you would like to import:

Figure 5.1 Importing data files using the ribbon buttons

To import documents, select `Documents`. This will allow you to import all types of documents (like text, audio, video or pictures) but *not* spreadsheets. To import a spreadsheet, you will need to import it as a `Dataset`. To import a spreadsheet as a classification sheet, click on `Classification sheets.` Note that you will be able to edit a spreadsheet imported as a classification sheet, but not if imported as a dataset, unless you specify a particular column to be codable upon import. To import a bibliography in `.ris` or `.txt` format, click on `Bibliographical Data.`

B. alternatively, click on the folder you would like to import your data to. Drag and drop the files from your desktop/explorer window to the white space (Figure 5.2). This is not advised if you would like to import a classification sheet (formerly casebook), in which case you should see section3.2 of Unit 2.
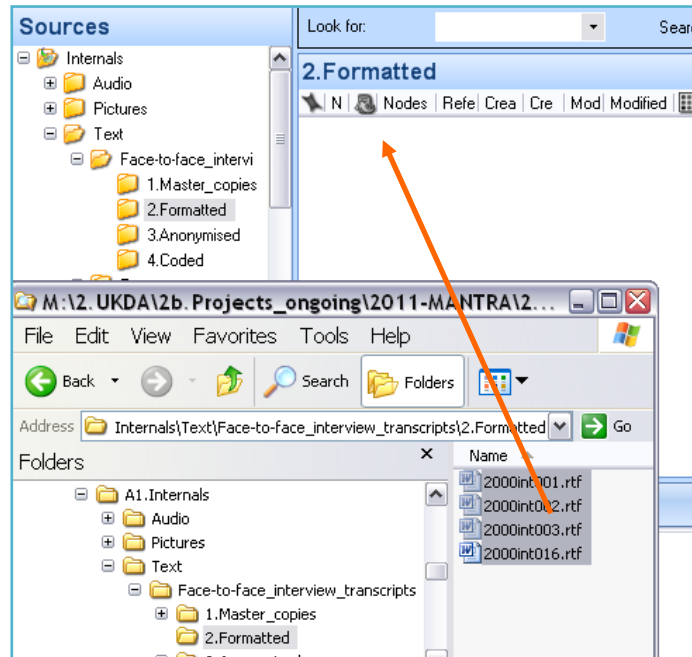

Figure 5.2 Importing textual data files in the Internals folder by dragging and dropping

C. Select the folder, then right-click in the white folder area for options. Then select `Import Internals` and then the appropriate document type (Figure 5.3)**.**
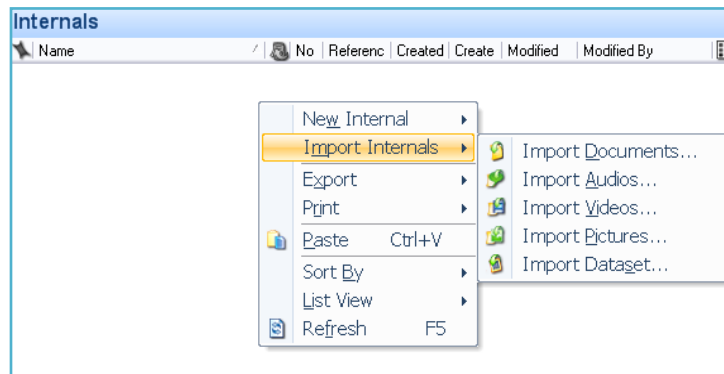
Figure 5.3 Importing documents using the within folder options

You can set default import settings for audio/video from the `Application Options` window (Figure 5.4). Click on `File>Options` then on `Audio/video` tab, select `embed media in project if file size less than X MB for standalone projects or X MB for server projects.`
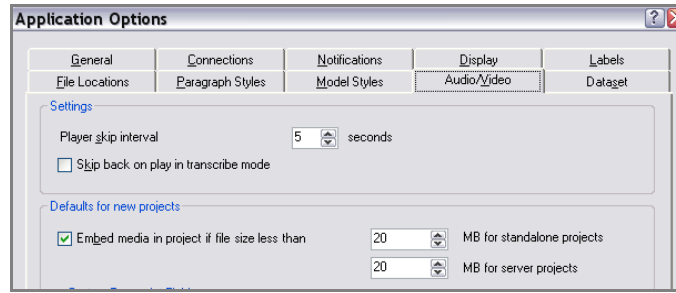
Figure 5.4 Setting defaults for audio/video import
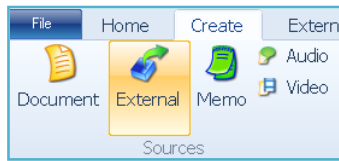
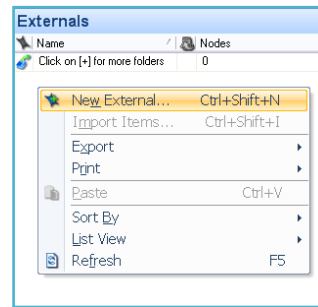*Figure 5.5 Importing Externals
using the ribbon options*

*Figure 5.6 Importing Externals
using the within folder options*

To import links or references to documents that you cannot import in NVivo 9, use the **Externals** source folder. You cannot import links by dragging and dropping, you can however go to the **Create** ribbon tab, then click on **External** (Figure 5.5). This will prompt you with a window where you can set the location of the external (should default to the directory you have set in your project options in 4.7). On the **General** tab, select a name and a description for your external. On the **External** tab, select the type of the external (file link, web link or other) and set the file path. Set the type of content and the unit type and range if applicable.

Alternatively, insert an external by right-click in the externals folder white area and selecting **New External** (Figure 5.6).

5.2 Import another NVivo 9 project

You can import information from another NVivo 9 project either partially or as a whole (such as sources, annotations, nodes, classifications and so on).

Import the external source files in the `2000-NVIVO9-demo_raw-data\2000-NVIVO9-demo.nvp` file to your `Externals` folder in the appropriate locations.

1-10.

Click on **External Data** then on **Project.** NVivo 9 will prompt you with a dialog box (Figure 5.7).

You are also given options for duplicate items and you are asked whether you would like to **merge them into an existing item** or to **create a new item.**

By clicking on **Options**, you can also further refine what items will be inserted from the project. When the import is complete, NVivo will output a report on the items imported. You can save this as a memo or in your NVivo outputs folder for your records.
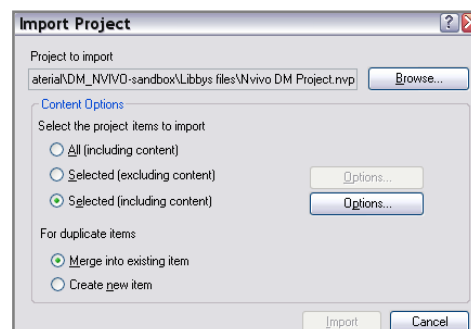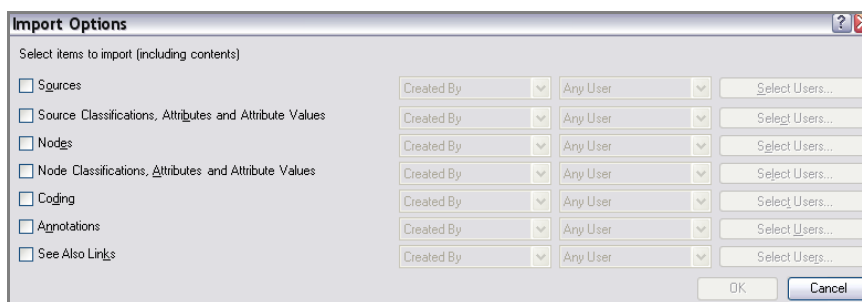

Figure 5.7 Importing another NVivo 9 project

Figure 5.8 Refining what you need to import from another NVivo9 Project

5.3 Importing data from other CAQDAS packages

To import data (sources and in some cases coding) from other CAQDAS packages, select `File>Open`. NVivo 9 will prompt you, asking for the type and path of the file you would like to import.

Importing an NVivo project with `.nvp` extension (even older versions) is usually quite straightforward, but you might experience issues when trying to import project files from older versions of NVivo with other extensions (`.qta`, `.stp`) or other CAQDAS packages like MAXQDA 2007 and 10 projects (`.mx3`, `.mx4`) or ATLAS.ti XML Export (`.xml`). The online help has detailed instructions on how to deal with some of these issues – see for example how to import an ATLAS .ti XML project file on `http://help-nv8-en.qsrinternational.com/Converting_ATLAS_Projects _to_NVivo.htm`. Note that conversion is not always successful and might result in data loss, which highlights the importance of storing and archiving your raw (i.e. not coded) data and documentation in non-proprietary preservation-friendly formats for future use.
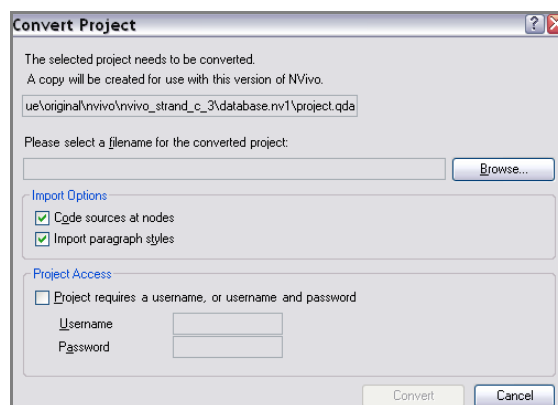

Figure 5.9 Converting a project file to an NVivo 9 project

Summary

In this unit we have covered some issues you need to consider before importing your data to NVIVO such as:
- informed consent
- IPR/copyright issues
- suggested practices in transcription
- suggested practices in anonymising your data
- recommended structure of folders for your data before import

NEXT ⏭ Unit 2: Managing your data when working in NVivo 9

This unit will present an overview of suggested data management practices when working in NVivo 9 including:

- filenames and file formats
- setting default import (and export) folders from NVivo 9
- importing different types of data (text, spreadsheets, pictures, videos, audios and other NVivo 9 project files either as a whole or parts thereof)
- editing and anonymising before and after import
- logging events and keeping notes
- structuring your nodes and classifications
- data storage, backing up your data and access control

Available from MANTRA-NVIVO-exercise-Unit2.doc

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