23 Content Analysis

Content analysis is the systematic description of form and content of written, spoken, or visual materials expressed in themes, patterns, and counted occurrences of words, phrases, images, or concepts.

Qualitative research methods that collect rich descriptions such as open-ended responses, narrative descriptions, and visual expressions are often characterized as an "attractive nuisance."[1] On the one hand, the material contains deep accounts of compelling information critical to design inquiry; on the other hand, lengthy text, interview transcripts, and ambiguous images can be challenging and time consuming to analyze. Content analysis provides an established and systematic technique for dealing with qualitative data, whether analyzing existing records and archived documents, or new materials generated by research participants through interviews, questionnaires, or creative methods such as drawing or collage.

Two primary approaches to content analysis are inductive and deductive, the former being preferred and more common. In inductive content analysis, the categories or codes are derived from a systematic reading of a sample set of the materials to be analyzed, gradually establishing the categories that will be used for subsequent analysis of all the materials. For example, in a review of transcripts, as key phrases emerge constituting a common theme, a name is given that characterizes the theme, and then subsequent examples of words or phrases that represent that theme are categorized accordingly.

In deductive content analysis, the codes or categories are derived prior to analysis, often based on a theoretical framework. For example, in a study of product advertising, codes could be established from Maslow's Hierarchy of Needs, looking for textual and visual instances that exemplify physical or social needs, safety, or self-actualization. These codes could have a further indicator of strength, and whether the message was explicit or implicit.

The outcomes of content analysis can be quantitative, most often counting simple occurrences of the units of analysis: words, phrases, images, concepts; but it may also satisfy the needs of the particular analysis to merely identify the common themes and patterns that emerge from the data, supported by a general indication of how dominantly they are represented. Affinity diagrams are useful in clustering units of analysis to derive and subsequently name theme categories.

In addition to content, the analysis method examines form, or structure of communication; for example, the scale and location of images or the font and type size of text on a page or screen or within a document, and the relationships between texts and images. For smaller sample sets, content analysis can be done manually; for larger information sets, software is available for sophisticated analysis and communication of results.[2]

1. Robson, Colin. *Real World Research: A Resource for Social Scientists and Practitioner-Researchers*, 2nd ed. Oxford: Blackwell Publishers, 2002.

2. See QSR International for an overview of qualitative analysis tools such as NVivo at http://www.qsrinternational.com

Further Reading

Sommer, Robert, and Barbara Sommer. *A Practical Guide to Behavioral Research: Tools and Techniques.* New York: Oxford University Press, 2002.

Many academic institutions have writing guides that provide information on content analysis, for example: http://writing.colostate.edu/guides/research/content/index.cfm
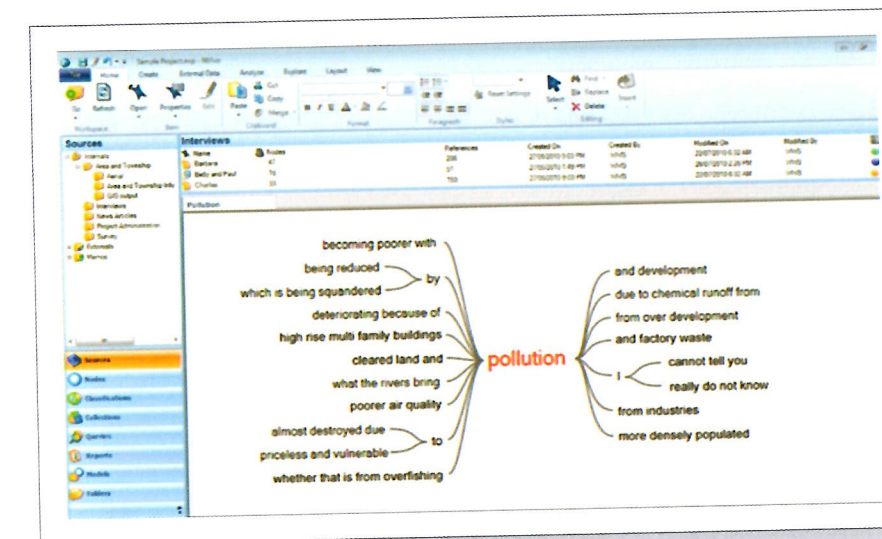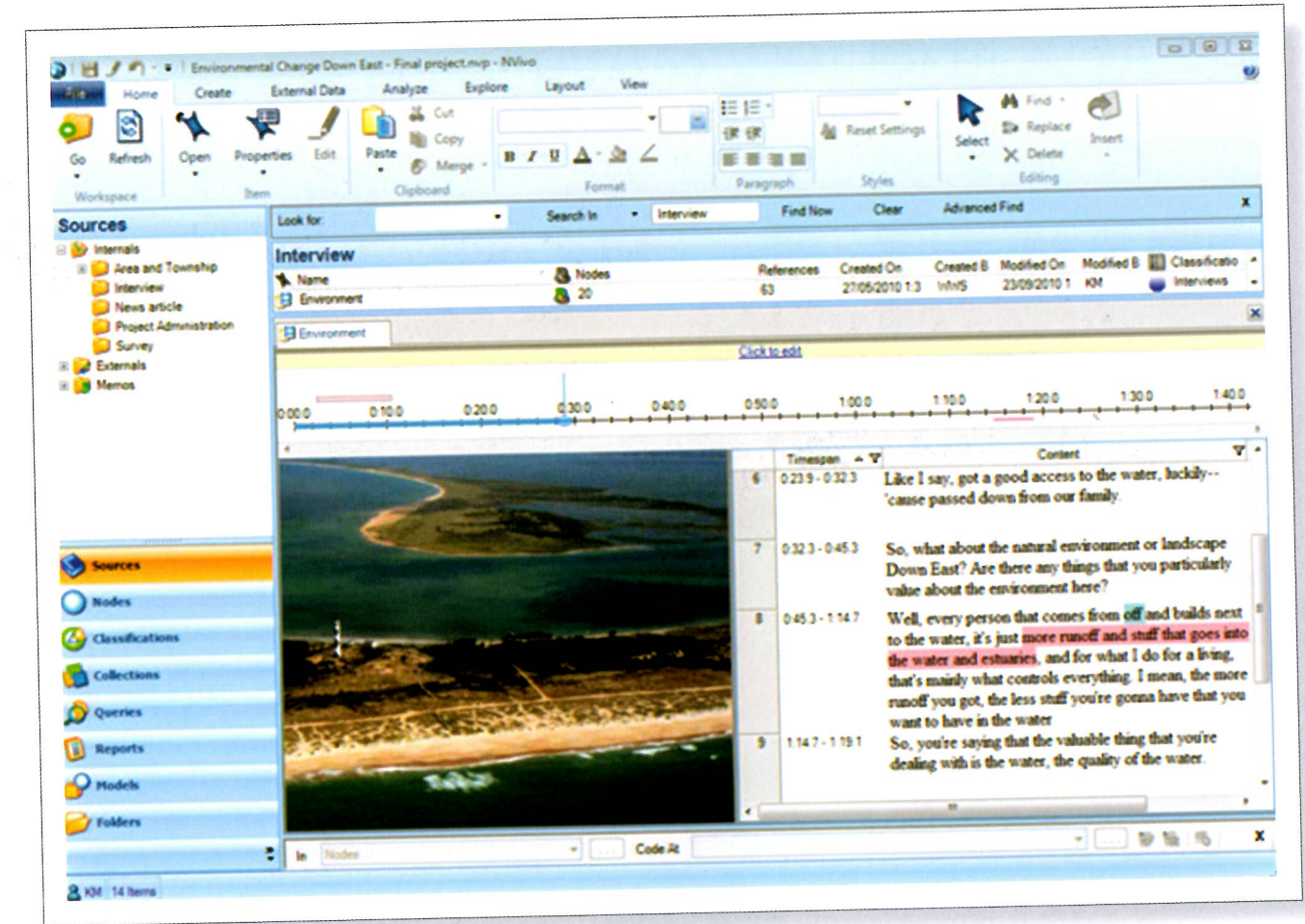
Content analysis helps you extract themes and make meaning out of unstructured information, often with the help of software.

Above: Screenshot of NVivo 9 main window.

Left: Screenshot of a word tree in NVivo 9.

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Behavioral	Quantitative	Innovative	**Exploratory**	Participatory
Attitudinal	**Qualitative**	Adapted	**Generative**	Observational
		Traditional	**Evaluative**	Self reporting
				Expert review
				Design process

See also Affinity Diagramming • Thematic Networks • Word Clouds