

The Role of Software in Qualitative Data Analysis: A Practical Guide

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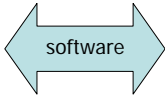
Goals for this Workshop

- data collection strategies
- role of software
- compare ATLAS.ti and Transana
- help you choose the right tools
- other?

Qualitative Analysis is Recursive

- Begin data analysis simultaneously with data collection
- This allows for flexibility in
 - Sampling approach (change criteria for eligibility or recruitment)
 - Research questions (change the focus of the interview, change sequence and design of questions)
 - Data collection methods (change the interview format, triangulate with participant observation)
 - Data analysis methods (focus not only on thematic patterns, but how people account for behavior)

Qualitative Data Analysis

- Source Data
 - Audio files
 - Video files
 - Pictures
 - Written texts
 - Annotations
 - Transcripts
 - Segments
 - Codes
 - Annotations
 - Memos
 - Maps
 - Networks
- 

Methods of Data Collection

- Participant Observation
 - written field notes
 - recordings of naturally-occurring interaction
- Individual and group interviews
- Video - camera angle considerations
- Audio - more discrete and practical
- Photo voice - give participants a camera, have them narrate a slide show

Benefits of Digital Audio for transcription and management

- Unlike tapes, digital media can be segmented, coded and indexed for analysis in a non-linear fashion using software.
- Better sound quality facilitates transcription process, saving both money and time
- DA can be edited, redacted (bleeped), slowed down, sped up, duplicated and converted without degrading the audio quality

Tips on Audio Recording

- Avoid voice recorders or audio players with voice recording
- Use portable music recorders
- Record to MP3 format



Samsontech.com
Zoom H2
\$199

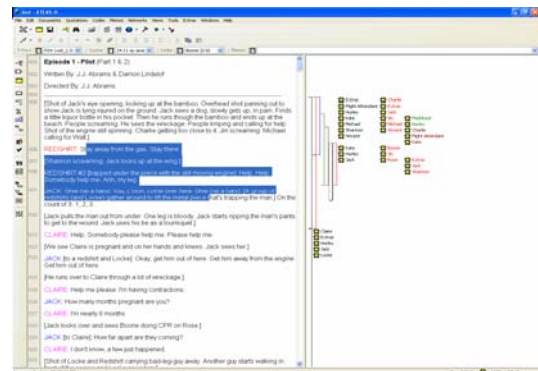
Never discard the source data

- Too often we discard the source data from interviews and work only with transcripts created by someone else who is not part of the research team.
- Keep the raw audio accessible for comparison with transcripts and summary notes.
- Archive data on encrypted CD or DVD for use in future research calling for a different approach to transcription and analysis.

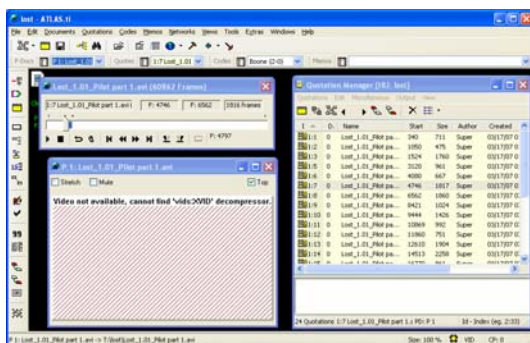
Transcription is Analysis

- Different analysis methods require different transcription formats and different details.
- Researchers should transcribe some of the data themselves.
- Spoken and written language are fundamentally different.
- Transcription involves translation, selection and interpretation of spoken language.

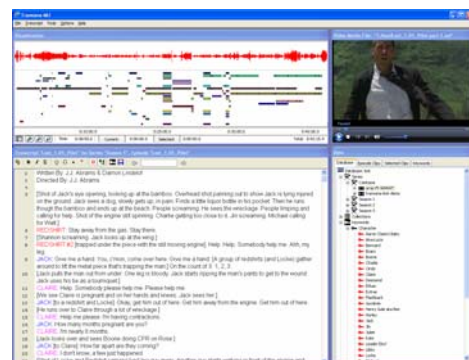
ATLAS.ti



Video Coding in ATLAS.ti



Transana 2.20



Analysis without Transcripts?

- ATLAS.ti is designed to analyze text files or media files, not both simultaneously.
- ATLAS.ti requires you to transcribe and clean data before analysis can begin.
- Transana is designed to analyze media files synchronized to one or more transcripts.
- With Transana, you can redact, segment and annotate the media files immediately after data collection.

Advantages of Analysis prior to Transcription

- Ability to analyze raw audio facilitates real-time supervision of the interviewers
- See if you are getting good data and change recruitment or staffing accordingly
- Prioritize which data to transcribe first, and at what level of detail – reduces transcription cost

Advantages of Analysis prior to Transcription (cont.)

- Unlike ATLAS.ti, Transana allows you to “transcribe” as you analyze/annotate
- The media file is synchronized to the transcript
- You can link multiple transcripts to each media file allowing for triangulation of different analytic methods
- You can code the media file and create code maps that reveal macro patterns not visible in transcripts

Software Is Not a Substitute for Methodological Training

- Unlike statistical software, QDA software does not do the analysis for you.
- People new to QDA expect the software to provide methodological support it is not designed to offer
- Prior training in qualitative methods is essential for a pragmatic approach to selecting and using software

What features do you need?

- QDA software books and web sites tend to compare support for features but not methods
- Software features evolve faster than methods
- Most researchers need a few core features and will never use the bells and whistles

Do You Need Even Software?

- Not all projects require software
- Steep learning curve
- Coding may distract from writing up
- Does the software support the file formats, languages and analytical approaches you are likely to use?

Reasons to Use Software

- Manage large volume of data
- Manage the transcription and analysis of multimedia data
- Software can be helpful for team analysis but not everyone on the team needs to be equally adept with the software

Software as a Clerical Tool

- Provides an interface to systematically explore and annotate your data
- Software encourages you to be more rigorous and transparent
- Provides a structure to keep track of evolving concepts, observations, and research journal all linked to your data

Software as a Clerical Tool (cont.)

- Greater access to your data in context lets you refine hypotheses and compare cases more effectively
- Helps to manage large data sets using filters
- Use boolean operators to search and retrieve coded data segments

Software as a Heuristic Tool

- Should support recursive analysis
- Encourages you to define and link codes to exemplary segments to help ground analytical concepts
- Allow you to visualize the data in a matrix, sequential map, network view, flow chart
- Provides a neutral space in which to juxtapose data segments

Triangulation and Teamwork

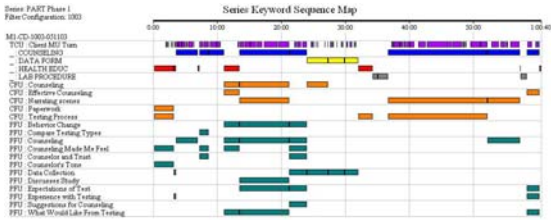
- Triangulation using multiple data sources, methods, and disciplines is increasingly the norm
- Team analysis helps validate findings, challenges you to articulate nascent concepts and defend tentative conclusions

Transana MU eliminates need to merge the database

- Team members log into a secure server that contains all transcripts and coding
- Team members can work on the same data simultaneously from remote computers
- All changes to codes and transcripts are updated automatically in real time
- Eliminates the main data management challenge of teamwork with ATLAS.ti: merging multiple copies of the database and distributing them to the team

Support for Triangulation and Teamwork: Tranana MU vs. ATLAS.ti

- Multiple transcripts, all synchronized with the same media, allow interdisciplinary analysis of the data



Considerations when Comparing QDA Software

- Price (particularly for team analysis)
- Cross platform (mac and/or pc)
- Support for coding of text and media
- Support for transcription, editing and reformatting of transcripts
- Support for code co-occurrence visualizations

Platforms and Price

	ATLAS.ti 5.2	MaxQDA 2007	NVivo 8	QDA Miner 3.0	Transana 2.22
					✓
	✓	✓	✓	✓	✓
Single License Educational Price	\$500 \$175 for registered students	\$500	\$595	\$465	SU \$50 MU \$0* *Using CAPS Transana Server

Coding and Transcription of Multimedia Files

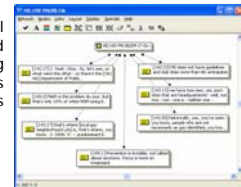
	ATLAS.ti 5.2	MaxQDA 2007	NVivo 8	QDA Miner 3.0	Transana 2.22
Text	✓	✓	✓	✓	✓
Video	✓		✓		✓
Audio	✓		✓		✓
Images	✓			✓	✓
Transcription and Syncing					✓

Visualizations

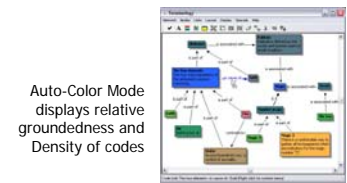
	ATLAS.ti 5.2	MaxQDA 2007	NVivo 8	QDA Miner 3.0	Transana 2.22
Networks	✓	✓	✓		
Coding Frequency Matrices		✓		✓	✓
Code Co-Occurrence Matrices		✓	✓	✓	✓
Coding Sequence Matrices		✓		✓	✓

Network Views in ATLAS.ti

Networks are mainly useful for pile sorting objects and visualizing and changing links and relations between codes



In addition to sorting text segments, you can sort images



Auto-Color Mode displays relative groundedness and Density of codes

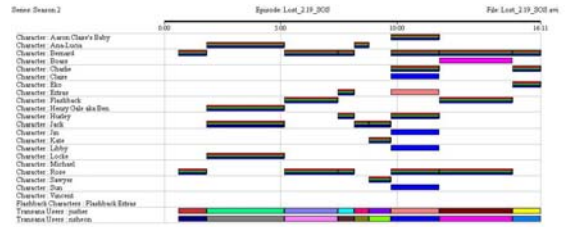
Juxtapose Code Margins

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1	I	Okay, so let's talk about the club - how did you learn about the study?	BW	CODE ONE	DB	CODE ONE	NS	CODE ONE
2								
3								
4	P	Uh, I saw one of those things there.				CODE THREE		
5						CODE TWO		
6	I	One - the flyer with the -						
7								
8	P	Yeah.						
9								
10	I	- uh? Okay. And the club that you saw it at was		CODE TWO				NEW.CODE FIVE
11								
12								CODE THREE
13								
14	P	330_						
15								
16	I	330_ How often do you visit 330_?		CODE THREE				NEW.CODE FOUR
17								
18	P	Once or twice a week.						
19								
20	I	What's the reputation of that club?						
21								
22	P	What - [Chuckle] Depends what you're looking for but [Chuckle] it's supposed to be one of the better ones around.						
23								
24								

Transana Multi-User

- Uses color and alignment along the time line to visualize inter-coder agreement



QDA Software Trends

- Increased integration with statistical software for mixed methods research
- Increased interaction with external databases such as Google

ATLAS.ti 6 mashup with Google Earth



Contact and Links

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- Download Software Demos:
 - www.atlasti.com
 - www.transana.org
- Guide to ATLAS.ti 5.2
- Transana MU 2.20 Training Slides
- Guide to Digital Recording for Qualitative Analysis
 - www.palmpal.org/projects.html