

Analyzing Qualitative Data: With or without software

Sharlene Hesse-Biber, Ph.D.

Department of Sociology

Boston College

Chestnut Hill, MA 02467

hesse@bc.edu

Role of the Researcher

- ◆ YOU are a data collection instrument
- ◆ You take notes and decide what topics to record
- ◆ How much do you set the agenda
 - ◆ What questions do you ask or not ask?
 - ◆ What do you deem important?

Role of the Researcher

- ◆ You are driving the analysis:
 - ◆ What are your implicit/explicit theories?
 - ◆ What is your favored analysis method(s)?

Role of the Researcher

- ◆ You make decisions before analysis based on your:
 - ◆ Epistemological perspective
 - ◆ Approach to the problem
 - ◆ Particular research questions

How should I analyze my qualitative data?

- ⦿ Depends on:
 - What research questions drive your study.
 - Research Question is linked to methods chosen and type of analysis rationale you apply.

Role of Transcription in analysis of your data

- ◆ Builds theoretical sensitivity (Strauss & Corbin, 1990)
- ◆ Brings the researcher closer to the data
- ◆ Provides a unique opportunity to critique and improve on the interview process

What is Transcribed?

- ◆ Written texts:
 - ◆ Field notes
 - ◆ Supporting documents
- ◆ Audio and/or Visual Data
 - ◆ Recordings of interviews, focus groups, consultation
 - ◆ Photos
 - ◆ Videos

Researcher Positionality

- ◆ The researcher's viewpoint is part of transcription
- ◆ How does your set of social, economic, personal, and other characteristics impact the way you represent your data?

Issues of Representation

- ◆ Whose transcription are you creating?
- ◆ Address issues of authority and representation.

Transcription and data analysis reflection:

- ◆ Recognize ways that data are interpreted and represented.
- ◆ How do you decide what to transcribe (everything or only particular aspects)?

Data Analysis: The goal is to analytically reduce your data by:

- ◆ Producing summaries, abstracts, coding, and memos
- ◆ Finding ways to your display data(matrices, frequency counts, etc.)
- ◆ Draw conclusions and test their validity
- ◆ Remember: Analysis is an iterative and ongoing process

Memo-ing: A critical link between your interview data and creation of codes and categories

- Memo about:
 - Codes, categories, and their relationships
 - Initial thoughts on data analysis
- Memos are ways of Summarizing where you are at during your analysis and potential interpretations you may have about your data.
- Analysis is saying: What does the data say.
- Interpretation is saying: What does it mean?

Data Analysis as Data Reduction

- ⦿ Management goal is to make large amount of data manageable
- ⦿ Analysis goals:
 - Search for commonalities, which lead to categories (know as codes or themes)
 - Search for contrasts/comparisons
 - There is Physical reduction of data (putting names on excerpts as if you are creating labels in a filing cabinet with no analytical bite)
 - Conceptual reduction of data: Thinking through meaning by coding—memo-ing—re-coding for meaning

Data Reduction...But how do I do this????

- ◎ Know your data: listen, read, and think about it
- ◎ Know your biases and standpoint
- ◎ Focus on the data – one way is to take a **grounded approach**. But remember there are multiple analytical styles (i.e. narrative analysis, content analysis, etc. Go back to your research question to determine analytical rationale

Coding Styles: Deductive Coding of your data

- ◆ Starts with pre-set themes/codes/categories
- ◆ Themes suggested by research literature, advisor, etc.
- ◆ Provides direction in your analysis
- ◆ Yet: Do you want to start out with a set of themes a priori? Why? Go back to your research question. If you are exploring new territory it may not be best to start out looking for “a something.”

Inductive coding style: Iterative analysis (often referred to as a Grounded Analysis).

- ◆ Your analysis— codes come directly from reading/thinking about data
- ◆ Part of iterative process that is often a like an upward spiral in which you go up and down the twists and turns almost like a dance-- a tango that has no straight lines.

Inductive (Grounded) Analysis

- ◆ Iterative process
- ◆ After initial coding, go back to change and break down codes

Developing Grounded Codes

- ◆ Code: symbol applied to a section of text in order to easily categorize it
- ◆ Related to research questions, themes, concepts
- ◆ Used for retrieval and organization
- ◆ Finish coding when saturation is reached

Developing Grounded Themes

- ◆ During and after coding, look for connections between codes
- ◆ Begin with descriptive themes
- ◆ Look for subcategories, relationships, cause-effect
- ◆ Develop a matrix of codes and themes

Differentiating Types of Grounded Codes:

- ◆ Tag
- ◆ Code
- ◆ Category
- ◆ Themes

Using Software to Analyze Qualitative Data

- ◆ Transcription Software: Using **HyperTranscribe**
- ◆ Computer-Assisted Software: Using **HyperRESEARCH**

Advantages of Computer-Assisted Qualitative Data Analysis (CAQDAS).

- ◆ Enhances ability to play with the data
- ◆ Assists in development of organizing system
- ◆ Theory building and construction
- ◆ Exploring different possibilities of data analysis and interpretation

Advantages of CAQDAS

- ◆ Create and share large data sets
- ◆ Access facilitates group projects
- ◆ Allows for secondary analysis of qualitative data sets

Advantages of CAQDAS

- ◆ Facilitates exploration of epistemological issues
- ◆ Works as a pedagogical tool for qualitative research methods

Transcription as Analysis with Computer Software

- ◎ Transition marker: using time stamps to highlight transitions, etc.
- ◎ Mark text in color
- ◎ Insert memos using representative fonts

Benefits of Transcription Technologies

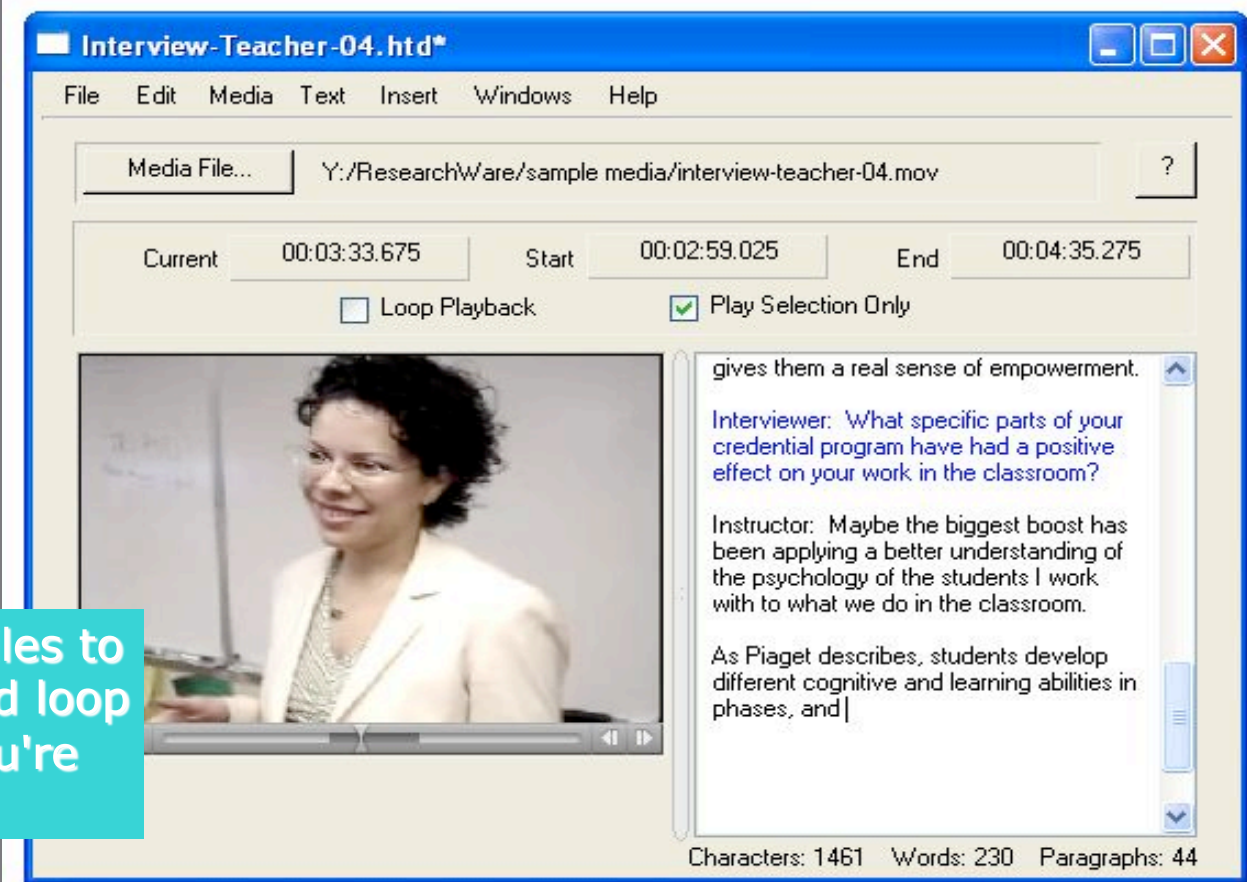
- ◆ Decrease time and money spent on transcription
- ◆ More easily used by junior team members
- ◆ Simplified technologies allow researchers to do own transcription

HyperTRANSCIBE™

- ⦿ Allows you to watch or listen to video or audio file during transcription and take memos on the fly
- ⦿ Single interface for media and transcription
- ⦿ Allows you to time-stamp your transcription for easy retrieval and analysis on the fly
- ⦿ Hands never have to leave the keyboard
- ⦿ Supports common video formats such as AVI, QuickTime, MPEG-2, MPEG-4

HyperTRANSCIBE™

You can load media files to play, start, pause, and loop the media while you're typing.



The screenshot displays the HyperTRANSCIBE™ software interface. The window title is "Interview-Teacher-04.htd*". The menu bar includes File, Edit, Media, Text, Insert, Windows, and Help. The "Media File..." field contains the path "Y:/ResearchWare/sample media/interview-teacher-04.mov". Below this, the "Current" time is 00:03:33.675, "Start" is 00:02:59.025, and "End" is 00:04:35.275. There are checkboxes for "Loop Playback" (unchecked) and "Play Selection Only" (checked). The main area is split into a video player on the left and a text editor on the right. The video player shows a woman in a white blazer. The text editor contains the following text:

gives them a real sense of empowerment.

Interviewer: What specific parts of your credential program have had a positive effect on your work in the classroom?

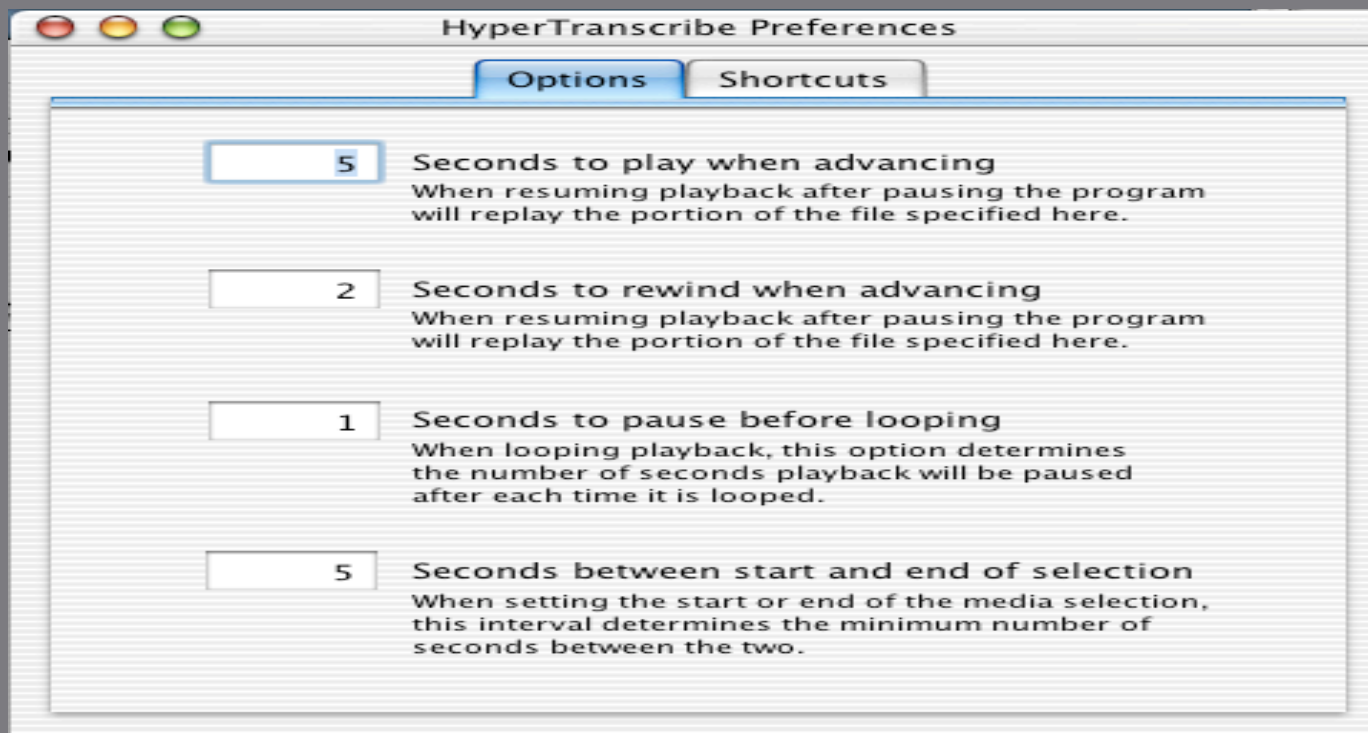
Instructor: Maybe the biggest boost has been applying a better understanding of the psychology of the students I work with to what we do in the classroom.

As Piaget describes, students develop different cognitive and learning abilities in phases, and |

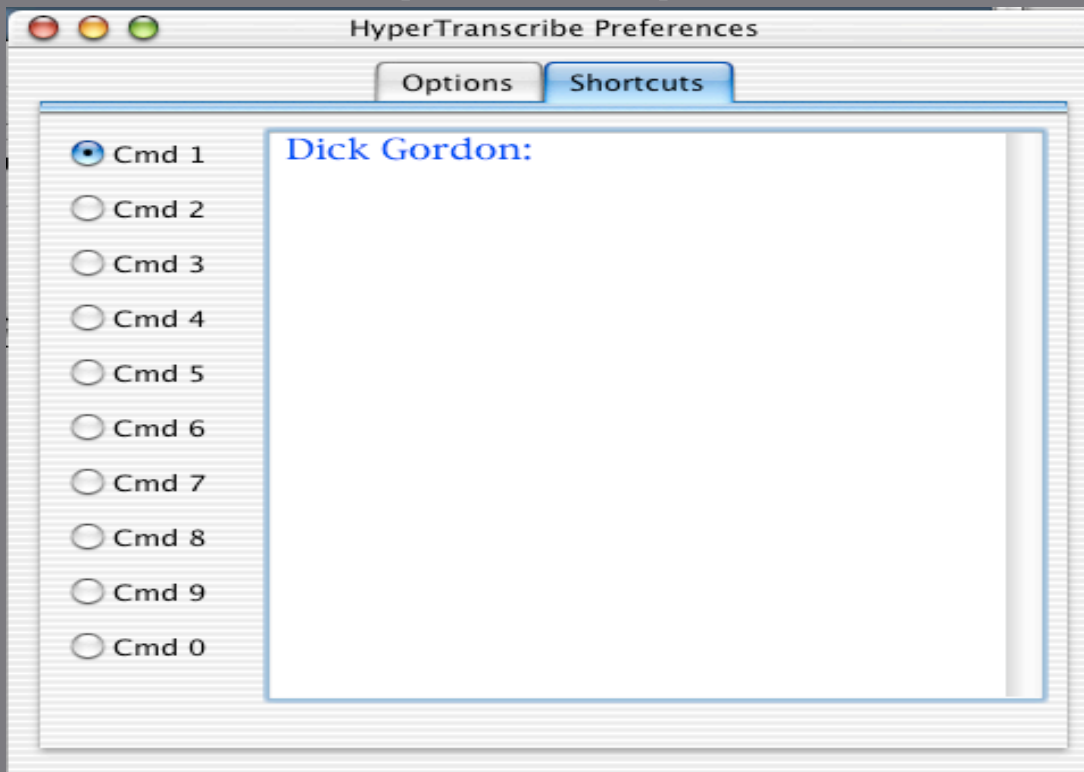
At the bottom right, the status bar shows "Characters: 1461 Words: 230 Paragraphs: 44".

HyperTRANSCIBE™

Simple control over timing options



HyperTRANSCIBE™ Add text shortcuts to speed up the transcription process



HyperTRANSCIBE™

- ◆ Download a free demo at www.researchware.com

HyperRESEARCH 2.8

- ◆ CAQDAS for Win and Macintosh
- ◆ Used for a variety of fields and analytical styles
- ◆ Facilitates group work
- ◆ Allows code and retrieval of data:
 - ◆ Boolean/proximity searches
 - ◆ Auto-coding and viewing codes in context

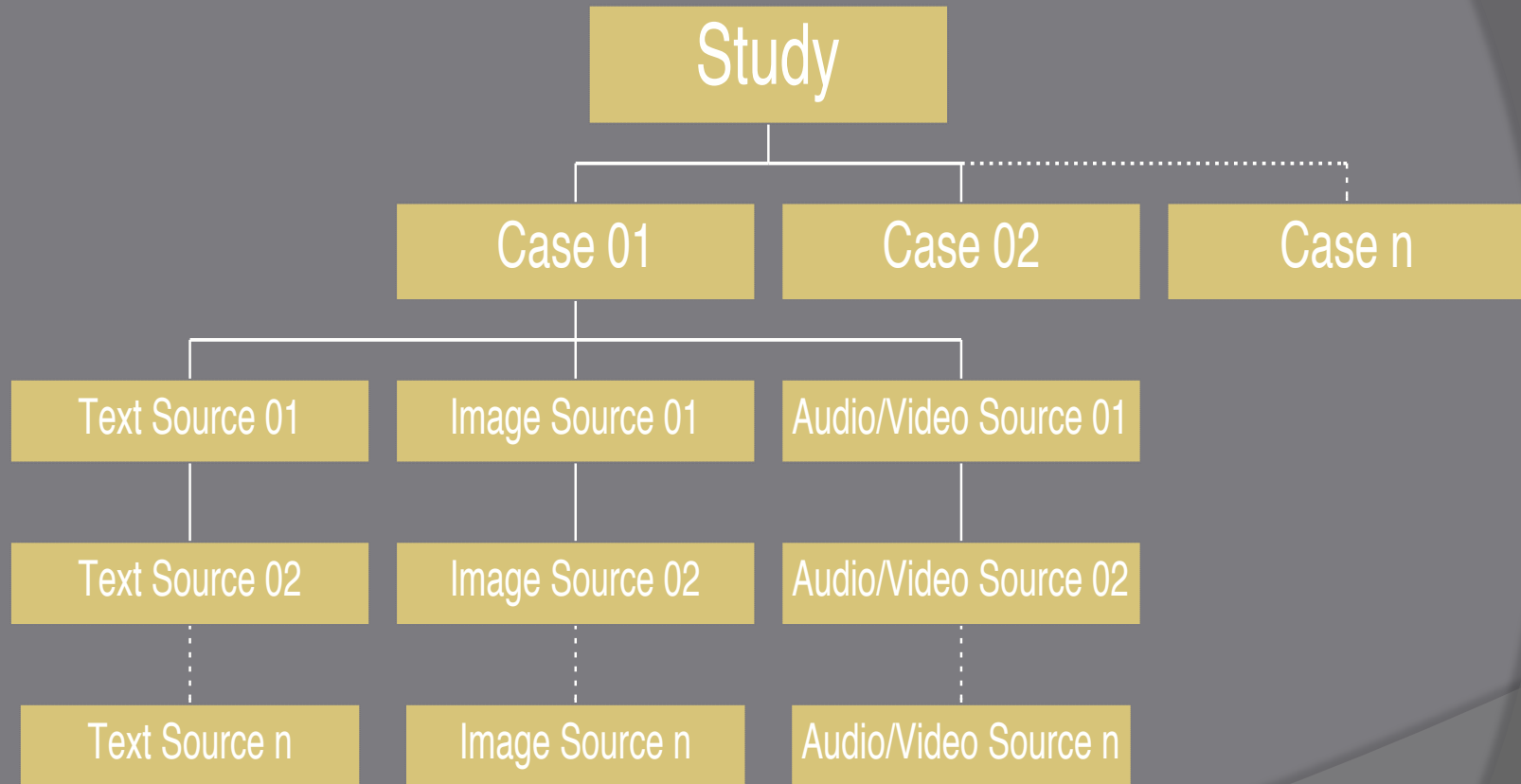
HyperRESEARCH 2.8

- ◆ Uses AI to create complex code categories
- ◆ Summary memos on data documents
- ◆ Hyperlinking
- ◆ Theory building
 - ◆ Hypothesis testing
 - ◆ Cognitive mapping
 - ◆ Code lists

HyperRESEARCH 2.8

- ◆ Links qualitative and quantitative
 - ◆ Export matrices
 - ◆ Import quantitative data
- ◆ Detailed summary reports

Study Structure



Case Card

Cinderella Study.hs2

Cases Selected: All Cases
8 of 8 Select Cases

Case 01

Code Name	Source	Type	Reference
I am making a high salary	Interview 1.txt	TEXT	1,319
nontraditional field	Interview 1.txt	TEXT	1,319
gets married and stays married	Interview 1.txt	TEXT	452,561
wants kids	Interview 1.txt	TEXT	926,1009
leaves work when kids born doesn't return	Interview 1.txt	TEXT	1012,1609
takes major responsibility for family work	Interview 1.txt	TEXT	1012,1609

Codes Selected: All Codes
6 of 6 Select Codes

View Annotation View Source

View codes in context

The screenshot shows a text editor window titled "Interview 1.txt". The window has a menu bar with "Page Number" and "Font Settings...". The page number is "1 of 1". The main text area contains three paragraphs. The first paragraph is highlighted in blue. The sidebar on the left contains several codes, each with a corresponding highlight in the main text area.

Page Number
1 of 1
Font Settings...

I am making a high salary
nontraditional field

gets married and stays married

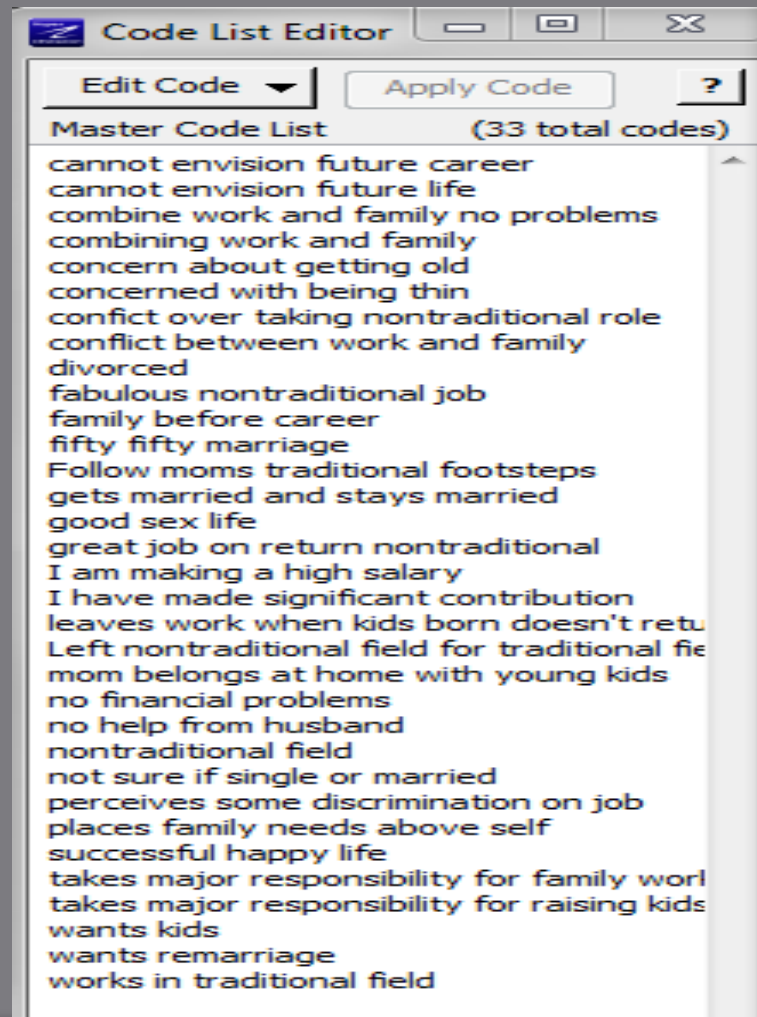
wants kids
leaves work when kids born doesn't
takes major responsibility for family

The year is 2010. I am 40 years old. What is my life like? That's a pretty difficult question to answer. For starters, I am the president of Copley and Mini Advertising Agency. I love my job, probably because I face a new challenge every day. I also like having power, and knowing that many people work below me. All kidding aside, the best part of my job is my six figure salary. Everything is just so expensive, and any extra money helps.

My husband, Michael, also has an excellent job. He works for an engineering company, where he is very happy. With both of our salaries combined we live very comfortably, but not extravagantly. We both set aside portions of our pay every week and put it in an account that will one day pay for our children's college education. I knew what it was like to have to work to pay my own way through college. I want to make sure that my kids don't have to worry about that.

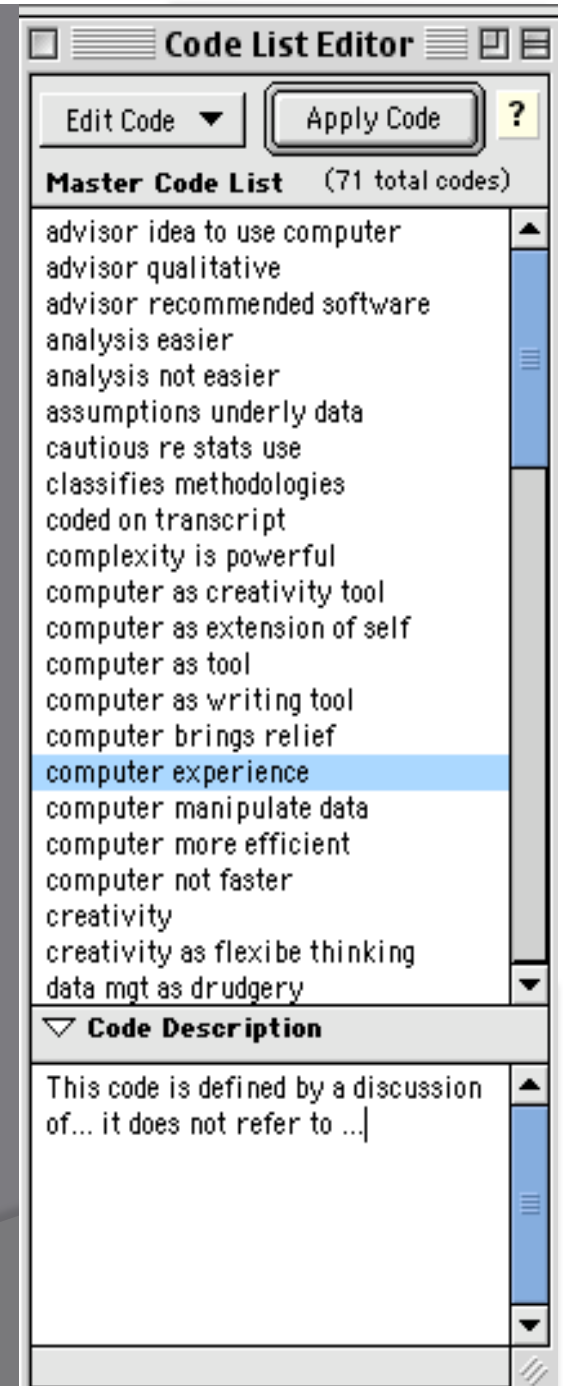
Michael and I have two wonderful children, Courtney, who's 10, and Justin, who's 8. Right now I feel I must deviate a little from this paper. In all honesty I don't know whether I want to say that I took off 4-6 years from work to raise my children or that I hired a nanny for them. I'm extremely torn on this issue. Sometimes I think that it is my responsibility to stay home and be more of a mother than a businesswoman. Other times I think, why should I have to be the one to sacrifice my career? I'm hoping that this class will help me to sort out my feelings on this topic. For the sake of the assignment, I'll say that I took the time off from work to be with my babies.

Code List Editor



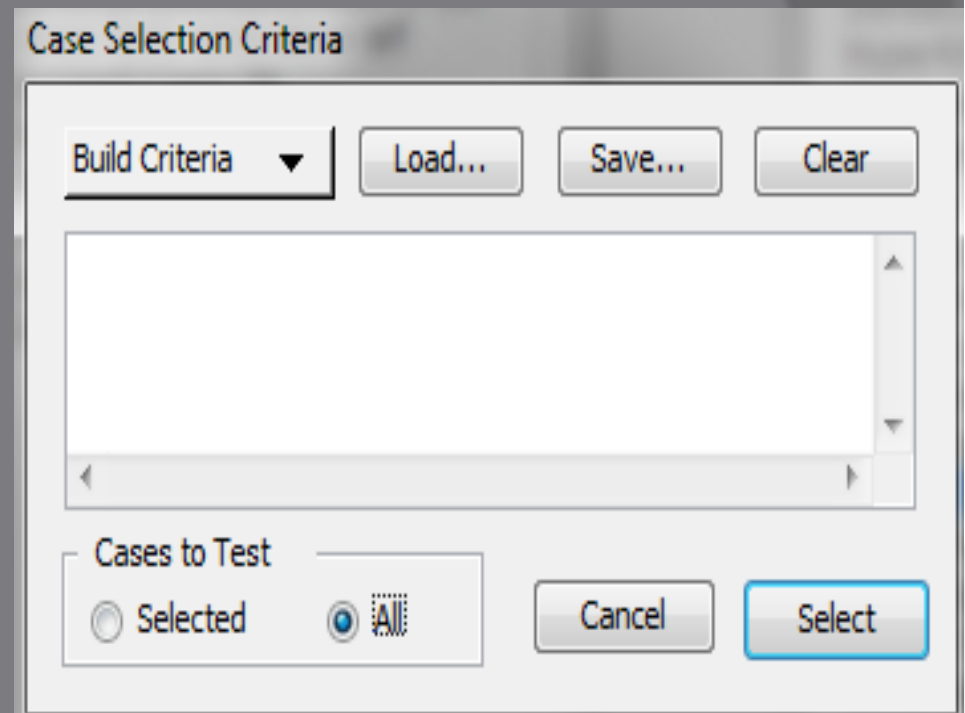
Memoing in Master Code List

- ◆ Define code categories on the fly



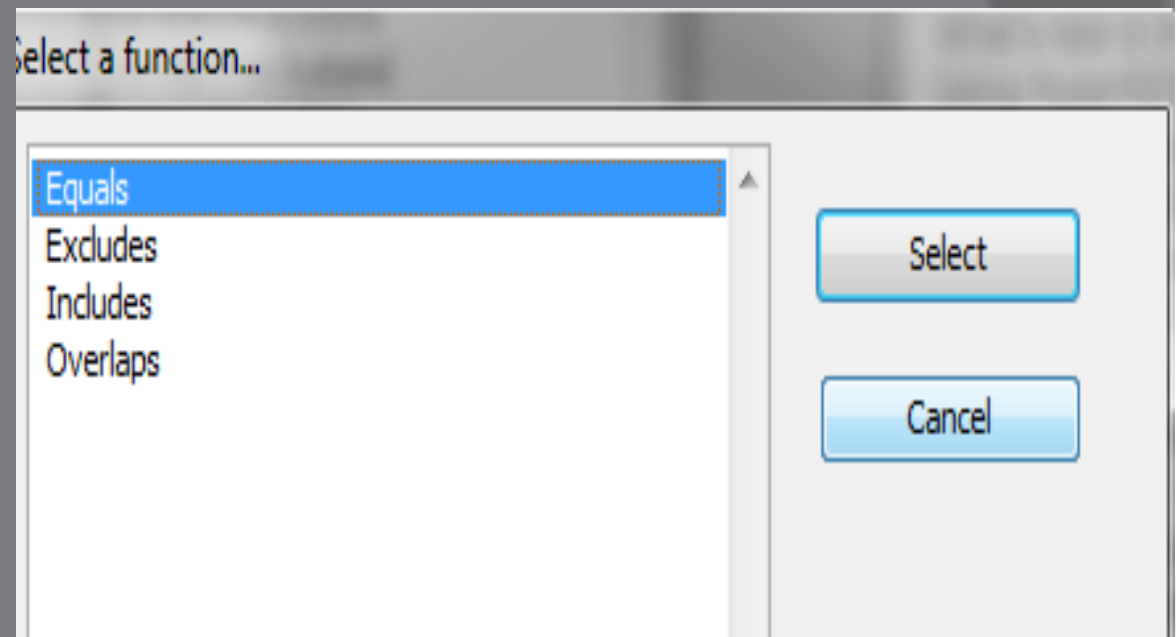
Selecting Cases or Codes

- Select all
- Select by choosing from a list
- Select using a Boolean expression (note:
- All subsequent browsing or analysis is done using the SELECTED subset of cases and codes)



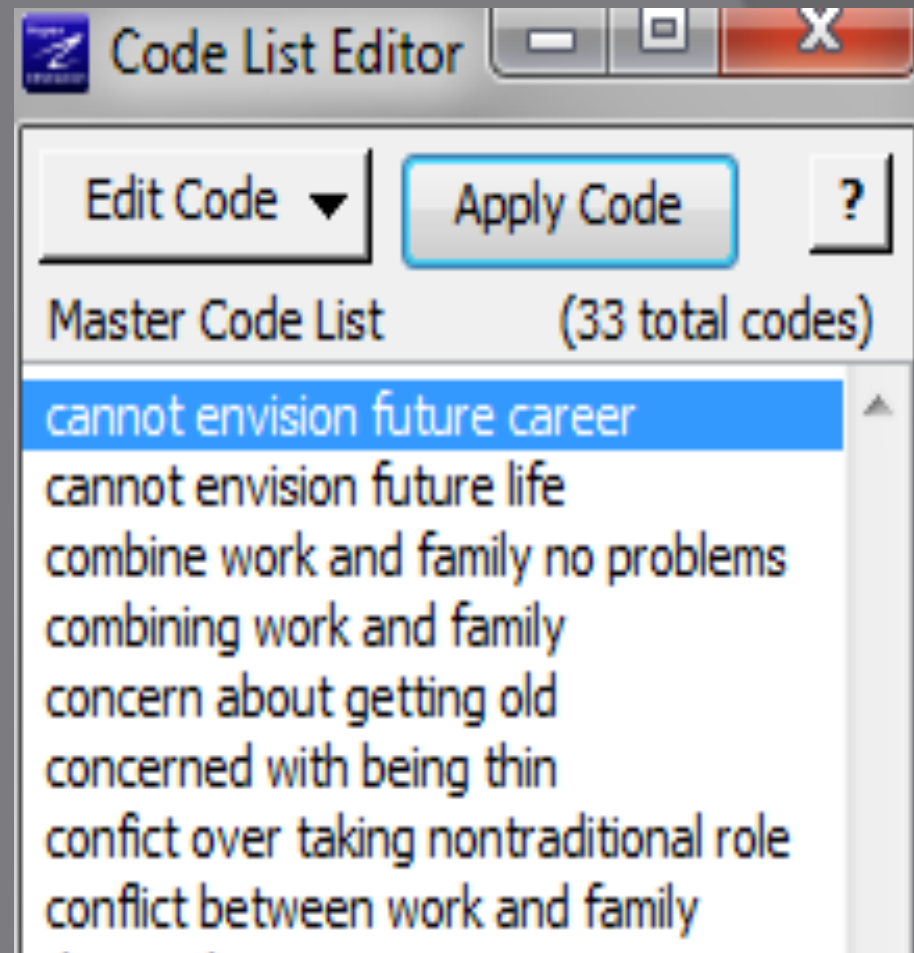
Selecting Cases or Codes

- ◆ Overlaps
- ◆ Includes
- ◆ Equals



Coding

**HyperRESEARCH adds codes on the fly.
Or use the Master Code List Editor to
add codes without attaching them to text or media segments
A code definition may be added
for each master code. 30,000 characters/code**



Code Map

Use the tools to create a code map and then use the code map to select a set of codes that are 'n' links away from a code you click on in the map.

```
graph TD; A[computer as tool] --> B[computer as writing tool]; A --> C[computer as extension of self]; A --> D[computer as creativity tool]; B --> E[computer manipulate data]; C --> F[computer experience]; F --> G[ease of use important]; D --> H[organizational tool];
```

When you Apply your code map selection, the matching codes on case cards are selected.

Code Name	Source	Type	Reference
computer as creativity tool	SODEMAN	TEXT	16248,16752
computer as tool	SODEMAN	TEXT	1559,1708

Coding Images

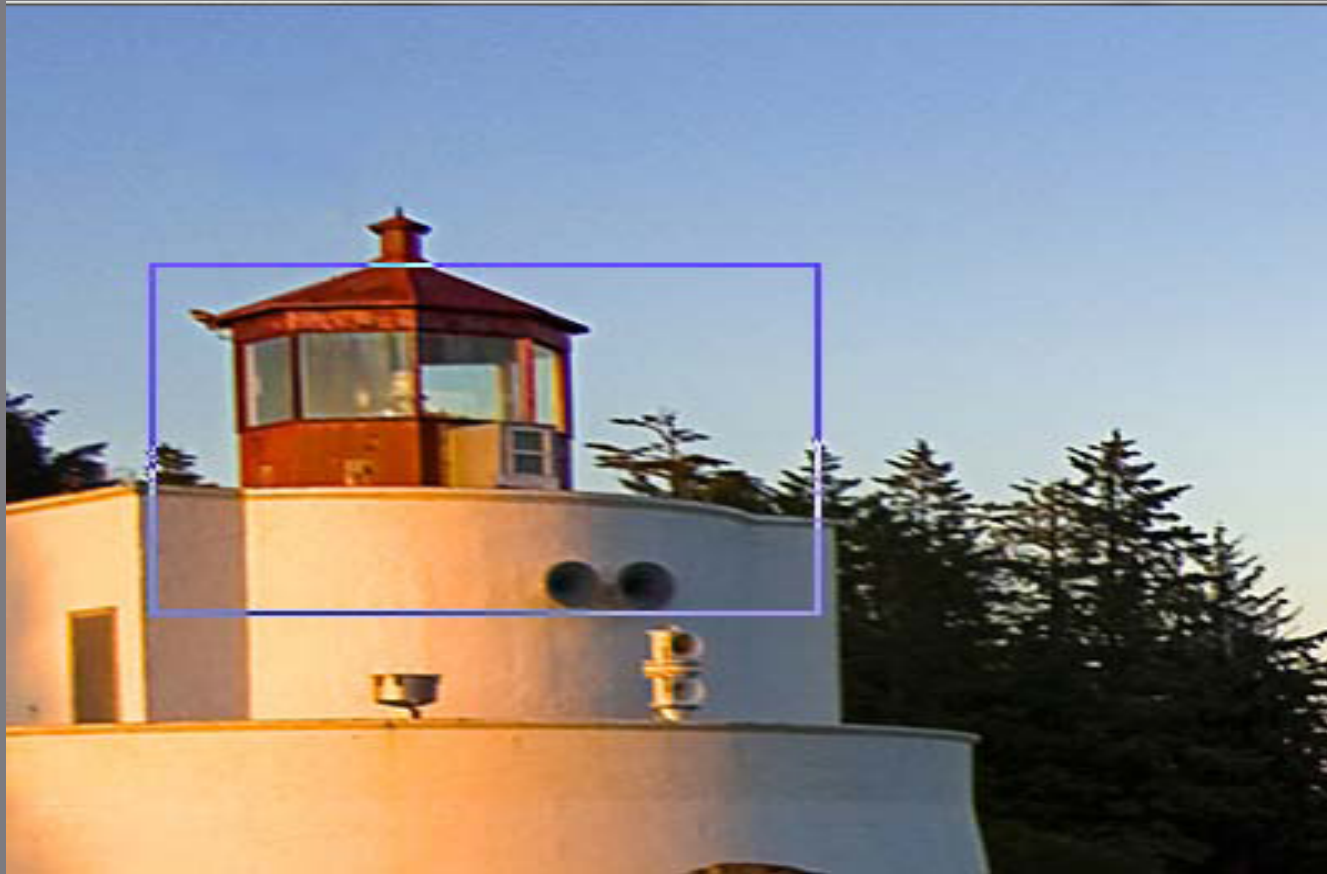


Image FROM: http://ed.stanford.edu/IT/training/workshop_handouts/HyperRESEARCH-handout.pdf

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Qualitative Analysis Consulting

Coding Video and Audio

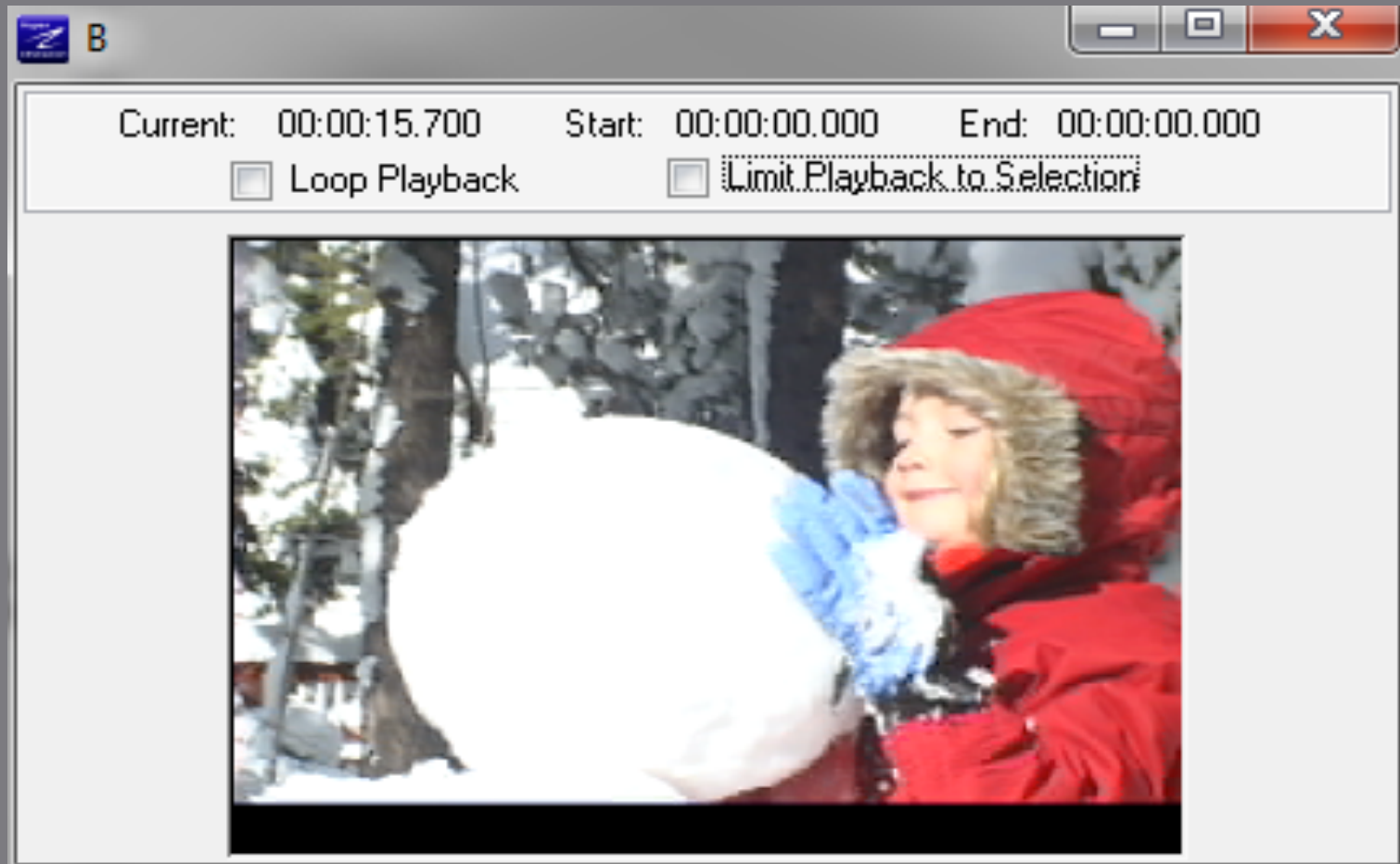


Image FROM: http://ed.stanford.edu/IT/training/workshop_handouts/HyperRESEARCH-handout.pdf.

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Running Reports

Frequency Report Settings

Frequency reports will include the code name and total number of occurrences across the entire study.

You can optionally choose to display the statistics listed below:

Include

Minimum

Maximum

Mean

Standard Deviation

Bar Graph

Codes and Cases to Include

All Codes and Cases

Only Selected Codes and Cases

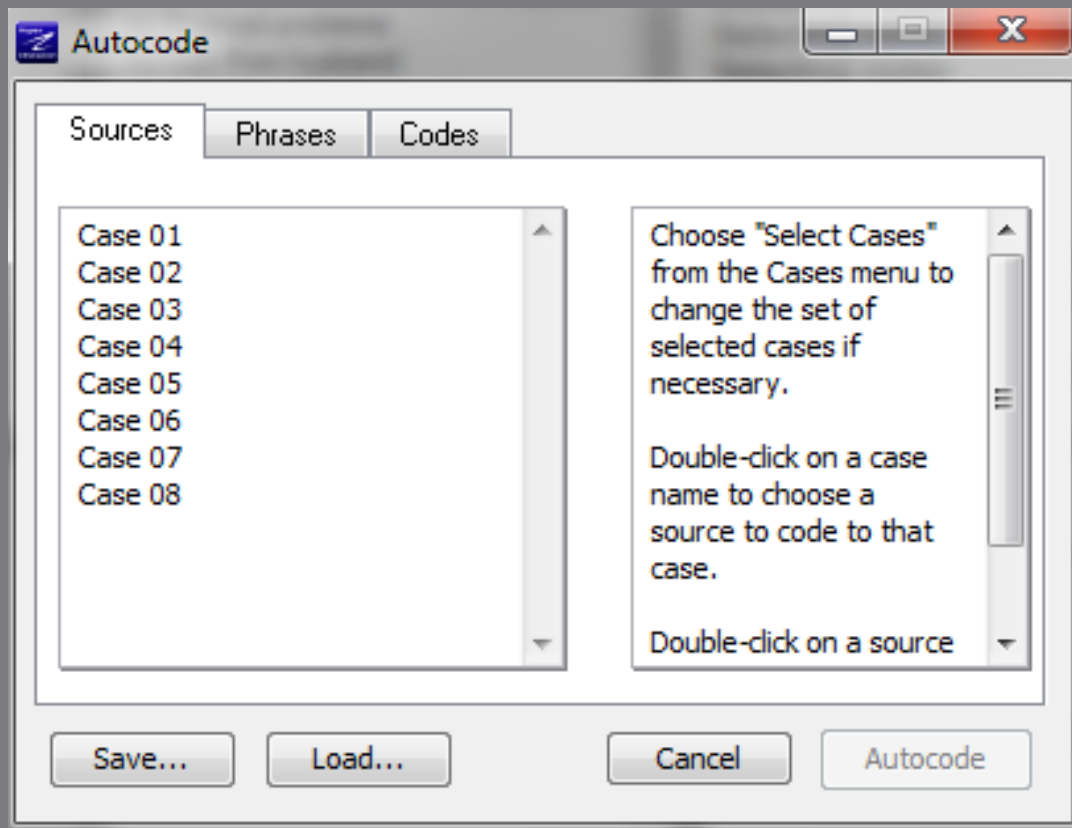
Cancel Display

Code Frequency

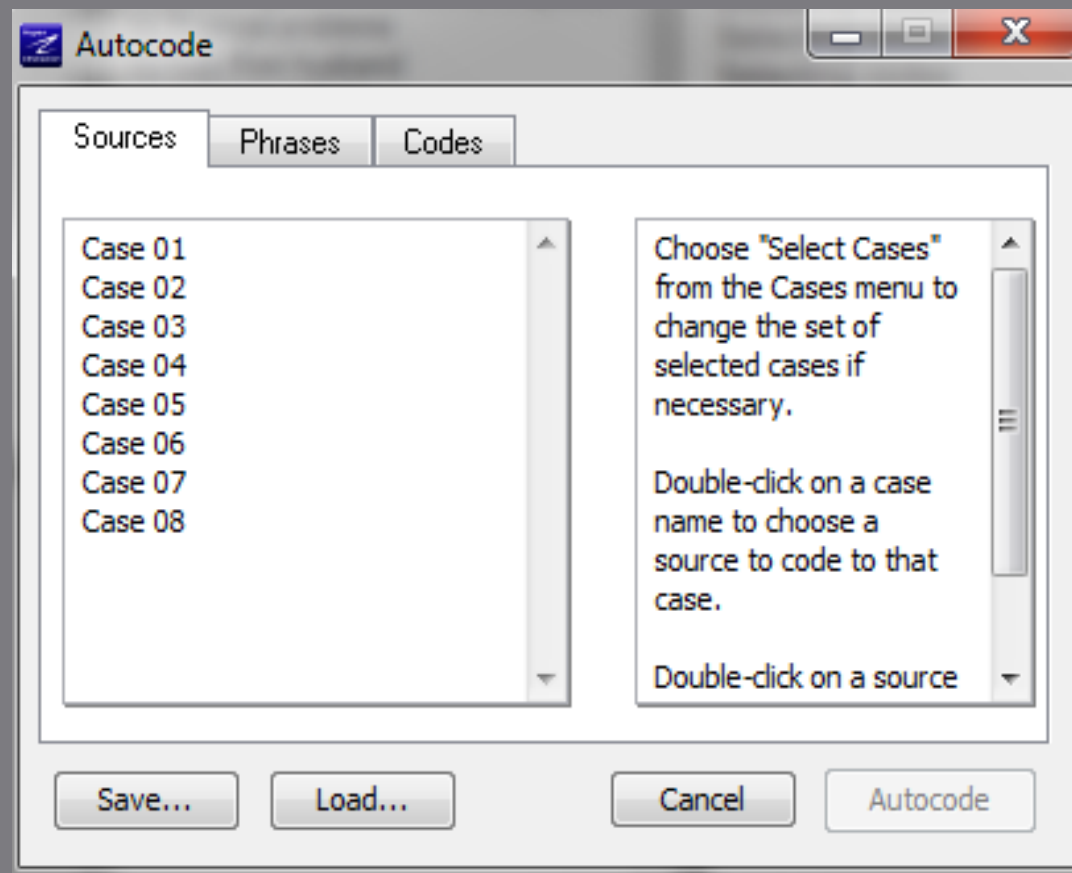
Code	Total	Min	Max	Mean	Std Dev	Bar Graph
cannot envision future career	1	0	1	0.125	0.354	
cannot envision future life	1	0	1	0.125	0.354	
combine work and family no problems	9	0	4	1.125	1.246	
combining work and family	2	0	1	0.25	0.463	
concern about getting old	3	0	1	0.375	0.518	
concerned with being thin	1	0	1	0.125	0.354	
conflict over taking nontraditional role	1	0	1	0.125	0.354	
conflict between work and family	0	0	0	0	0	
divorced	0	0	0	0	0	
fabulous nontraditional job	3	0	1	0.375	0.518	
family before career	2	0	1	0.25	0.463	
fifty fifty marriage	4	0	3	0.5	1.069	
Follow moms traditional footsteps	0	0	0	0	0	
gets married and stays married	7	0	1	0.875	0.354	
good sex life	1	0	1	0.125	0.354	
great job on return nontraditional	3	0	2	0.375	0.744	
I am making a high salary	5	0	1	0.625	0.518	
I have made significant contribution	1	0	1	0.125	0.354	
leaves work when kids born doesn't return	3	0	2	0.375	0.744	
Left nontraditional field for traditional field	0	0	0	0	0	
mom belongs at home with young kids	2	0	1	0.25	0.463	
no financial problems	1	0	1	0.125	0.354	
no help from husband	2	0	1	0.25	0.463	
nontraditional field	3	0	1	0.375	0.518	
not sure if single or married	0	0	0	0	0	
perceives some discrimination on job	0	0	0	0	0	
places family needs above self	1	0	1	0.125	0.354	
successful happy life	5	0	2	0.625	0.744	
takes major responsibility for family work	2	0	1	0.25	0.463	
takes major responsibility for raising kids	2	0	1	0.25	0.463	
wants kids	6	0	1	0.75	0.463	
wants remarriage	0	0	0	0	0	
works in traditional field	1	0	1	0.125	0.354	

Total: 33 72 Export... Print...

Auto Code: Choose Sources



Auto Code: Choose Phrases



Reporting

- Based on cases and codes
- Display, print, or export
- A report is based on the set of cases AND codes you have selected.
- The checkboxes specify which elements are included a report.
- Reports may be displayed, printed or exported

Report

Reports are based on the currently selected cases and codes. View or change these using the Select Cases and Select Codes commands under the Cases and Codes menus.

Source Types to Include

Text Image Movie Theme

Report Elements to Include

Hyperlinks Master Case List
 Case Name List of Selected Cases
 Code Name Case Selection Criteria
 Code Type Master Code List
 Code Reference List of Selected Codes
 Source Name Code Selection Criteria
 Code Frequency Master Source File List
 Source Material
 Annotations

Sort Report By

Case Name Code Name

Pagination

Display on Multiple Pages

Cancel Export Text... Display

Hypothesis Tester & Theory Generator

The screenshot shows a software window titled "Hypothesis". It contains a "Hypothesis Rule List" with four entries:

Number	IF	THEN
1	fabulous non trad job AND I am makg high salary	ADD HIGH WORK COMMITMENT
2	gets married and stays married AND wants kids	ADD HIGH FAMILY COMMITMENT
3	HIGH WORK COMMITMENT AND HIGH FAMILY COMMITMENT	ADD HI POTEN FOR WRK FAM CONF
4	HI POTEN FOR WRK FAM CONF AND (cmb wrk fam no problems OR	

Below the list are checkboxes for "Show Rule Editor" (checked) and "Add Themes to Cases" (unchecked). Buttons for "Cancel", "Export...", and "Display" are present.

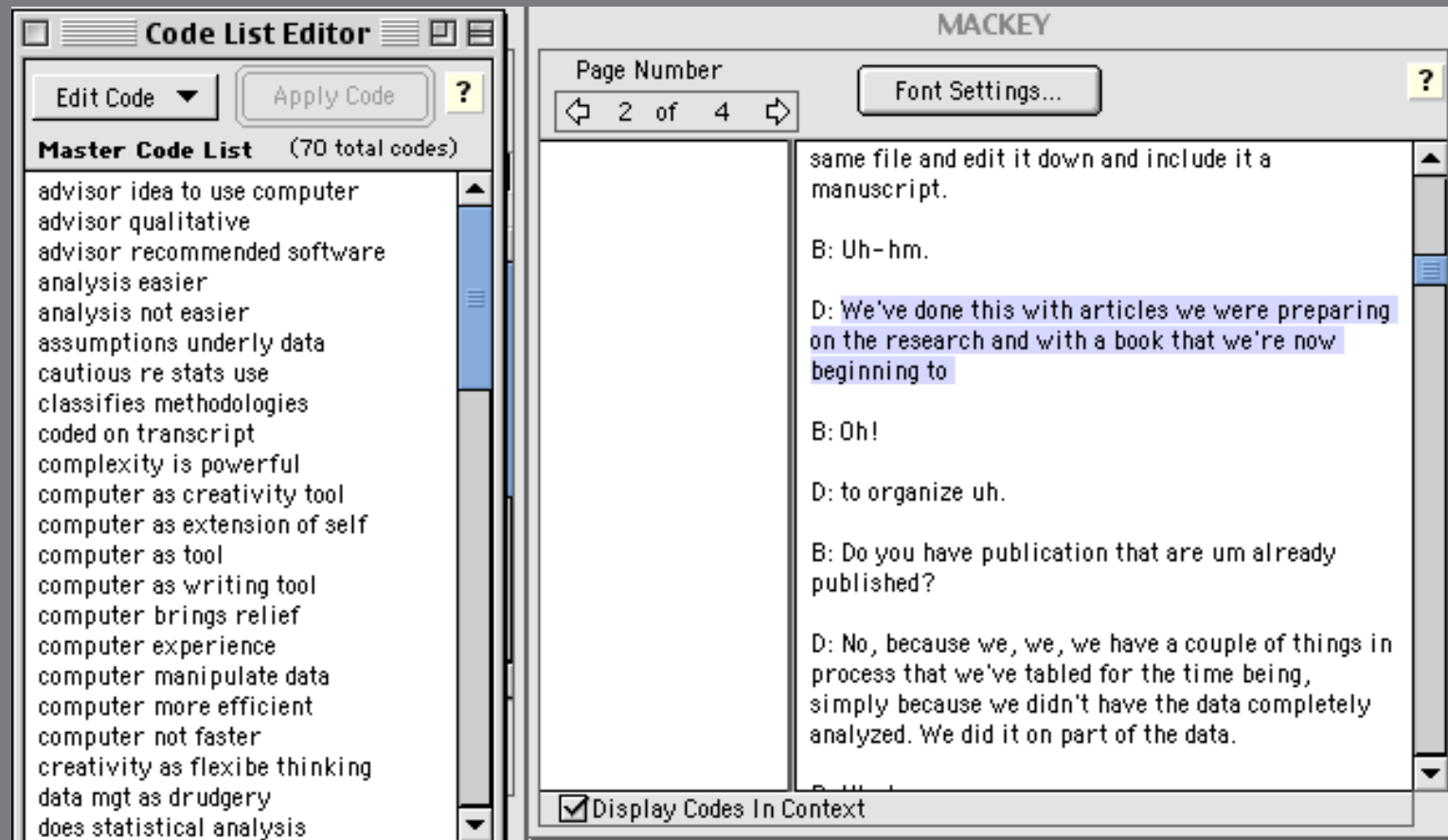
The "Hypothesis Rule Editor" section shows the "IF" clause: "fabulous non trad job AND I am makg high salary" and the "THEN" clause: "ADD HIGH WORK COMMITMENT". It includes "Build Expression" and "Actions" dropdown menus, "Clear IF" and "Clear THEN" buttons, and "Prev Rule", "Next Rule", and "OK" buttons.

Integrating Qualitative Analysis with Software: A Step by Step Approach with some examples of the “how to’s”

Exploration Phase

- ◆ Steps in Analysis
 - ◆ Read text and think of codes (also referred to as 'indexing' or 'tagging')
 - ◆ Assign codes to segments
- ◆ Computer Function
 - ◆ Assign codes
 - ◆ Attaches codes to text segments; automatic coding or words and phrases

Add Codes to Text



Exploration Phase

◆ Steps in Analysis

- ◆ Clarify codes if necessary
- ◆ Writing memos about codes and new directions in research; link codes to the research questions

◆ Computer Function

- ◆ Assigns codes, overview of codes, create theory memos, attach memos to text/codes
- ◆ Memoing, theory memos, formulate new questions / hypotheses

Line by Line Coding

Text:

I always wanted to be the thinnest, the prettiest
Thinnest, Prettiest

I wanted to look like the girls in the magazines

I'm going to have so boyfriends and boys are going

Going to be so in love with me, I won't have to
economic
resources

work and I'll be taken care of me for the
rest of my life
security
Standards

Code:

Pos. body image
Provides

Thin Rationale
Thinness as
Media

Evaluation of codes

Initial codes in Eating Disorders Study were changed as follows:

FROM:	TO:
Clothing made for thin people.....	clothing that fits
Weight lower priority.....	concerned with weight appearance
Minimal diet.....	control over body and eating
Magazines.....	media creates standards
Dating and appearance.....	men control women by appearance
Will always want to be thin.....	values thinness

Thin rationales:

- Thin as a means of Security
- Thin and Healthy
- Thin as Part of Identity
- Thin /Beauty is Empowering

Using diagrams

- ♦ **Thin as a means of Security** 
- ♦ **Thin and Health** 
- ♦ **Thin as Part of Identity** 
- ♦ **Thin /Beauty is Empowering** 

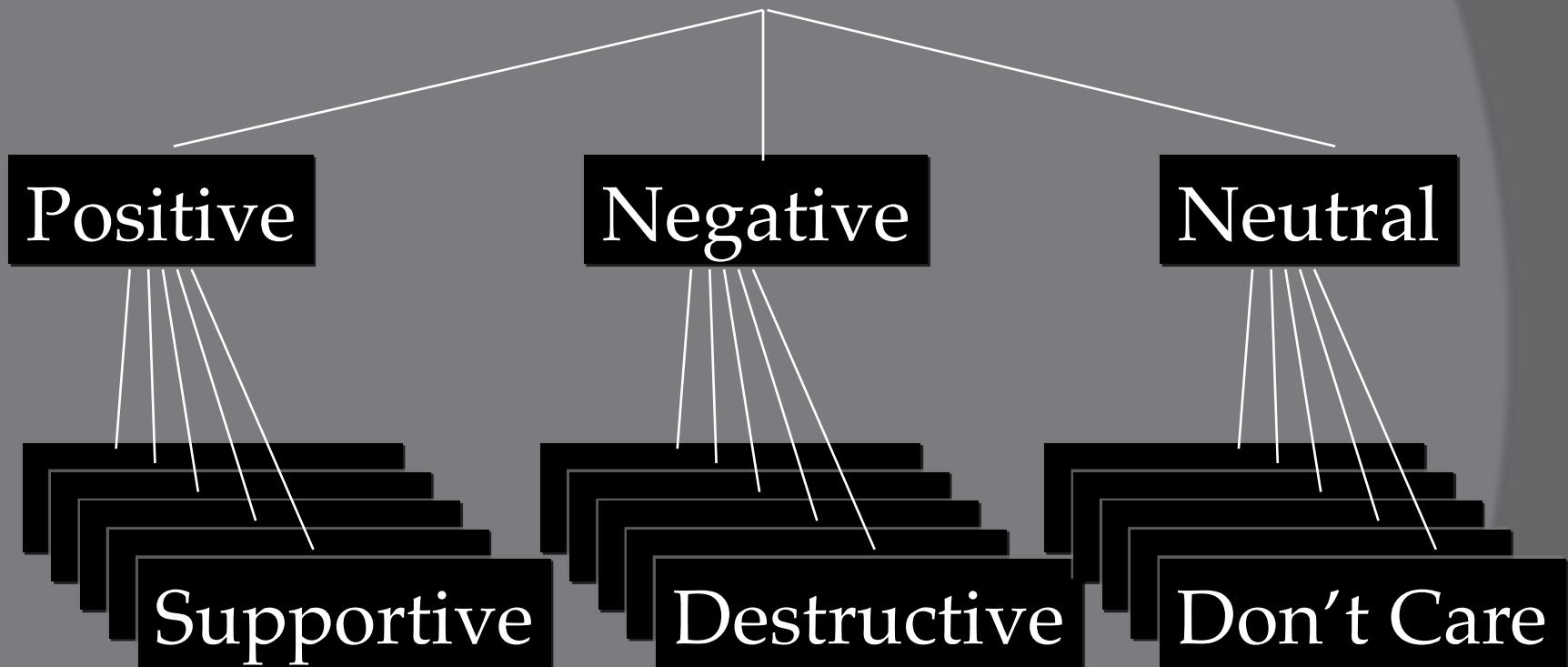
Thin
Rationales

Meta Coding: Going from Larger Themes to Detailed Analysis

- ◆ Meta Code: Pressure to be thin or thick
- ◆ Sub codes:
 - ◆ media source of thin pressure
 - ◆ no pressure to be thin
 - ◆ peer pressure to be thin
 - ◆ pressure to be thin
 - ◆ pressure to gain weight
 - ◆ resists pressure to be thin
 - ◆ teased about skinniness

Hierarchical Coding-

Attitudes towards Appearance



Memoing Codes in Context

The screenshot displays the QDA Study software interface, divided into two main windows: 'QDA Study' and 'SODEMAN'.

QDA Study Window:

- Cases Selected:** All Cases (6 of 6)
- Code List:** A table listing various codes, their sources, types, and references. The code 'computer as tool' is highlighted.
- Codes Selected:** All Codes (36 of 36)
- View Options:** View Annotation and View Source are checked.
- Annotation:** A text area containing the sentence: "Here I can see that the respondent is referring to... this may mean that and it is linked to...".
- Footer:** SODEMAN : computer as tool

SODEMAN Window:

- Page Number:** 1 of 2
- Font Settings...** button is present.
- Text Content:**
 - computer as tool matches method to re
 - learned qual in class explored other softwa
 - S: Um, I guess I'm fairly good at using research methods. I've always looked at methodology the same way I've looked at programming and computers -- just choose whatever tool's appropriate to get the job done
 - B: Uh-hm.
 - S: and use it. And when I was taking my first qualitative um interviewing course, I came upon the notion that whatever tools they had for doing ethnographic studies and doing content analysis really weren't up to the job.
 - B: Uh-hm. What were they using -- do you remember?
 - S: Hm?
 - B: What were they using at the time?
 - S: They were recommending that we use Ethnograph, or a variety of Macintosh-based HyperCard packages,
 - B: Uh-hm.
 - S: and since I run a, an IBM PC, I wasn't gonna use anything on the Mac,
 - B: Uh-hm.
 - S: and Ethnograph was, it was too narrow, it wasn't powerful enough, and it, I thought that I could just get the job done as well using WordPerfect and regular statistical software.
- Footer:** Display Codes In Context

Memoing in Context: An Example

- ◆ Code: Being thick
- ◆ Throughout all interviews it was clear that being thin is not only not a valued social norm, but is also often considered a negative attribute associated with starvation and ill health (several kids associated being thin with being bony). Conversely, being heavy or 'thick' was associated with health and sexuality (one boy said he liked it when 'things gjggle'). It was commonly acknowledged that guys like a "big butt" and a "big chest."

Data Reduction Phase

- ◆ Steps in Analysis
 - ◆ Linking text segments that have the same meaning
- ◆ Computer Function
 - ◆ Retrieval of text segments by codes or combinations of codes

Data Reduction Phase

◆ Steps in Analysis

- ◆ Perform open and axial coding
 - ◆ Formulate initial code categories
- ◆ Create analytical codes and check with material
 - ◆ May want to sub-categorize or integrate categories

◆ Computer Function

- ◆ Perform coding and retrieval of code segments
- ◆ Create a hierarchical coding structure
- ◆ Create and analyze memos
- ◆ Change/adjust segments and codes
- ◆ Create methodological memos

Data Reduction: An Example

- ◆ Code: Attitudes towards appearance
- ◆ Subcodes:
 - ◆ Importance of looks in the estimation of self/others
 - ◆ Worries about appearance
 - ◆ Important aspects of appearance
 - ◆ Social support or pressures re: appearance

Metacodes: An Example

Code: Body Image

- ◆ Family supportive of looks
- ◆ Mother critical of weight
- ◆ Not worried about looks
- ◆ Parents critical of looks
- ◆ Parents supportive of looks
- ◆ Peer support for looks
- ◆ Positive body image
- ◆ Satisfied with wt
- ◆ Worried re looks

Code: Hair

- hair is important
- hair braiding experience
- hair more important than weight
- short hair is in
- straight is better
- teased about hair
- spends time on hair
- won't hire if " nappy hair"
- "afros not cool"

Mixed Methods: use of a qualitative and a quantitative method in your study

- ◆ Based on priority and timing (Morgan, 1998)
 - ◆ QUAL-quant, QUAN-qual, equal
 - ◆ Sequential or concurrent
- ◆ Note: Multi-modal study is the use of two or more qualitative methods OR two or more quantitative methods

Mixed Methods: Data Analysis Stage

- ◉ Quantizing: changing codes into variables
- ◉ Qualitizing: changing variables into codes

Mixed Methods Analysis: Quantizing

- ◆ For example, what women report parents who are overweight and have an eating disorder (Hesse-Biber, 1996)?
- ◆ Or, of those women whose parents value thinness, how many report an eating disorder?

LINKING QUALITATIVE AND QUANTITATIVE

Table 1
The Relationship Between Having an Eating Disorder (EATDIS) and Growing up with Parents, Peers, or Siblings Being “Critical” of One’s Body and Eating Habits (PPSC)

		PPSC	
		No	Yes
EATDIS	Yes	12.8 (5)	56.3 (9)
	No	87.2 (34)	43.8 (7)
		100% (39)	100% (16)
		N=55	

Matrix of Qualitized and Quantized Data

Case	Eating Disorders Scale	Body Image Dissatisfaction	Eating Disorders	Self Esteem
“Jenna”	8	high	moderate	low
“Mary”	28	low	high	high

Sharlene J. N. Hesse-Biber (PhD, University of Michigan) is professor of sociology, Boston College. Her monograph, *Am I Thin Enough Yet?* (Oxford, 1996), was selected as one of *Choice Magazine's* best academic books for 1996. She is author of *The Cult of Thinness* (Oxford, 2007) and *Mixed Methods Research: Merging Theory with Practice* (Guilford Publications, 2010). She is the coauthor of *Working Women in America* (Oxford, 2005) and *The Practice of Qualitative Research* (Sage, 2006, 2011). She is coeditor of *Feminist Approaches to Theory and Methodology* (Oxford, 1999), *Approaches to Qualitative Research* (Oxford, 2004), *Feminist Perspectives on Social Research* (Oxford, 2004), *Emergent Methods in Social Research* (Sage, 2006), and *The Handbook of Emergent Methods* (Guilford, 2008). She is editor of *The Handbook of Feminist Research* (Sage, 2007; this book was an AESA Critics' Choice Award winner, and was selected one of *Choice Magazine's* Outstanding Academic titles for 2007), and *The Handbook of Emergent Technologies* (Oxford, 2011). She is co-developer of HyperRESEARCH, a software tool for analyzing qualitative data, and a transcription software tool, HyperTranscribe (www.researchware.com).