Article

Technique Triangulation for Validation in Directed Content Analysis

Áine M. Humble, PhD
Associate Professor, Family Studies
Mount St. Vincent University
Halifax, Nova Scotia, Canada

Abstract

Division of labor in wedding planning varies for first-time marriages, with three types of couples—traditional, transitional, and egalitarian—identified, but nothing is known about wedding planning for remarrying individuals. Using semistructured interviews, the author interviewed 14 couples in which at least one person had remarried and used directed content analysis to investigate the extent to which the aforementioned typology could be transferred to this different context. In this paper she describes how a triangulation of analytic techniques provided validation for couple classifications and also helped with moving beyond "blind spots" in data analysis. Analytic approaches were the constant comparative technique, rank order comparison, and visual representation of coding, using MAXQDA 2007's tool called TextPortraits.

Keywords: sociology, family studies, content analysis, qualitative data analysis software, triangulation, visual tools

Introduction

Ensuring validity in qualitative research is something all researchers should strive for, yet it is not always clear how this actually proceeds in data analysis. Moreover, during the past 20 years, ways to ensure rigor in qualitative research have been given less attention than previously, the result of some researchers suggesting that standards other than reliability or validity should be applied to qualitative research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). For example, Guba and Lincoln's work in the 1980s (e.g., Guba & Lincoln, 1981) influenced researchers to think about the trustworthiness of their findings rather than consider issues around reliability or validity (Morse et al., 2002), yet issues of reliability and validity should remain central in qualitative research, and a number of researchers (e.g., Golafshani, 2003) have called for a renewed attention to this. In line with this recent focus, in this paper I describe how I used a triangulation of analytical techniques to attain validity, or rigor, in my study. These analytic approaches consisted of constant comparison, rank order comparison, and examination of visual representations of open coding.

The topic explored was wedding planning in couples in which at least one person was remarrying (one woman was marrying a third time). After I received ethics approval from my university's research ethics board, semistructured interviews were conducted separately with wives and husbands from 14 married couples (28 interviews) who had been married between 1 week to just under 3 years. Previous categorizations from Humble, Zvonkovic, and Walker (2008)—traditional (bride planned the wedding, groom had little to no involvement), transitional (bride and groom think they planned the wedding together, but the bride was actually much more involved than the groom), and egalitarian (bride and groom equally involved in planning)—were applied using a directed content analysis method (Hsieh & Shannon, 2005). As in my previous work (Humble et al., 2008), the gender perspective (Ferree, 1990; Thompson, 1993) informed the analysis, with a focus on gender construction at the interactional level and the way in which couples "do gender" (West & Zimmerman, 1987), which typically results in processes generating and maintaining unequal positions (Wood, 1995).

In this paper I describe how the triangulation of data analysis techniques provided validation for the couple categorizations, enhanced my theoretical understanding of how gender was constructed within this family ritual, and also revealed to me parts of the analysis that I had been overlooking and biases I had inadvertently brought to the data analysis. Additionally, because methodological aspects of qualitative data analysis (QDA) software are seldom discussed (Kuckartz, 2006), I refer to several features of MAXQDA 2007's software that were used for data analysis so that readers can become more familiar with the program's various analytical tools.

Readers who would like to know more about the specific results of the study, including a description of respondents and a comparison of their first and subsequent weddings, are referred to Humble (2009). I note here, however, that transitional couples were less common in this sample of remarried individuals compared to Humble et al.'s (2008) study and that respondents tended to approach their involvement in first and subsequent wedding planning similarly despite their second or third weddings typically being smaller and less formal than their first weddings. Before describing the data analysis, I first provide some background to the topic being studied, directed content analysis, and triangulation.

Background to the study

Division of labor in families is gendered (Haas, 1999; Walker, 1999); that is, women still do the majority of unpaid household labor despite a narrowing of the gap in recent years. Little attention, however, has been given to how division of labor plays out in family rituals, which are significant sites for the social construction of gender (Coltrane, 1998).[1] Family rituals such as Christmas and birthday celebrations are, in essence, opportunities for the extension of women's everyday domestic responsibilities around preparing and serving food, giving gifts, creating leisure opportunities, and so on (Di Leonardo, 1987; Seery, 1996), yet research focusing on wedding work is uncommon. This inattention is interesting, given that weddings are such a rich context in which to study household labor. The work required to implement this family ritual can often take a year or more and involve numerous responsibilities and tasks to oversee, particularly for individuals who internalize the commoditized romantic nature of weddings perpetuated and reinforced by a multibillion-dollar wedding industry (Ingraham, 1999).

Weddings are relevant contexts in which to study gender construction because brides and groom are often expected to display gender in normatively stereotypical ways, referred to by Goffman (1976) as gender display. Indeed, analyses of gender display in wedding preparation have demonstrated that although brides and grooms often present themselves as equally involved, they frequently are not. For example, women tend to carry out more tasks and often maintain responsibility for wedding planning regardless of men's involvement (Humble et al., 2008; Sniezek, 2005). However, variation does occur; some couples do share wedding work equally (Humble et al., 2008).

Humble et al.'s (2008) conceptualization of wedding research described couples who were categorized as (a) traditional, (b) transitional, and (c) egalitarian. In traditional couples, brides (or brides and other women) planned their weddings with very little or no involvement from grooms. Although some of these brides experienced high levels of stress while planning, this division of labor was taken for granted and accepted. In transitional couples, brides and grooms felt as though they were equally involved; however, there were many examples of how a cultural script of weddings being "for women" influenced their planning in a way that resulted in gender construction similar to that of traditional couples. Not surprisingly, conflict between brides and grooms was more common in transitional couples than in traditional or egalitarian couples, given the challenges that transitional couples face in holding competing ideologies (Humble et al., 2008). In particular, an interactional pattern was identified in which traditional and transitional brides seemed to "do gender" more successfully than their partners in wedding preparation. These brides often threw themselves into wedding preparation and consciously or unconsciously limited men's participation. Grooms' responses were to pull back from wedding work: The energy needed to fight against the surge of power conferred on brides by the wedding industry was too much for them. Additionally, pulling back from wedding work resulted in less work for grooms, not necessarily an undesired goal for many people. Egalitarian couples' rejections of gender strategies (Hochschild, 1989) such as these resulted in shared wedding planning.

What small amount of wedding work research that does exist has focused on first-time marriages. In this study, I asked how division of wedding labor played out for individuals remarrying. Prior to the study, I had considered two alternatives. On one hand, remarrying individuals might plan their weddings differently compared to first weddings based on marital experiences with their previous spouses (Burgoyne & Morison, 1997). Remarried women do proportionally less housework than women in first marriages (Sullivan, 1997); thus, wedding planning might be more shared for remarrying couples compared to their first weddings. Past wedding experiences might also make a difference. For example, brides who experienced stress the first time around

might choose to do things differently a second time. On the other hand, gendered patterns of labor might not be so different, given that remarried women still do more housework than remarried men (Pyke & Coltrane, 1996; Sullivan, 2004), and divorced and widowed men withdraw from mundane household tasks when they reenter marriage (Gupta, 1999).

Directed content analysis

Hsieh and Shannon (2005) identify three types of qualitative content analysis: summative, conventional, and directed. Summative content analysis involves the counting of words or content and the interpretation of that quantification. In conventional content analysis, categories emerge out of the analysis rather than through preconceived categories being imposed on the data. Directed content analysis involves the application of conceptual categories to a new context.

Directed content analysis is appropriate to use when "existing theory or prior research about a phenomenon that is incomplete. . . would benefit from further description," with the goal "to validate or extend conceptually a theoretical framework or theory" (Hsieh & Shannon, 2005, p. 1281). Because the present study was designed to explore the transferability or generalizability (Maxwell, 1992) of previously developed conceptualizations from one context (first-time weddings) to a new context (second or third weddings), I used the directed content analysis method (Hsieh & Shannon, 2005). The previously developed conceptualizations applied to this study were Humble et al.'s (2008) categorizations of wedding planning previously described.

Directed content analysis could be described as being deductive in nature. This might be of concern to qualitative researchers who believe that qualitative research can only be inductive, yet others argue that qualitative research can be inductive or deductive (e.g., Daly, 2007; Mayring, 2000), or be influenced by a combination of inductive, deductive, and abductive reasoning (Daly, 2007). In the data analysis section, I note how my analysis was both deductive and inductive.

Technique triangulation

Various researchers have discussed the importance of implementing verification strategies throughout a study (Morse et al., 2002) or "constructing evidence within the qualitative project" (Meadows & Morse, 2001, p. 187). Researcher have further noted that a number of techniques can be used to ensure the validity of results, and triangulation is identified as a strategy for increasing the validity or rigor of a study (Golafshani, 2003). Toward that end, I used a number of analytical techniques to understand my phenomenon and to develop rigor during my study. I frame this strategy as technique triangulation.

The term *triangulation* emerged from navigating and surveying professions, in which it is used to describe how two known points are used to find the location of a third unknown point (Farmer, Robinson, Elliott, & Eyles, 2006; Knafl & Breitmayer, 1991). In his seminal work Denzin (1978) described four types of triangulation: methodological, data, theoretical, and investigator. Researchers have both reiterated these categorizations (e.g., Farmer et al., 2006) and expanded them (Knafl & Breitmayer, 1991, who identify unit of analysis as another type of triangulation). In this study, triangulation of data, theory, investigator, and unit of analysis were not used. Method triangulation was used, but I view this as including more than Denzin's (1978) original definition of triangulation as consisting of more than one research method or data collection technique. The use of multiple methods can also include "combining analytic approaches (e.g., constant comparison, immersion/crystallization, matrices, manual analysis, and computer-assisted analysis), and/or analyzing the same data with two different methodological approaches" (Meadows & Morse, 2001, p. 194). Thus, the use of multiple data analysis techniques is also a

form of triangulation. In this paper, I demonstrate how technique triangulation informed the directed content analysis, ultimately contributing to a more thorough understanding of the ways in which traditional, transitional, and egalitarian couples differed from each other and to the way in which gender was constructed within this particular context.

In the next section, I describe the three analytic techniques used: constant comparative technique, rank order comparison, and visual analysis of coding. In the final section, I discuss how this technique triangulation contributes to the gender perspective (Ferree, 1990; Thompson, 1993), an understanding of wedding planning, and the advancement of qualitative methods.

Data analysis

Analysis was conducted with the assistance of MAXQDA 2007 software (Kuckartz, 2007b). This QDA software uses a code-and-retrieve process and includes a number of data management features such as the ability to code in multiple colors, create memos, and retrieve coded segments. It also has many data management features, including several visual tools such as the Code Matrix Browser and TextPortrait options described later.

Constant comparison

Data analysis began with using grounded theory techniques of open coding (Strauss & Corbin, 1990), or topic coping (Richards & Morse, 2007). Transcripts were examined in MAXQDA 2007's text browser window, and codes were listed in the code system window, both of which could be viewed simultaneously. Coded indicators (text segments), which consisted of words, sentence fragments, sentences, or paragraphs (LaRossa, 2005), examined the types of work that were carried out; who carried out the work, including other people; how individuals felt during wedding planning; and so on. Given my specific interest in how brides and groom divided the work of planning a wedding, as tasks were identified, they were placed into three general categories: what individuals said (a) the bride did on her own, (b) the groom did on his own, and/or (c) they did together. Whether other people helped out was also noted. These categories replicated the type of work categories Humble et al. (2008) had used; however, the development of specific codes within each of those groups was very much an inductive process. At this stage, analysis remained very close to the data, as recommended by Charmaz (2006) and LaRossa (2005). For example, when Scott[2] said, "There was a kit of invitations and I don't know if they did them on the computer or if they did them with [a] calligraphy type thing," this was coded as "making invitations" under the general category of "women's work." It was also coded as "help from other family members (not including mothers)" after I asked Scott who "they" meant (he responded: his wife and her daughter).

Analysis was iterative, involving the constant comparative technique (Strauss & Corbin, 1990). LaRossa (2005) described the defining rule of constant comparison as "while coding an indicator for a concept, one compares that indicator with previous indicators that have been coded in the same way" (p. 841). MAXQDA's coded segment window, in which all text segments coded for the same code can be displayed, assisted with this technique. During the first part of this stage of analysis, necessary adjustments were made to coding, such as developing new codes, changing code names, deleting codes, merging codes with others, or moving coded segments from one code into another. I also used memos related to coded segments and codes to keep track of my developing interpretations of the data.

As each bride and groom's transcript was coded, I also developed a composite picture of each couple, which I kept track of in a Word document (in retrospect, this could have been accomplished with a memo in MAXQDA 2007). In each couple's description I noted how they became engaged, the type of wedding they had (e.g., formal versus informal, small versus large), each spouse's level of involvement in wedding planning, and how their experiences in this wedding compared to their first wedding. I was most interested in understanding the level of each spouse's wedding planning involvement and how they constructed gender with their partner and others. Thus, as the couple descriptions emerged, ordinal comparison (Mahoney, 1999), which involves the ordering of cases into categories "based on *the degree to which* a given phenomenon [in this case, gender construction] is present" (p. 1160, emphasis in original), was used to differentiate the couples into the three couple types previously defined: traditional, transitional, and egalitarian. Again, this was a constant comparative process because I continually went back and forth between the couples, comparing them along a continuum of gender construction. Moreover, I also compared couples within each category (for example, from most traditional to least traditional within the traditional category). I would ask myself questions such as "Is couple #4 really more 'traditional' than couple #11?" or "Does couple #12 belong more in the egalitarian category than the transitional category, and if so, where would I place couple #12 along the continuum within that category?" The constant comparison process thus continued in this manner, not between coded segments or codes but between and within broader conceptual categories.

Descriptive coding (Richards & Morse, 2007) assisted with the process of defining the couple categories. Descriptive coding is different from line-by-line coding; it is "used to store things known about data items" (p. 138), such as who was getting remarried, whether a person had cohabited prior to remarrying, and so on. It can also be used to store information emerging from the analysis, such as ways in which weddings are planned. This type of coding is then used to ask questions of the data. For example, do traditional brides view weddings differently than egalitarian brides?

MAXQDA 2007's Attributes feature, which is in the form of a matrix, was used for descriptive coding (Figure 1 shows an example of an attribute table). Selected descriptive data were entered into the matrix. Once the attributes table was created, I used the program's "activation" option to analyze the data on the basis of couples' gender construction: traditional, transitional, or egalitarian. I was then able to examine wedding planning patterns separately for each couple category.

What follows are three representative quotes from each couple type (I refer readers to Humble [2009] for lengthier descriptions of each category).

Traditional couple:

> I think because I've done it once already, he's like, "You know what you're doing, you just go, you do it, tell me what you want," you know. Like, "You know what you're doing, you've done it." . . . He was sort of interested in the getting married part, but the planning part was not really sort of big for him. It's like, you know, he said, "I want to *get* married, but I don't really care so much about the, you know, which color napkins or any of those kind of details." [laughing] (Alexis)

Figure 1. Example of attributes table

	Textname	Number ...	Gender	Gender c...	Who was getti...	Previous m...
≡	couple 01- interview 01...	126	female	transitional	groom	never-married
≡	couple 01- interview 02...	88	male	transitional	groom	divorced
≡	couple 02- interview 03...	101	female	egalitarian	groom and bride	divorced
≡	couple 02- interview 04...	64	male	egalitarian	groom and bride	divorced
≡	couple 03- interview 05...	56	male	transitional	groom and bride	divorced
≡	couple 03- interview 06...	92	female	transitional	groom and bride	divorced
≡	couple 04- interview 07...	100	female	traditional	bride	never-married
≡	couple 04- interview 08...	60	male	traditional	bride	divorced
≡	couple 05- interview 09...	52	female	egalitarian	groom and bride	divorced
≡	couple 05- interview 10...	45	male	egalitarian	groom and bride	divorced
≡	couple 06- interview 11...	55	male	traditional	groom and bride	widowed
≡	couple 06- interview 12...	89	female	traditional	groom and bride	widowed
≡	couple 07- interview 13...	58	female	egalitarian	groom and bride	divorced
≡	couple 07- interview 14...	57	male	egalitarian	groom and bride	divorced
≡	couple 08- interview 15...	51	male	transitional	groom and bride	divorced
≡	couple 08- interview 16...	71	female	transitional	groom and bride	widowed
≡	couple 09- interview 17...	88	female	traditional	groom and bride	widowed
≡	couple 09- interview 18...	42	male	traditional	groom and bride	divorced
≡	couple 10- interview 19...	57	male	traditional	groom and bride	divorced
≡	couple 10- interview 20...	85	female	traditional	groom and bride	divorced
≡	couple 11- interview 21...	66	female	traditional	groom and bride	divorced
≡	couple 11- interview 22...	44	male	traditional	groom and bride	divorced
≡	couple 12- interview 23...	83	male	egalitarian	groom and bride	divorced
≡	couple 12- interview 24...	78	female	egalitarian	groom and bride	divorced
≡	couple 13- interview 25...	87	female	traditional	groom and bride	divorced
≡	couple 13- interview 26...	54	male	traditional	groom and bride	divorced
≡	couple 14- interview 27...	102	male	egalitarian	groom and bride	divorced
≡	couple 14- interview 28...	105	female	egalitarian	groom and bride	divorced

Note: Only a selected number of attributes are shown in this table.

Transitional couple:

> We worked together on it but Leila was more keeping track of things and, and we
> were both there to make the decisions. . . . I think we did a lot together and I'd do the
> odd phone call or something like that. Yeah, Leila was very much the point person

> and I was only too happy to [laughing], you know, be there to make the decisions or
> be assigned, you know, if she said, "Oh can you call this, and take care of that?" . . .
> She couldn't do it all. (Jack)

Egalitarian couple:

> [My husband] was on the computer for hours and hours and hours and hours and
> hours, you know, he had sent out [to] people, you know, "This is the exchange rate,
> and this is, you know, what you need money for, and these are the kind of tips you
> can give, and this is what you can expect the temperatures to be." I mean everything
> was to a "T." He made the final decisions on all of that and he will probably go on at
> great length about what he did, and as he should because he was extremely meticu-
> lous and detail oriented and I think everybody who went really appreciated it. (Tara)

Rank order comparison

Although my assignment of the couples into the three categories made sense to me, I still felt that
I needed to understand the data more fully, particularly with regard to differentiating between
transitional couples and egalitarian couples. Transitional couples talked about doing things
together (carrying out tasks) in similar ways to egalitarian couples, yet I knew they were not the
same. For example, transitional grooms were more likely to acquiesce to their partner's greater
(or perceived greater) organizational skills or wedding planning knowledge than grooms in
egalitarian couples, and transitional women but not egalitarian women maintained responsibility
for making sure everything was carried out. This complexity was fascinating, and I went back to
the topic coding for more consideration of the patterns. In reading about directed content analysis,
I came across a reference to a technique called rank order comparison technique (Curtis et al.,
2001) and decided to apply it to my data, following my (instinctual) nose (Morse, 2000), so to
speak.

Rank order comparison involves quantification (counting). Morse (2007) has suggested that
counting is uncommon in qualitative research and has questioned its inclusion. However, she has
also noted that it can be used when meaningfully implemented and when adding to the descriptive
work already accomplished. Other qualitative researchers counter that enumeration is an intrinsic
part of qualitative research (Miles & Huberman, 2004; Onwuegbuzie, 2003; Sandelowski, 2001).
For example, words such as *most*, *some*, or *common*, which frequently appear in qualitative
research, signify quantification of data. When "most respondents" is used instead of "12 people,"
for example, the "word masks number" (Sandelowski, 2001, p. 236). Additionally, quantitative
strategies can be used to confirm ideas or contribute to more trustworthy analyses (Miles &
Huberman, 2004). Given that I still felt my analysis was not complete, I proceeded with the rank
order comparison, focusing on the number of tasks carried out in each couple category by brides,
grooms, or couples together.

Using MAXQDA 2007's Code Matrix Browser tool, I examined transcripts for each of the couple
categories for the general work categories of "wife did on her own," "husband did on his own,"
and "couple did together." Figure 2 shows a partial screen shot of a Code Matrix Browser. Each
vertical line represents one interview. In the example shown, only transitional couples were being
examined (similar to how the attributes table can be used, an option is available to activate only
certain codes and/or transcripts), so there are six vertical lines to represent each of the six
individuals in the three transitional couples. Dots indicate whether a person's transcript was
assigned a particular code.[3]

Figure 2. Partial screen shot of code matrix browser for transitional couples
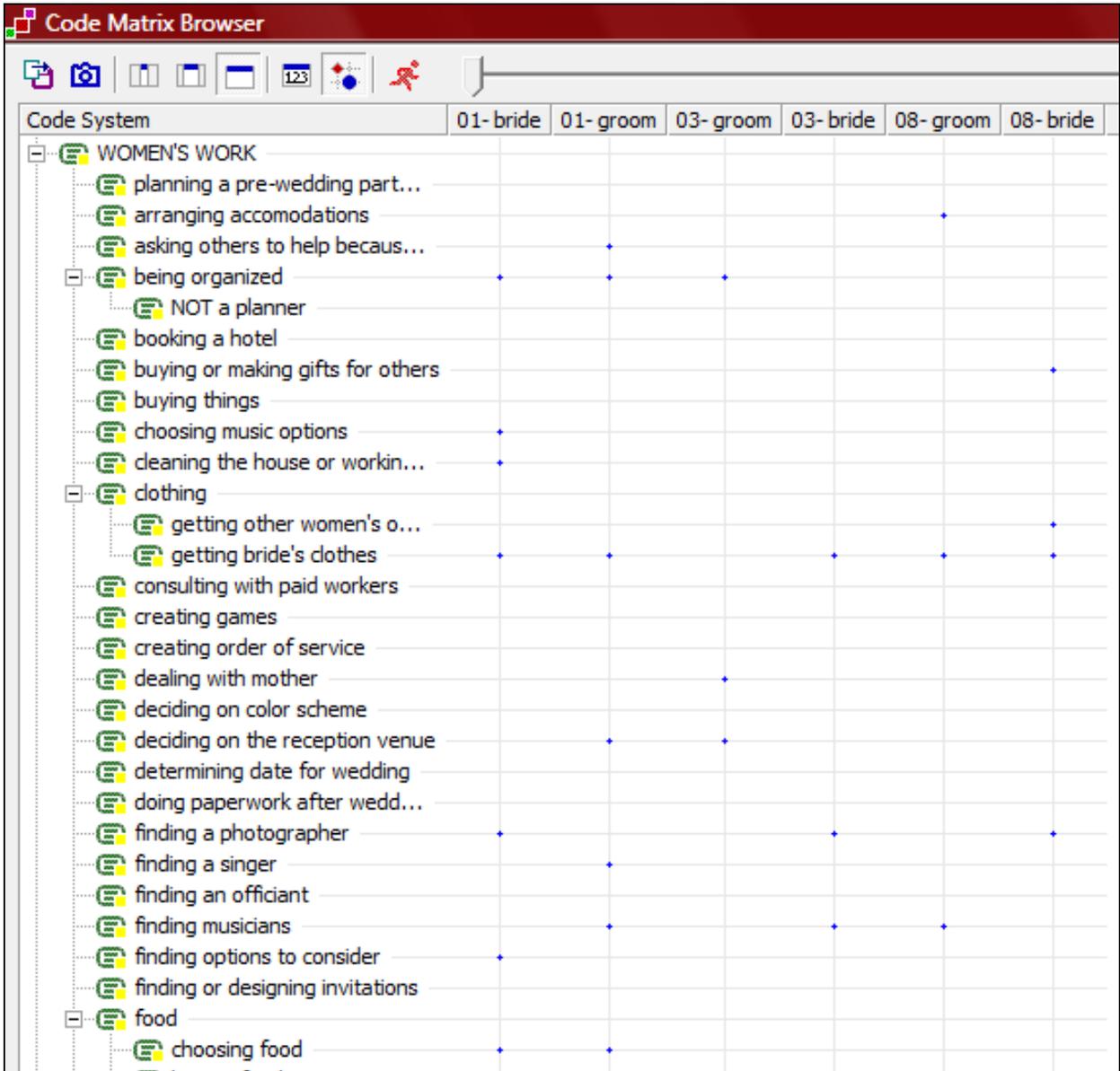
The number of dots was counted in each category (work done by women alone, work done by men alone, and work done together). The outcome of this procedure was a sum of how many different tasks spouses in each couple category reported being carried out by brides alone, grooms alone, and couples jointly. I then divided each number by the number of couples (not individuals) in each category to produce an average number of work tasks per couple category for each of the three ways in which tasks could be carried out. For example, when looking at transitional couples, I counted 10 dots for men's work. There were 3 transitional couples in the study. Ten divided by 3 resulted in an average number of 3.3 tasks reported being done alone by transitional grooms. Finally, these averages were then rank ordered across categories, with 1 being given to the highest average number in each category, 2 for the next highest average, and so on. The average numbers and rankings are presented in Table 1.

	Who Did Wedding Work		
	Number of Tasks Bride Did on Own	*Number of Tasks Groom Did on Own*	*Number of Tasks Carried Out Together*
Traditional couples	14.0 (**1**)	5.8 (**2**)	10.3 (**3**)
Transitional couples	12.3 (**2**)	3.3 (**3**)	17.0 (**2**)
Egalitarian couples	10.2 (**3**)	8.0 (**1**)	17.6 (**1**)

Table 1. Rank ordering of average number of tasks done by brides, by grooms, or together

Note: Numbers are the average number of tasks per couple category who reported different kinds of work in each column; for example, choosing vows, visiting venues, or picking music. Numbers in parentheses are the ranking. Rankings are structured so that a 1 is given to the highest frequency in each column and 3 for the lowest frequency in each column.

An inspection of the averages and rankings confirmed couple categorizations. More important, it further clarified the similarities of transitional couples to both traditional and egalitarian couples. Predictably, brides in traditional couples were ranked first for carrying out the most tasks on their own, compared to brides in the other categories. Also as expected, egalitarian couples were ranked first for the highest average number of tasks couples carried out together, and transitional couples were a close second. The most interesting outcome of this analysis related to the work that grooms did alone. Grooms in transitional couples were ranked third for doing the lowest number of tasks on their own; thus, they were carrying out even fewer tasks than traditional grooms. A comparison of the first and second columns (subtracting the number of tasks grooms did from the number of tasks brides did) showed that the largest gap between brides' and grooms' wedding work was in transitional couples, with brides doing, on average, nine more tasks than their partners. Traditional couples were a close second; brides in these couples did an average of eight more tasks than their partners. Egalitarian brides typically did only two more tasks than their husbands. Thus, focusing on transitional couples, I could see they were certainly similar to egalitarian couples in terms of tasks carried out, yet simultaneously similar to traditional couples in that brides did much more work than grooms on their own. My recognition of transitional grooms' low solo involvement was an "ah ha" moment for me that would not have occurred without this analysis. Clearly I had been focusing too much on work done by brides or done together at the expense of grooms' solo labor.

TextPortraits

In recent years, more attention has been given to the use of visual tools in qualitative analysis (Kuckartz, 2007a). A visual tool can be used "as an assessment tool as well as a mode for presenting analysis results" (p. 2). As a result of my experience with the rank coding procedure, I turned to MAXQDA 2007's visual tool called TextPortrait to continue my focus on how the visual representation of open coding would provide additional verification for couple assignments.

With TextPortrait, open coding must first be conducted in different colors (the program allows for an almost unrestricted number of colors to be used, an advantage that MAXQDA 2007 has over other qualitative software programs). Colors, obviously, must be used in a meaningful way. For this study, the general work categories were coded in the following colors: "wife did on her own": yellow; "husband did on his own": blue; and "couple did together": red. Whenever help from others was mentioned, it was coded in gray. Finally, on the odd occasion when a respondent specifically identified not receiving help from family, such as "[My sisters] didn't offer and I

don't know, they didn't offer to bring any food, they didn't offer to come with me to look for a wedding dress," the segment was coded in white.

All coded segments in the five categories were "activated" and then examined for each person. Thus, because each portrait looks only at one case (individual), this type of visual representation is a within-case display (Kuckartz, 2007a). The format of a TextPortrait is as follows:

> Starting with the first row and the top left tile, the tiles are "described" with a color from left to right. When it reaches the end of a row, it proceeds down to the first column of the following row—much like when using the "return" function on a typewriter. In the normal manner of presentation, the total number of tiles is divided among the coded passages of text so that the number of tiles that symbolize a segment or its color is determined by the total size of all coded segments. (p. 8)

Thus, "broken down into a 100×100-piece rectangle, the [TextPortrait] is 'portrayed' as a painting of its codes, maintaining the location and length of their occurrence in the text" (Kuckartz, 2007b, p. 12). It is important to remember, however, that the size of each colored section will depend on how many coded segments are being represented in the portrait. For example, if there is only one coded segment, total, represented in a portrait, then the portrait will consist of the one color that was used for that code.

Figure 3 compares TextPortraits not only between the three couple categories, but also between brides and grooms within each couple category, using three specific couples as examples.

As I looked from traditional to transitional to egalitarian couples, I could see that references to work brides' solo work became fewer because the amount of yellow in the portrait decreased. I also noted that references to the work that grooms did on their own (blue) was very similar for traditional and transitional grooms, despite the fact that transitional grooms seemed to do more things with their partners.

Examining the differences between partners, the traditional couple partners (Alexis and Luke) were quite similar in their recognition that the bride did most of the work, as both of their portraits are mostly yellow. Likewise, the egalitarian couple (Anne and Liam) have similar amounts of colors recognizing many ways in which tasks were completed. Not surprisingly, the transitional couple is where the biggest differences emerge. Nancy's interview focused very much on the things she did on her own or with her mother, and she noted very few situations where she did things with her husband, Derek. However, Derek's TextPortrait has a much higher proportion of red than his wife, suggesting that he perceived more shared involvement than his wife did. I was not surprised by differences such as this, given the difficulty in transitional couples' attempts to blend companionship with hierarchy (Blaisure & Koivunen, 2000), described by Humble et al. (2008) as the simultaneous holding of competing or contradictory gendered ideologies.

Figure 4 shows the importance of including all relevant codes in a portrait, or more specifically, "help from others" when looking at wedding planning.
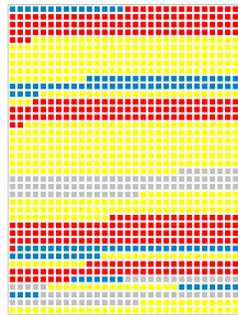
Figure 3. Comparison of TextPortraits for traditional, transitional, and egalitarian couples[4]
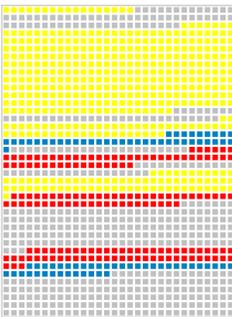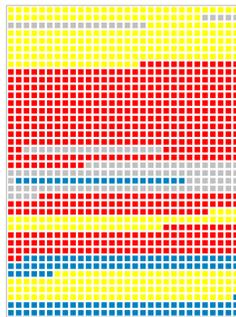
Traditional Couple
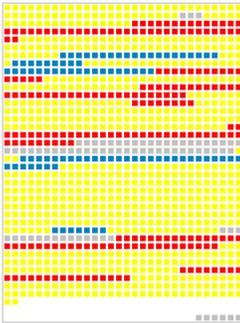
Alexis   Luke

Transitional Couple
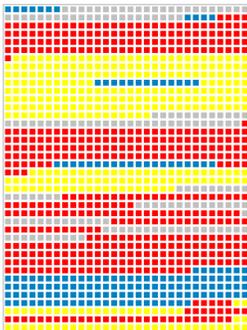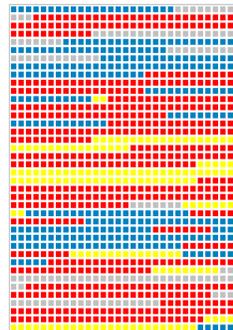
Nancy   Derek

Egalitarian Couple

Anne   Liam

Note: Color assignments are as follows: *yellow*, bride did by herself; *blue*, groom did by himself; *red*, couple did together; *gray*, other people did the task or helped out (e.g., mother, friend, neighbor); *white*, specific references to family members not helping out.

Figure 4. The importance of including "other help"

Fred (traditional couple)

other help not included   other help included
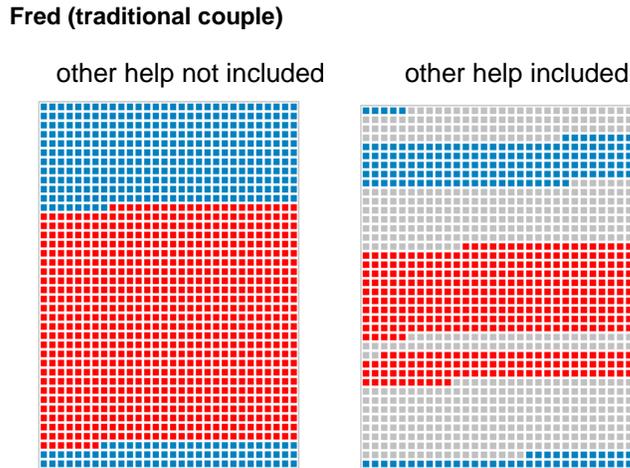
Originally my TextPortraits examined only three work categories: bride did on her own, groom did on his own, and couple did together. However, when I used this strategy, a couple of TextPortraits initially did not make sense. The left portrait for Fred in Figure 4 is an example of this. Given that Fred was in a traditional couple, I was confused as to how his portrait showed only work he did on his own and work he did with his wife. I asked myself, "Could I have made a mistake with my categorization?" When I reran the portraits including help from others as well as references to when people did not help, his TextPortrait made much more sense. This second portrait is presented on the right. With this particular couple, many of the wife's friends had been actively involved in planning the wedding. He said, "All of a sudden uh, the [social group] wanted to take over. [And I said] 'Do whatever you want, ladies. Go for it'." Thus, many of Fred's references to wedding work had been about the friends and had therefore not been captured in the first portrait. If I had always looked only at work brides and grooms carried out, my visual analyses would have been incomplete and inaccurate.

Discussion

To apply Humble et al.'s (2008) previous categorizations of gender construction (traditional, transitional, and egalitarian) in planning first-time weddings to remarrying couples, I conducted a directed content analysis on transcripts from interviews with 14 couples in which at least one spouse had recently remarried. Use of a variety of data analysis techniques, which I refer to as technique triangulation, extended Humble et al.'s work and contributed to a deeper understanding of the process of doing gender in wedding planning. Moreover, it increased my awareness for rigor in qualitative research methods and my ability to achieve it during the study, in contrast to relying on post-hoc methods to defend the trustworthiness of the analysis, a strategy that many researchers have carried out in recent years but which Morse et al. (2002) have argued against using.

Adding a second technique of data analysis (rank order comparison, using MAXQDA's Code Matrix Browser) helped me move toward a full articulation of the couple categories, particularly in terms of understanding how gender was constructed in transitional couples. This technique also illuminated for me a bias I apparently had been having in my data analysis to that stage: I had been focusing on certain kinds of work (done alone by women, done together by couples) at the

expense of a third category (work done alone by men). Thus, this alternative way of looking at my data increased the rigor of my analysis and my understanding of what was occurring in these couples' interactions.

In particular, the numerical technique enriched the descriptive analyses already completed and was instrumental in differentiating further between the three couple types.[5] This is not surprising, as looking at data in a quantitative way can help researchers to think about their data in different ways (Sandelowski, 2001). Moreover, the quantification procedure was particularly helpful in keeping me "analytically honest" (Miles & Huberman, 2004, p. 253). Miles and Huberman described the issue in this way:

> As qualitative researchers we work to some extent by insight and intuition. We have moments of illumination. Things "come together." The problem is that we could be wrong. A near-library of research evidence shows that people (researchers included) habitually tend to *overweight* factors they believe in or depend on, to *ignore or forget* data not going in the direction of their reasoning, and to *"see" confirming instances* far more easily than disconfirming instances (Nisbett & Ross, 1980). (p. 253, emphasis in original)

TextPortraits, an additional visual tool available in MAXQDA 2007's QDA software, was the final data analysis technique used. The TextPortrait analysis is a unique way of visualizing selected codes, and like the rank order comparisons, it brought me back to examining the coding more closely. Examination of the patterns of colored coding provided additional confirmation for the couples' categories. Moreover, this technique was influential in helping to understand that only examining women's and men's work in wedding planning, both alone and together, sometimes gave an incomplete and inaccurate picture of how a person described wedding planning. It was essential to include "others" in examining these portraits. Thus, codes must be chosen carefully so that pictorial diagrams are meaningful. More examples of how individuals use this new visual tool will help researchers learn how this tool can be used for both assessment and the presentation of results (Kuckartz, 2007a).

The technique triangulation I used highlights just how responsive researchers need to be throughout their inquiry, as Morse et al. (2002) have suggested. Moreover, to conduct a comprehensive directed content analysis, researchers will need to consider a variety of analytical approaches, which might mean using both deduction and induction (Daly, 2007). Generally speaking, however, all researchers will benefit greatly from being flexible, creative, and intentional in their analyses. Data should be checked, confirmed, and monitored at all times (Morse et al., 2002). Our understanding of phenomenon can be enhanced through the quantitative or visual display of data that extends beyond the "ordinary narrative text" (Miles & Huberman, 1994, p. 3) typically presented in qualitative research findings. Additionally, qualitative research will also benefit from including a full explication of data analysis procedures rather than defending the trustworthiness of findings in a post hoc manner (Morse et al., 2002).

A couple of limitations are in order with regard to the rank order comparison technique and the TextPortrait analysis. With rank order comparison, the differences between averages in wedding work were small. However, the measurement was intended neither to stand alone nor to be generalized to a large population. Rather, it was intended as an enhancement of the descriptive work that had already taken place. Moreover, as already indicated, I considered this procedure instrumental in helping me understand what was going on with transitional couples and in helping me identify a bias that I was bringing to the data analysis. A limitation of TextPortraits is that the colored patterns relate to the number of references to particular forms of work and the amount of

time spent in an interview describing them rather than identify actual amounts of work done, which is relevant to look at in this particular context. Thus, researchers using this tool will need to be mindful not only about what codes they activate for analysis but also what interpretations they make out of the patterns. Nevertheless, visual analyses might still tell us something about how gender is constructed. For example, the amount of detail given to describing one's own or a spouse's level of wedding planning involvement may be an indicator of how much the person subscribes to the gendered nature of weddings. Moreover, a comparison of spouses' TextPortraits with each other quickly and easily demonstrates differences or similarities in how individuals present themselves and construct their stories to others, and might be more meaningful than simply identifying how much or how many of something is present.

Conclusion

Qualitative research will benefit from a full articulation of how data analysis approaches ensure rigor. Thus, in this article I described how I used a triangulation of data analysis techniques—constant comparison, rank order comparison, and visual representations—to fully inform a directed content analysis of remarried couples' wedding planning experiences and to verify my analysis during the study rather than after it. Triangulation has typically focused on the use of multiple methods, data sources, theories, and investigators, but some researchers have recognized other types of triangulation (e.g., Knafl & Breitmayer, 1991) or extended previous definitions (Meadows & Morse, 2001), but I have argued that triangulation can also refer to the various techniques used in data analysis. Additionally, because little research to date has focused on methodological aspects of QDA software (Kuckartz, 2006) or visual outcomes of data analysis (Kuckartz, 2007a), I demonstrated how two visual tools from MAXQDA 2007's software, called the Code Matrix Browser and TextPortrait, assisted with the analysis. Presenting multiple forms of evidence to validate the categorizations contributed to my understanding of theory, the phenomenon under investigation, and qualitative methods. In particular, technique triangulation helped me become aware of any blind spots or biases I had inadvertently brought to my data analysis.

Notes

1. Gender construction refers to a multifaceted concept that can be analyzed at many levels: the broader sociohistorical context, the immediate situation, interactional processes, and individual outcomes (Thompson, 1993). It is constructed, as opposed to being a static attribute of individuals. Because gender is constructed, it can be changed, negotiated, and resisted; however, it is typically recreated in stereotypical ways (Wood, 1995).

2. All names are pseudonyms.

3. A second option is available in the Code Matrix Browser in which, rather than showing dots for the presence (yes or no) of a coded text segment, numbers can be chosen to show how many text segments were assigned each code.

4. These TextPortraits are best viewed online or printed in color. Additional information regarding Text Portraits (including other examples from this study) is available at http://www.msvu.ca/ARCFamilyWork/Handling-Qualitative-Data/HQD-working-with-data-textportraits.asp

5. The amount of work brides or grooms carried out did not solely account for couple categorization. Please refer to Humble (2009) for a description of how wedding management also played an important role.

References

Blaisure, K. R., & Koivunen, J. M. (2000). Incorporating a discussion of equality in couple education programs. *Family Science Review*, *13*(1/2), 74–95.

Burgoyne, C. B., & Morison, V. (1997). Money in remarriage: Keeping things simple and separate. *Sociological Review*, *45*(3), 363–395. doi:10.1111/1467-954X.00069

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.

Coltrane, S. (1998). *Gender and families.* Thousand Oaks, CA: Pine Forge.

Curtis, J. R., Wenrich, M. D., Carline, J. D., Shannon, S. E., Ambrozy, D. M., & Ramsey, P. G. (2001). Understanding physicians' skills at providing end-of-life care: Perspectives of patients, families, and health care workers. *Journal of General Internal Medicine*, *16*(1), 41–49. doi:10.1111/j.1525-1497.2001.00333.x

Daly, K. J. (2007). *Qualitative methods for family studies and human development*. Thousand Oaks: CA: Sage.

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods* (2nd ed.). New York: McGraw-Hill.

Di Leonardo, M. (1987). The female world of cards and holidays: Women, families, and the work of kinship. *Signs*, *12*(3), 440–453. doi: 10.1086/494338

Farmer, T., Robinson, K., Elliott, S. J., & Eyles, J. (2006). Developing and implementing a triangulation protocol for qualitative health research. *Qualitative Health Research*, *16*(3), 377–394. doi:10.1177/1049732305285708

Ferree, M. M. (1990). Beyond separate spheres: Feminism and family research. *Journal of Marriage and the Family*, *52*(4), 866–884. doi:10.2307/353307

Goffman, E. (1976). Gender display. *Studies in the Anthropology of Visual Communication*, *3*(3), 69–77.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, *8*(4), 597–607. Retrieved February 1, 2008, from http://www.nova.edu/sss/QR/QR8-4/golafshani.pdf

Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass.

Gupta, S. (1999). The effects of transitions in marital status on men's performance of housework. *Journal of Marriage and the Family*, *61*(3), 700–711. doi:10.2307/353571

Haas, L. (1999). Families and work. In M. B. Sussman, S. K. Steinmetz, & G. W. Peterson (Eds.), *Handbook of marriage and the family* (2nd ed., pp. 571–612). New York: Plenum Press.

Hochschild, A. (1989). *The second shift*. New York: Avon.

Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. doi:10.1177/1049732305276687

Humble, A. M. (2009). The second time 'round: Remarried couples' gender construction in wedding planning. *Journal of Divorce & Remarriage*, *50*(4), 260–281. doi:10.1080/10502550902775994

Humble, A. M., Zvonkovic, A. M., & Walker, A. J. (2008). "The royal we": Gender ideology, display, and assessment in wedding work. *Journal of Family Issues*, *29*(1), 3–25. doi:10.1177/0192513X07305900

Ingraham, C. (1999). *White weddings: Romancing heterosexuality in popular culture*. New York: Routledge.

Knafl, K. A., & Breitmayer, B. J. (1991). Triangulation in qualitative research: Issues of conceptual clarity and purpose. In J. A. Morse (Ed.), *Qualitative nursing research: A contemporary dialogue* (revised ed., pp. 226–239). Newbury Park, CA: Sage.

Kuckartz, U. (2006). Computer-assisted analysis of qualitative data (U. Kuckartz, Trans.). In A. Diekmann (Ed.), *Methoden der sozialforschung* (pp. 453–478). Wiesbaden, Germany: VS-Verlag.

Kuckartz, U. (2007a, May). *Data display and visualization in qualitative data analysis*. Paper presented at Visual Knowledge Sociology; Berlin, Science Forum at the Gendarmenmarkt conference, Berlin, Germany.

Kuckartz, U. (2007b). *MAXQDA 2007 reference manual for Windows 2000 and XP* (J. Poppe, Trans.). Marburg, Germany: Verbi Software.

LaRossa, R. (2005). Grounded theory methods and qualitative family research. *Journal of Marriage and Family*, *67*(4), 837–857. doi:10.1111/j.1741-3737.2005.00179.x

Mahoney, J. (1999). Nominal, ordinal, and narrative appraisal in macrocausal analysis. *American Journal of Sociology*, *104*(4), 1154–1196. doi:10.1086/210139

Maxwell, J. A. (1992). Understanding and validity in qualitative research. *Harvard Educational Review*, *62*(3), 279–300.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, *1*(2), Article 20. Retrieved January, 2, 2008, from http://www.qualitative-research.net/index.php/fqs/article/view/1089/2386

Meadows, L. M., & Morse, J. M. (2001). Constructing evidence within the qualitative project. In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds.), *The nature of qualitative evidence* (pp. 187–200). Thousand Oaks, CA: Sage.

Miles, M. B., & Huberman, A. M. (2004). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.

Morse, J. M. (2000). Follow your nose. *Qualitative Health Research*, *10*(5), 579–580. doi:10.1177/10497 3200129118642

Morse, J. M. (2007). Qualitative researchers don't count. *Qualitative Health Research*, *17*(3), 287. doi:10.1177/1049732306297322

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), Article 2. Retrieved September 17, 2009, from http://ejournals.library.ualberta.ca/index.php/IJQM

Onwuegbuzie, A. J. (2003). Effect sizes in qualitative research: A prolegomenon. *Quality & Quantity*, *37*(4), 393–409. doi:10.1023/A:1027379223537

Pyke, K., & Coltrane, S. (1996). Entitlement, obligation, and gratitude in family work. *Journal of Family Issues*, *17*(1), 60–82. doi:10.1177/019251396017001005

Richards, L., & Morse, J. M. (2007). *Readme first for a user's guide to qualitative methods* (2nd ed.). Thousand Oaks, CA: Sage.

Sandelowski, M. (2001). Real qualitative researchers do not count: The use of numbers in qualitative research. *Research in Nursing & Health*, *24*(3), 230–240. doi:10.1002/nur.1025

Seery, B. L. (1996). *Four types of mothering emotion work: Distress management, ego work, relationship management, and pleasure/enjoyment work*. Unpublished doctoral dissertation, Pennsylvania State University.

Sniezek, T. (2005). Is it our day or the bride's day? The division of wedding labor and its meaning for couples. *Qualitative Sociology*, *28*(3), 215–234. doi:10.1007/s11133-005-6368-7

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Sullivan, O. (1997). The division of housework among "remarried" couples. *Journal of Family Issues*, *18*(2), 205–223. doi:10.1177/019251397018002005

Sullivan, O. (2004). Changing gender practices within the household: A theoretical perspective. *Gender & Society*, *18*(2), 207–222. doi:10.1177/0891243203261571

Thompson, L. (1993). Conceptualizing gender in marriage: The case of marital care. *Journal of Marriage and the Family*, *55*(3), 557–569. doi:10.2307/353338

Walker, A. J. (1999). Gender and family relationships. In M. B. Sussman, S. K. Steinmetz, & G. W. Peterson (Eds.), *Handbook of marriage and the family* (2nd ed., pp. 439–474). New York: Plenum Press.

West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, *1*(2), 125–151. doi:10.1177/0891243287001002002

Wood, J. T. (1995). Feminist scholarship and the study of relationships. *Journal of Personal and Social Relationships*, *12*(1), 103–120. doi:10.1177/0265407595121007