

The Journal Project: Qualitative Computing and the Technology/Aesthetics Divide in Qualitative Research

Judith Davidson

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arts-based
research;
autoethnography;
memoir

Abstract: Twenty-first century qualitative research is at a crossroads as it faces the double challenges of new technologies for conducting research and the powerful strand of interest in arts-based research (including memoir and autoethnography). The journal project, a study of eighteen months of my personal journals, aims to demonstrate how this tension can be addressed within qualitative research. In this article, I describe how I combined the use of qualitative data analysis software with humanistic approaches to qualitative research, namely arts-based research and memoir or autoethnography. I identify five stages of visual activity (creating data, organizing data, primary responses, secondary responses, and curation) and describe how the visual components intersected with and supported the work in the qualitative computing software (QSR's NVivo). In today's world, qualitative researchers (like everyone else) are immersed in the opportunities of digitalness and its visual possibilities, and it is critically important that we learn to leverage the potential of these tools for our work.

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1. Introduction

Since the 1980s to the present, qualitative research has been engaged in a period of rapid, dramatic development in which our field has grappled with post-modernism and critical theory, developed deeply reflexive practice that incorporates the self in new and thoughtful manner, and opened our arms to the possibilities of the arts and humanities. During this period in qualitative research, new technologies in the form of Qualitative Data Analysis Software (QDAS) were developed, but these tools have been slow to be accepted by the field in

comparison with the other non-digital tools and practices (DAVIDSON & Di GREGORIO, 2011a, 2011b). Indeed, the divide that developed in qualitative research between users and non-users of these tools can be described as a schism between technology and aesthetics (DAVIDSON, 2010a, 2010b). As qualitative computing moves into the 21st century and the world of the Web, how can we move beyond this divide? [1]

In 2008, I sought to bridge the gap I perceived between technology and aesthetics in the field of qualitative research with my journal project. Using NVivo software, I undertook a study of eighteen months of my personal journals (2006-2008). Specifically, my goals were to:

1. conduct an autoethnographic project incorporating arts-based research using QDAS;
2. explore the aesthetic qualities of QDAS, that is, how is the process and use of QDAS an aesthetic experience contributing to the study; and
3. use this study as the practical grounds for developing a theoretical way to reconsider the divide between technology and aesthetics within qualitative research. [2]

By summer 2010, I had spent two years entering and analyzing hundreds of handwritten pages in NVivo software and had completed preliminary analysis of the journal material. In tandem with my analysis process, I had also been developing my own art practice through participation in a course called "Contemporary Practices," offered at a local art center. I used this opportunity to develop arts-based responses or comments to the material of the journals. Finally, I was seeking ways to answer my third issue—how can we get beyond this theoretical divide between technology and aesthetics in qualitative research; what resources will help us to do so? [3]

In this article, my goal is to use the journal project as an opportunity to explore the technology/aesthetics divide in qualitative research. [4]

2. The Technology/Aesthetics Divide in Qualitative Research

It is my assumption that while the technology/aesthetics divide has deep roots in human history, for qualitative research, in particular, the divide can be traced back most directly to the industrial age beginnings of anthropology and sociology, when researchers raised concerns about the impact of industrial technology on indigenous people and poor laborers. In the last quarter of the 20th century, as qualitative research has undergone theoretical revolutions in the form of post-modernism, critical theory, and other philosophical approaches, this divide has been exacerbated. Qualitative computing non-users often perceive these tools to be exploitive, unaesthetic, and rigid. Qualitative computing users have lacked examples of projects that crossed the technology/aesthetic divide that would convince non-users of their value (DAVIDSON, 2010b). [5]

In qualitative research, there has been much discussion of the arts in recent years. Interestingly, the surge of interest in arts (1980 to today) corresponds directly to the rise of computers and technology in the wider society and, specifically, the rise of qualitative computing tools in qualitative research (DAVIDSON & Di GREGORIO, 2011a, 2011b). Explorations in the applications and integration of the arts into qualitative research have traveled many roads: from ethnopoetics and autoethnography to literary representations, performance and fine arts exhibition. Arts-based research volumes have proliferated. Rich discussions in this area have taken place in the arena of instruction of qualitative research (BRESLER, 2005, 2006a, 2006b). [6]

As one of the earliest of the online qualitative research journals, *FQS* has played a particularly important role in supporting the development of this discussion. A quick search of the journal's archives¹ revealed 145 articles related to the arts of which 26 were specifically focused on arts-based research. *FQS* has published 39 articles that identify autoethnography as a major focus and ten that focus on memoir. [7]

For instance, in 2011 *FQS* devoted an entire themed issue to a discussion of qualitative data analysis software: "The KWALON Experiment: Discussions on Qualitative Data Analysis Software by Developers and Users" (EVERS, MRUCK, SILVER & PEETERS, 2011). This issue was rich with discussion of what could be called the second wave of critique, that is, an evaluation of a field that is now mature and composed of diverse forms of software. *FQS* has not only published individual articles on the issues of arts in qualitative research, but the journal has furthered discussion through providing, for example, reports on conferences related to this issue (see for instance WAINWRIGHT & RAPPORT, 2007). In this way the journal has promoted a comprehensive form of access to the issues of arts in qualitative research. [8]

Since the early 1980's computer applications for qualitative research have also surged. With my colleague Silvana Di GREGORIO, we have described the development of qualitative computing from its emergence as a mirror of traditional paper and pen methods (QDAS), to the transfer to the stand-alone software to a web-based environment (QDAS 2.0) to the emergence of tools that are web-based, application focused, and very possibly will cut connections with many of the paper and pen traditions that have been held as the standard (QDA/Cloud App, DAVIDSON & Di GREGORIO, 2011a). Nevertheless, unlike statistical packages like SPSS, qualitative computing has been slow to be accepted by the qualitative research community. Here, too, *FQS* has played a unique role in furthering the discussion of qualitative computing. They have published a total of 155 articles related to this topic. [9]

Not surprisingly, thus, discussions of computing technology in qualitative research have been separate from those of the arts in qualitative research discussions. QDAS adherents have been drawn to discussions of analysis—the

1 April 6, 2012.

focus of their tools. In arts oriented qualitative research discussions, the focus has emphasized issues of epistemology and ontology. There is no simple explanation why these discussions had to be separated in this manner, but the fact is that they have. [10]

I initiated the journal project as a means of bringing together these two strands within qualitative research. Before we delve into the journal project, I need to present the critical premises or definitions that are central to my thinking:

Technology	Art	Aesthetics
<p>"encompassing tools for problem solving ..." (BRUCE & BISHOP, 2007, p.716, referring to DEWEY's work). This definition includes qualitative computing and arts-based approaches as technologies.</p>	<p>"It is not possible to separate art from non-art; there are only things of various sorts, functions, forms, and meanings" (PASZTORY, 2005, p.10). Whether a thing is art depends upon context (KUBLER, 1962).</p>	<p>"Aesthetics concerns all of the things that go into meaning—form, expression, communication, qualities, emotion, feeling, value, purpose, and more" (JOHNSON, 2008, p.212).</p>

Table 1: Critical premises [11]

3. The Journal Project

In the beginning of my project—technology, arts, and aesthetics were intermingled in a mass something like hibernating snakes. I had a vague sense of where I was going. I thought my instincts were right, but the ultimate end was shrouded in a heavy fog. The journal project brought together three specific elements: autoethnography, arts-based research, and qualitative research computing. I approached each of these areas with my own slant. [12]

In this study, autoethnography was approached from several directions that overlapped with the standard notion of autoethnography, but took its own life (CHANG, 2008; ELLIS, 2004; ELLIS, ADAMS & BOCHNER, 2010; IRWIN & DeCOSSON, 2004). The material, my personal journals, although autobiographical in nature, had not been created as an autobiographical research source. The analysis approach I took to the material was highly emergent in nature, as opposed to a more pre-ordained approach where I would have been looking for answers to a particular question. [13]

I have been engaged with Qualitative Data Analysis Software (QDAS) since 1988. I have worked primarily but not exclusively with tools created by QSR International. I began with NUD*IST and worked my way through its various iterations and the subsequent NVivo packages. I have used these tools in my own research but also in my work as an instructor of qualitative research. I have been active trying to scale-up institutional capacity at my university in the use of

these tools, and I have spent time exploring the history and future of these tools (DAVIDSON & JACOBS, 2008). [14]

In that decade plus of work with these tools I have encountered all manner of assumptions about the benefits or dangers of computing in qualitative research. At first I was surprised by the emotional responses I encountered from other qualitative researchers, later I was irritated, and now I am alternately resigned and amused. [15]

One of the upshots of the diverse opportunities I had to engage with QDAS in so many different ways is that I became highly aware of the aesthetic components of QDAS use. As an early adopter of these tools, I found myself in the position of having to help define the genre of the e-project and learning to understand the tool from the perspective of connoisseurship (EISNER, 2002). In so doing, I found myself drawing heavily upon my background in the area of reading research, literary genre, and reader-response (DAVIDSON, 2000, 2005a, 2005b, 2005c). Looking back I realize this work was the beginning point for my understanding of the ways qualitative computing embodied aesthetic perspectives. [16]

At the same time, I had simultaneously been exploring the use of visual data in my own research (DAVIDSON, 2004a, 2010a, KUHN & DAVIDSON, 2007) and supporting students to expand their use of visual data through my qualitative research classes and in their dissertations (DAVIDSON et al., 2006; DAVIDSON, DOTTIN, PENNA & ROBERTSON, 2009, DAVIDSON & JACOBS, 2008; DOTTIN, 2007; PENNA, 2007; ROBERTSON, 2007). These experiments increased my opportunity to think about the organization and analysis of drawings, photographs, and other arts materials in the environment of QDAS. Through these experiences I became attuned to the notion that visual and other artifacts were not incommensurable with the use of QDAS. Although there were QDAS tools with strong visual analysis components, like Atlas.ti and Transana, and later versions of NVivo, for the most part, QDAS users had been remarkably textual, meaning non-visual in their approaches. [17]

My early visual forays were more related to visual ethnography trends than arts-based research, which came later. During my graduate program, I was very lucky to have been able to study with Liora BRESLER, a qualitative researcher working in the area of arts education (BRESLER, WASSER & HERTZOG, 1996; BRESLER, WASSER, HERTZOG & LEMONS, 1997; DAVIDSON, 2004b; WASSER & BRESLER, 1997). In the years after graduate school, however, I had drifted away from arts discussions. When I became interested in arts-based approaches in qualitative research, I initially took a low-key approach, hiding my first sorties into the area, and, indeed, feeling almost like a traitor to my QDAS colleagues (see for instance: LEAVY, 2009; PRYER, 2011, SULLIVAN, 2005). As I delved more into these perspectives, instead of seeing an impassable barrier between the two approaches—QDAS and arts-based approaches—I saw great continuities and connection. This felt to me like an even greater heresy, causing me deep tension in many areas—my identity as a qualitative researcher, my

beliefs about the ways to conduct qualitative research, and the meaning of analysis. [18]

My struggles with the role of technology in qualitative research and the role that arts-based research could play in my work as a qualitative researcher joined together in one large wave, a qualitative research tsunami, when I conceived of the journal project. This work brought the outside or professional world into stark juxtaposition with the internal/intimate and personal world. It was probably not an accident that this clash between the outside and the inside came at a time when I was deeply engaged in some of the most challenging personal reflective work of my life, of which the journals were the repositories of memories and the discussions I was having with those memories. [19]

In the following section I describe the unfolding of technology and arts or aesthetics in the journal project as a sequential but recursive cycle that seeks to explain the dense transactions that took place within and across these media. [20]

3.1 Intertwining technology and the arts in the journal project

In thinking about the relationship of technology and art in this qualitative research project, I have identified five interlocking stages:

- creating data;
- organizing data;
- primary responses;
- secondary responses;
- curation. [21]

3.1.1 Creating data



Illustration 1: The journal ritual

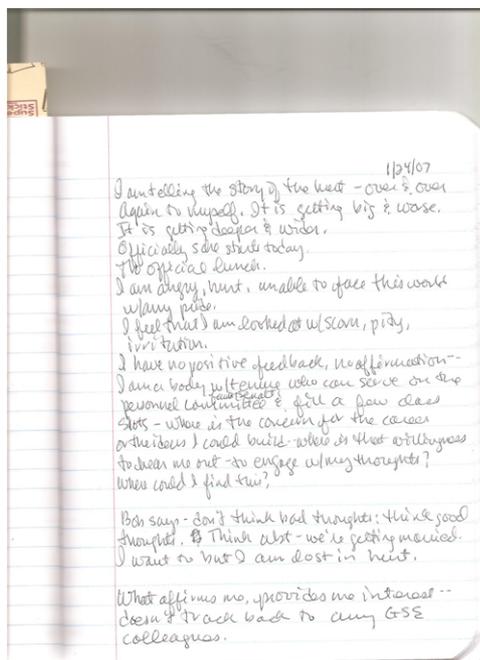


Illustration 2: Journal page [22]

It all started with the journal—A simple composition book—and, my morning tea. I serve it to myself on this tray, one that I decorated with Asian illustrations to remind me of my time in Japan. The cup I drink from is decorated inside with a picture of a llama to remind me of my love of fiber (since this article was written, this wonderful cup was broken!) [23]

Writing in the journal is an almost daily ritual that comes first thing in the morning right after feeding the animals. Every morning I simply write. This was how the data was created. I do not censor or structure the contents. As things come to me, become important or prominent in my mind, I write about them. When their importance fades, I change subjects. Until I conceived of the journal project, I seldom re-read what I wrote. [24]

The concrete object of the journal is evocative for me. The many pages and my handwriting are also evocative. In the passage shown in Illustration 2, and entry from April 5, 2007, my godson is visiting while his mother is abroad helping her mother who is ill. [25]

The journal is a technology for recording personal experience. The journal is also a technology of recovery. The journal is also art. It is an expressive container. I use it as a place to find the words to express my ideas, to document memory, and to play with words as a means of inquiry into these issues. Ironically, although I wrote by hand, I wrote on occasion about the technologies of qualitative research, using the handwritten journals as a place to begin my writing about the digital technologies of qualitative research. The creation of the data is a mixture of technology and art. [26]

3.1.2 Organizing the data

Once I had decided to undertake the journal project, my task was to translate the many pages of the journals into NVivo 8, the tool I would use for organization and analysis (The project has since been shifted into NVivo 9, the most current version). This required many, many hours of reading and typing, coding, and memoing. [27]

Just as the composition books that held the journals and the handwritten pages were evocative, so, too, was the interface NVivo provided me for working with these materials. I have worked with it for many years, and like my desk, its contents and their arrangement are important to me. Here is a picture of the familiar blue space that the journal project calls home. In this screen shot, my "methodological coding journal" is open, as it almost always is when I am working in the project.

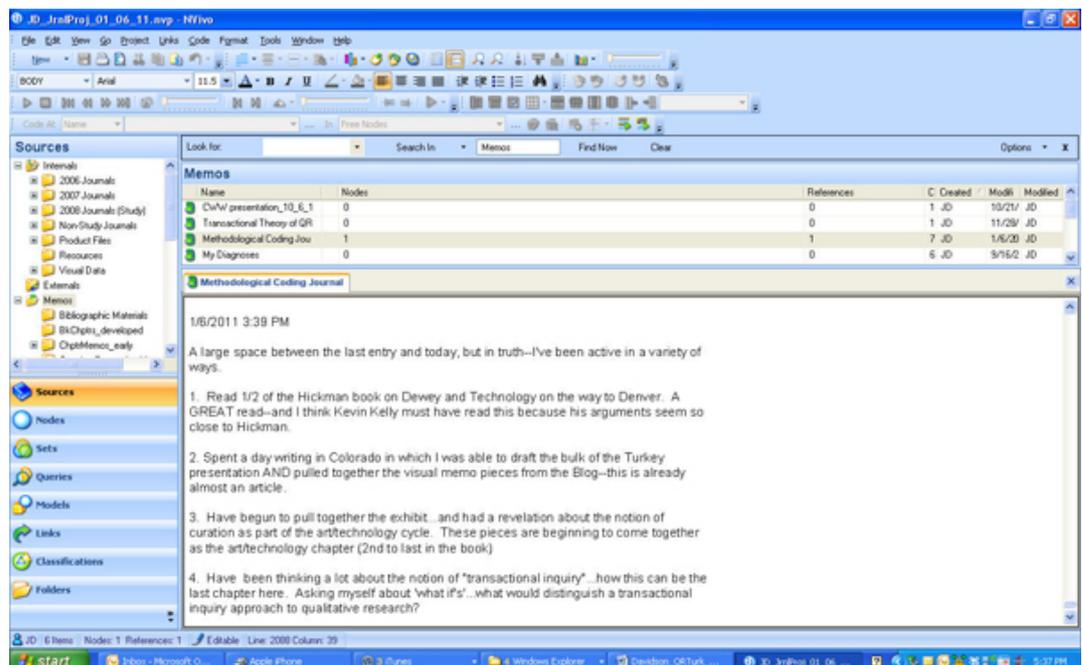


Illustration 3: Methodological coding journal in NVivo e-project [28]

In working in Nvivo, it is not only the format, color, and icons of the software that are familiar and evocative for me. I have also thought long and hard about issues related to the organization of materials within this tool. I am concerned with efficiency and best use of the tool, and because these decisions help me to locate the meaning of the project for myself, they have aesthetic dimensions. When things are done "right" as I see it, they will look a certain way, I will be able to find items in specific places, materials will be formatted in a particular manner. These are issues of genre—style, form, contents. The good use of the tool is efficient and artistically pleasing (DAVIDSON 2005a, 2005b, 2005c; Di GREGORIO & DAVIDSON, 2008). [29]

In an extension of the journal and the memo, I began to explore the use of visual memos during the time that I was entering and organizing the journal project materials. I used hands-on art techniques to create these memos. The one I will share here began as a set of passages in the journal, which I then extracted and developed visually on the back of an old cut-up collage. I posted this visual memo in my blog (<http://qrfrag.blogspot.com/2010/01/visual-memos-in-qualitative-research.html>) on April 1, 2010.

Monday, January 4, 2010

Visual Memos in Qualitative Research

In yesterday's blog, I talked about the journal project and my attempts to stretch myself using arts-based research. Today, I'll share an example—a Visual Memo.

As I was writing in the Journal about the Journal Project, I was led to consider the issue of how the journal is a very different container from the academic prose into which I've been so deeply socialized. Later I extracted this set of entries (xeroxed them out) and sat down to work with them in visual form. The result of which is what I would consider a Visual Memo.



Illustration 4: Title

Here's where it starts. I used an old collage. I cut it up and used the back of it.

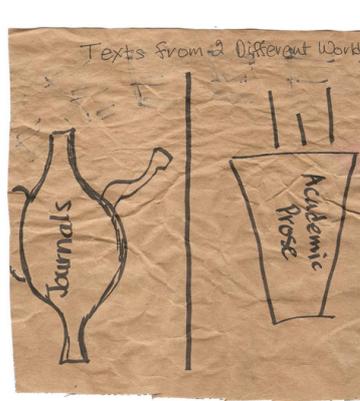


Illustration 5: Bifurcated worlds

My next thought, see below, was about the way I conceptualize the two genres. Imaginatively speaking, I see the containers as different looking.



Illustration 6: Imagining the journal prose

Within the genre of the journal, I see the contents represented in a different way from that of academic prose. It's colorful, filled with curved lines. It has accents, punctuation, and places of heat, depth, and surfacing.

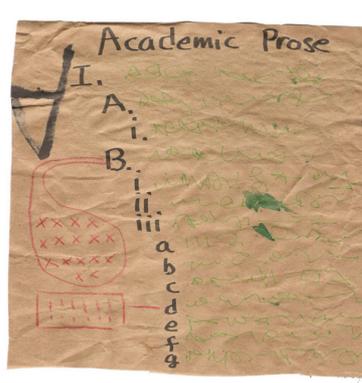


Illustration 7: Academic prose

Academic prose, on the other hand ... well you can see for yourself in this visual that is dominated by the structure of the outline, the lines of text, and comments that are carefully separated from the body of the text.

Two things that seem particularly different to me between these two genres—are at the heart of the journal project—emotion! (Feelings, subjectivity, sensitivity, personal concerns and reactions—how else can I name thee?)



Illustration 8: Emotion in the journal

In the journal—I would refer to it as emotion, and it feels, like it looks like, this:

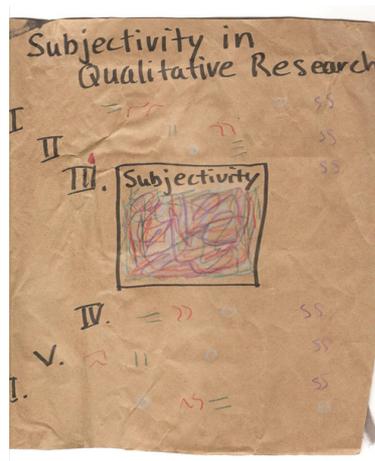


Illustration 9: Subjectivity in qualitative research

In academic prose, specifically the world of qualitative research, I conceptualize it as subjectivity, a boxed item that has a place within the outline. Within that box, there seems to be emotional content, but it is carefully contained—like a kind of hazardous waste!

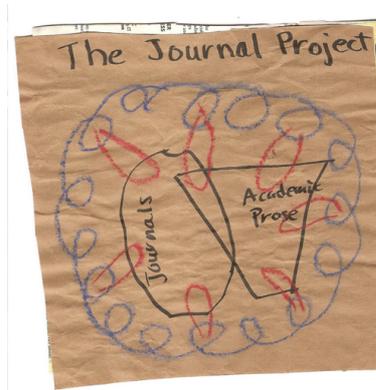


Illustration 10: The journal project

A goal of the journal project is to help me bring these two different worlds of prose (and ideas) together in some meaningful way. I imagine that this will have to be a process. In this illustration they are just beginning to touch, but they are being drawn together by some kind of surrounding net.

Over time, I can assume that the forms will create a closer and more integrated merger. In the merger depicted below—the outline and text of academic prose are distinct and yet one with the curves and colors of the journal...the journal content is held within the framework of the academic prose, which has also expanded in new ways.

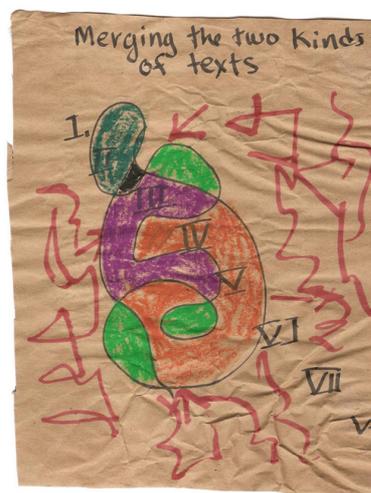


Illustration 11: Merging the two kinds of text

Thinking about the containers of the journal vs. the kind of container formed by academic prose ... leads me to my other big container: the e-project. As mentioned earlier, this is a term that I am using to describe the electronic container that QDAS provides as a place to store, organize, and interpret qualitative research materials. I have given a lot of thought to how I, and my students, came to visualize the e-project as we used them over time for different kinds of qualitative research work. Here is a visualization of my sense of the e-project:

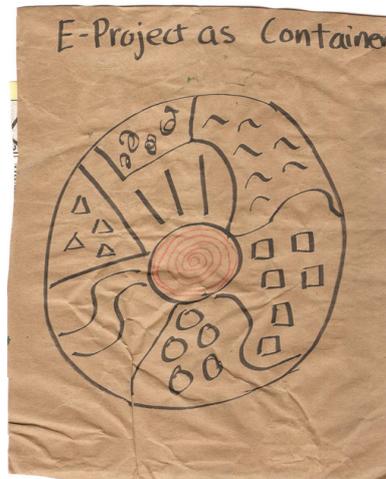


Illustration 12: E-project as container

And now the trick for me is going to be how to think with visual memos in the e-project.

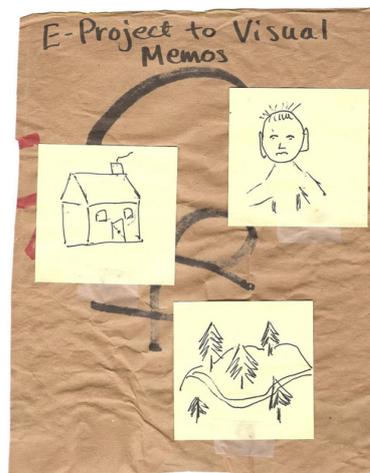


Illustration 13: E-project to visual memos

If you are interested in the notion of visual memos, I highly recommend the graphic novel and work available on illustrated journals. Two sources that I really like are:

1. Linda Barry's book: *What It Is*
2. Danny Gregory's book: *An Illustrated Life*

Posted by Judith Davidson at 7:41 AM [30]

3.1.3 Primary responses

This is one of several visual memos that I shared in my blog. This, in turn, led me to begin to think of them as an oeuvre of their own, which I have now begun to write about separately. In thinking about the connection between art and

technology, and my need for these various forms of visualization in my qualitative research practice, I wrote this paragraph in a blog of February 20, 2010 (<http://qrfrag.blogspot.com/2010/02/journal-project-and-qualitative-data.html>).

"QDAS is first and foremost for me a visualization tool. It is a place where I can build a structure that allows me to connect all of the bits and pieces of experience in containers and limbs that have a relationship to the larger world of ideas. Coding, tagging, hyperlinking, modeling, relationship building—all of these things that you can do with efficiency in QDAS are tools for visualization." [31]

In this second state of the journal project you can see that the form and use of technology and art-like things changed dramatically. The pages of the composition book, filled with marching letters, are now digitalized and organized within a different sort of visual structuring tool. Even as I organize and analyze within the new tool (NVivo 8), however, I am turning back on myself to reflect with the technology of drawing and color. Ironically, this new art-like reflection is presented in the technological container of a blog (ZALIS, 2008). As these new forms emerged, I was bending and reshaping the relationship of technology and art in the project far beyond what I had originally imagine. [32]

3.1.3.1 Example 1: Bob and intimacy

A highly used code in the project was "Bob," used for passages about my husband Bob. The period of journals I have used for this project included the period of time in which we were married and began life as a couple. The role that Bob played in the contents of the journal project is demonstrated by this node report on the "Bob" code.

Project:	JD_Journal-Project		
Generated:	1/13/2011-7:39-PM		
Bob			
Created-On	7/11/2008-11:41-AM	By	JD
Modified-On	9/10/2010-10:47-AM	By	JD
Users	1		
Cases	16		
Type	Sources	References	Words
Total	118	157	18744
			Paragraphs
			1022
			Region
			Duration
			Rows
			3

Illustration 14: Node summary report for code "Bob" [33]

To translate—there are 157 coded references to him in 118 sources. This adds up to 18,744 words about the man that are presented in 1,022 paragraphs. Here is the man himself:



Illustration 15: Bob [34]

Below is an example of one of the felts created in response to the "Bob" code. I call this one, "What happens when you drop your socks on the floor!" It is a reaction to the NVivo extractions of the journal about intimacy and the joy and irritation of my wonderful husband, who always drops his socks by the side of the bed. There is no more powerful symbol to me of the intimacy of our relationship that I could think of than the sight of his socks on the floor!



Illustration 16: What happens when you drop your socks on the floor! [35]

At the time I created this felt, I was very interested in the possibilities of enmeshing personal garments within felt. It seemed to me to be a powerful way of making personal narratives (as represented by clothing) visible in felt. [36]

The background of the piece was purposely designed to look somewhat like a wooden floor as well as something more organic like the floor of a forest. To do this I created my own drumcarded felting batt for the background. I used a dark fleece as the base (New Zealand Polworth) and mixed in other dyed fleece—mostly merino but some fleece of other sorts as well. I kept the dark background primary and the colored fleece as accents. [37]

The fiber detail is important here because with felt, as with qualitative computing, you cannot get the result you want without knowledge of the materials, processes, and tools you will use. Just as my organization of the project and the coding of material took experience and knowledge ... so too did my arts-based response. [38]

3.1.3.2 Example 2: Cloth/paper and spirituality

My spiritual practices as a member of a Protestant church were well documented in the journal pages. Indeed, most of my journal entries concluded with a prayer of some sort. This act was as ritualistic for me as the setting of the tea tray. The screen shot below shows the spirituality node in the journal project. There are 160 items coded as prayer.

Name	Sources	References	Created On
Spirituality	45	49	7/11/2008 11:40 AM
Protestant Ministries Boar	5	5	1/15/2009 4:28 PM
Prayers	153	160	7/11/2008 11:38 AM
Support me to persevere in rel	1	1	3/11
Strengthen Improve my charac	0	0	3/11
Protect the undefended	0	0	3/11
Protect the ones I love	0	0	3/11
Prayers Analysis	0	0	3/11
Theory and prayers	0	0	3/11
Scope Impact of the pra	0	0	3/11
Learning about prayer	0	0	3/11
Functions of the prayer	0	0	3/11
As a ritual of writing	0	0	3/11
Grow my spiritual life	0	0	3/11
Grieving the past	0	0	3/11
Experience of time and space	0	0	3/11
Creation of new families	0	0	3/11

Illustration 17: "Spirituality" node [39]

The "spirituality" code became a powerful starting point for art pieces. In addition to the felt pieces, as I explored new collage techniques I found myself incorporating copies of the actual journal pages into art pieces. In this way I returned to my starting place with the writing of the journal and the visual and kinesthetic response that I had to the pages themselves. Here is an example of a piece that makes use of a technique called "cloth/paper":



Illustration 18: Cloth/paper [40]

These are selections of the journal in which I write about the Mary/Martha story from the Bible and its relationship to my thoughts about the role I played in my own family. [41]

As illustrated by these two different examples (Bob and spirituality), different parts of the NVivo 8 package provided different ways of seeing or visualizing the components of the analysis from Node reports to the ability to drill into a node and look at the actual materials stored at that code. In a similar fashion different methods of engaging with fiber or textiles, similarly allowed for different ways to "see" the ideas. [42]

3.1.4 Secondary analysis

Having written the journals, entered them into NVivo, analyzed their content, and throughout the process made visual response or art as I reflected on what I was learning, there was yet another way that I brought the technology and the art together. In this fourth stage, I conducted a secondary analysis in which I imported photos of the art work into the NVivo project and analyzed them there using the photo analysis tools. This stage allowed me to think both about the content or narrative of the art piece in relationship to the style, materials, and form. In other words, it allowed me a place to reflect on how the message is conveyed by the medium. I refer to this stage of the visual analysis as "secondary analysis" and/or "critique." [43]

In working back and forth between close description of the photograph of the item and my visual memo, I realized that the individual items fell into three categories that were related sequentially to each other:

1. embedded narrative fabrics;
2. felts made in relationship to the journal project that explored new arts techniques;
3. felts that were made for other purposes, but reviewed in light of the journal project. [44]

3.1.4.1 Example 1: Embedded narrative fabrics

This piece titled "Enmeshed in a dream" is the first in which I used a piece of clothing as a narrative element within the felt. There is a substantial amount of material coded at dream in the project.

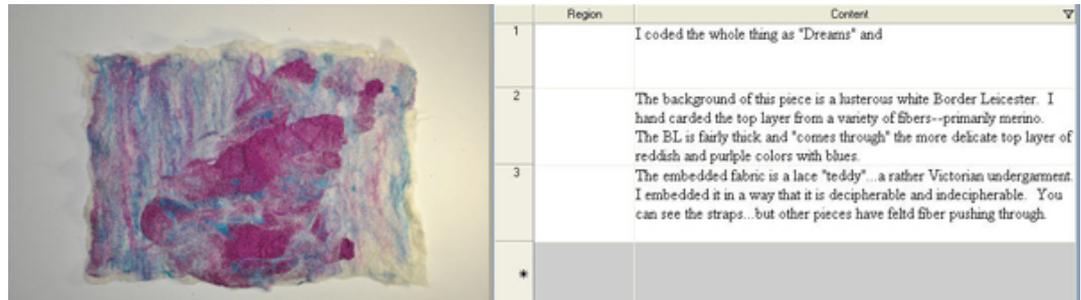


Illustration 19: Enmeshed in a dream [45]

Writing about each piece—its techniques, symbolism, and process was highly generative, providing me with an opportunity to describe the fiber process and to document the ways materials and processes were combined to reach a desired end that had relationship to the journal project. [46]

3.1.4.2 Example 2: Exploring new art techniques in relationship to the journal project

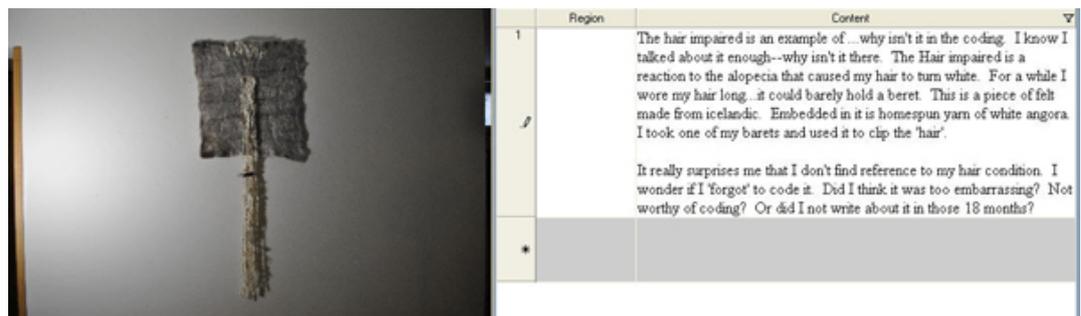


Illustration 20: The hair impaired [47]

This piece is titled "The hair impaired." In this piece my goal was to work with plain, natural colored fleece and to experiment with embedding handspun elements within the felt. The square felted background is made from an Icelandic fleece, and the long hanging yarns are handspun from undyed angora goat locks. [48]

"The hair impaired" is a classic example of presence in absence. I made this piece thinking that the journal had significant material on the issue of alopecia—the disease that has made my hair turn white and fall out. After making the piece and importing the photo into my e-project, I looked back into the NVivo data base and could not find anything coded about the hair issue. Yet, I know that this has been an important issue in my life throughout this period—why is it not coded? Can I somehow not see it now? How many other parts of my life during this period are not reflected in the journals? [49]

3.1.4.3 Example 3: Reflecting on art pieces through the lens of the journal

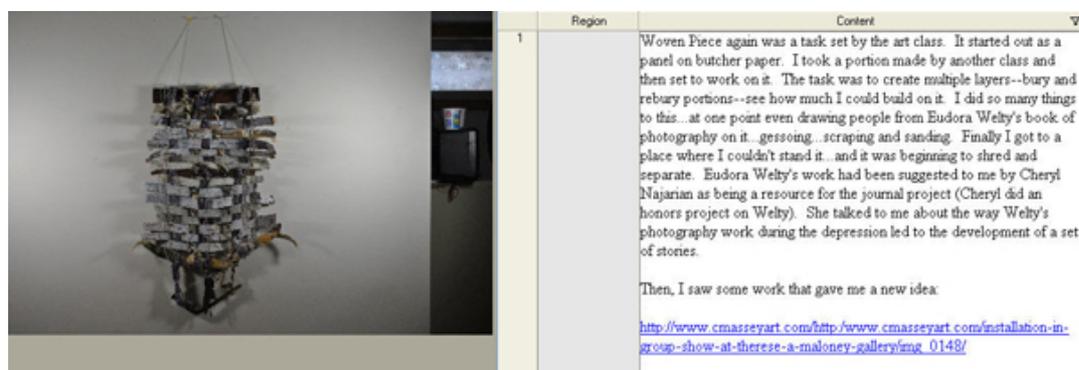


Illustration 21: Woven piece [50]

I call this simply "Woven piece." It was made as a response to a task imposed by my art class. After it was finished I have continued to think with it as an example of the technologies of recovery. It blends repurposed art work, with metal found by the Merrimack River, and handspun materials. Many pieces that were made in settings and for purposes initially unrelated to the journal project came over time to be "read" through the journal project. [51]

3.1.5 Curation

The fifth stage of this process of drawing technology and art together in my qualitative research work I have named "curation" (my thanks to Julie BERNSON, Education Director of the Addison Gallery of American Art in Andover, Massachusetts for helping me to recognize the importance of this way of *thinking with things*, a term that has come to mean much to me). Between conversations with Julie about the educational perspective of the Gallery and reviewing her recent master's thesis: "A Visual Education: Co-construction of the Addison Gallery of American Art's Museum Learning Center and Its Pedagogy" (BERNSON, 2010), I came to a new recognition of the power of drawing things together, in the way museums do, to consider their relationship together as a story or set of linked themes or perspectives. [52]

In truth, this process of curation began in Stage 4, as I examined the images of the made things in the QDAS program, decontextualizing them and thinking about their abstracted characteristics. The QDAS program with its capacity to deconstruct the visual through the use of the visual log and area coding assisted greatly in this process. [53]

The importance of curation as a means of interpretation increased as I began to plan an exhibition of the journal project for the 2011 International Congress on Qualitative Inquiry (DAVIDSON, 2011). My hope was that through a visual presentation, much like a museum exhibit, I would be able to demonstrate the connection and reciprocity between the technology and the art in the conduct of the journal project. [54]

As I thought about what materials I had made and how they might be organized for an exhibit, I began putting them up on whatever free wall I could find. The combinations of things presented in this way began to speak to me in new ways. This, I realized, was the importance and power of curation. [55]

3.1.5.1 Example 1: Curation

As an example, here is a photo of felt and mixed media items that I put up on one wall.



Illustration 22: Curation [56]

It was not long before my eye became centered on the four at the center, realizing they had an important relationship to each other. Three of the items (those in the center with strong texture and made with natural colored wools primarily) had been made at a workshop a year previously. At the time, I was deeply immersed in thinking about the journal entries related to the body and sexuality. When I created these pieces, I immediately knew they were related to women and their sexuality. [57]

The blue piece in the center had been made very recently, shortly after viewing the Sheila Hick's retrospective at the Addison Gallery (SIMON & FAXTON, 2010). When I saw this piece placed with the three earlier pieces, I was suddenly shocked by the sense of connection among the four pieces. In my head I began to call them "the molten core" group. [58]

As I look back now into the NVivo project, I find many codes that provide information that bears upon the ideas I feel are embodied in these pieces: sexuality, recovering the body, anxiety, melt-downs and flashbacks. Curation helped me to return to the codes, and I hope it will help me to think through them in new ways. [59]

3.1.5.2 Example 2: Curation

In curation, from the art perspective, I have learned that I can combine and separate and then recombine or re-separate. As an example, I made a large felt in which I embedded a red undergarment—a piece of Victorian like women's lace underwear. The felt is dominated by the red of the undergarment. I called this piece "Disassociated," a term that I coded to frequently in my journals. Not satisfied with the art work, I cut it up into pieces, which I assembled and reassembled in different ways. Here is one example of the assembly of the pieces that make up "Disassociated."



Illustration 23: Disassociated (a)



Illustration 24: Disassociated (b) [60]

I have looked at the pieces together and separately, wondering if they tell a different part of the story of disassociation when together or when separately, or another story entirely. In the single section of "Disassociated," you can see one bra cup from the undergarment enmeshed with a variety of different fibers, including handspun yarns, and pre-felts. Looking intently into the single piece, I am made physically aware of what it is like to be in a state of disassociation, that is, where you can neither seem to locate your body, nor organize it into a whole that is connected to your mind. [61]

In the journal project's latest iteration of the coding tree "disassociation" is located under "negative technologies." Here is one statement I made about the topic, drawn from the journal entry for November 17, 2006.

"I have been interested in the notion of disassociation and what it means in small amounts, not huge, gigantic amounts—like you forget days in your life. I'm interested

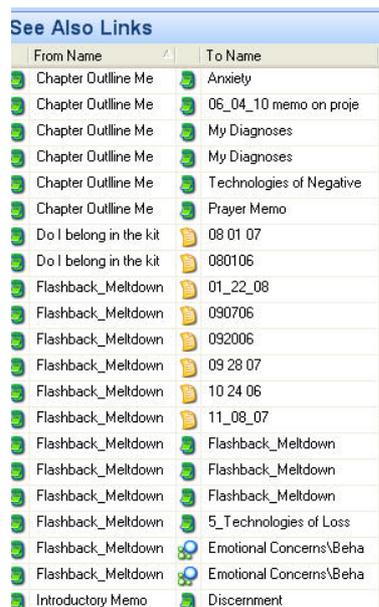
in the same way I am about the Fight or Flight response. How do we experience these things in small, regular, continuous doses?" [62]

The stage of curation allowed for lingering, revising, and reviewing. Interpretations were shaken up by new comparisons, unexpected evidence from forgotten corners could emerge at this time. Curation provided opportunity for appreciation, puzzlement, and surprise. [63]

In my mind, curation appeared to start with the concrete things, the art pieces and then led back into the project itself. However, on thinking more about it I realize that curation was also happening in a more text-to-text form as I tried to shape and prune the material with the idea of a book in mind. Identifying, selecting, and organizing the pieces that would be useful for a book presentation was also a form of curation. This process was happening simultaneously with the activities of curation I experienced with the art pieces. [64]

3.1.5.3 Example 3: Curation—See also links

"See also links," a hyperlinking feature of NVivo, provided one textual means of effecting curation. In the box below, you can see a portion of the linkages that have been created between different source materials (on the left) that are linked to other materials on the right (journal entries, memos, and other source materials). If you go down the left hand column, you will find "flashback meltdown." This is a single memo that has hyperlinks within it to twelve different segments of text related to the discussion I am having in the memo. These hyperlinks offer a powerful form of visualization, like curation they allow me to gather or collect discrepant elements together and zoom in or out of the view.



From Name	To Name
Chapter Outline Me	Anxiety
Chapter Outline Me	06_04_10 memo on proje
Chapter Outline Me	My Diagnoses
Chapter Outline Me	My Diagnoses
Chapter Outline Me	Technologies of Negative
Chapter Outline Me	Prayer Memo
Do I belong in the kit	08 01 07
Do I belong in the kit	080106
Flashback_Meltdown	01_22_08
Flashback_Meltdown	090706
Flashback_Meltdown	092006
Flashback_Meltdown	09 28 07
Flashback_Meltdown	10 24 06
Flashback_Meltdown	11_08_07
Flashback_Meltdown	Flashback_Meltdown
Flashback_Meltdown	Flashback_Meltdown
Flashback_Meltdown	Flashback_Meltdown
Flashback_Meltdown	5_Technologies of Loss
Flashback_Meltdown	Emotional Concerns\Beha
Flashback_Meltdown	Emotional Concerns\Beha
Introductory Memo	Discernment

Illustration 25: See also links in journal project [65]

Ultimately this became a theory of negative technologies, that is, a discussion of the psychological tools individuals use to bind themselves in negative positions to the world.

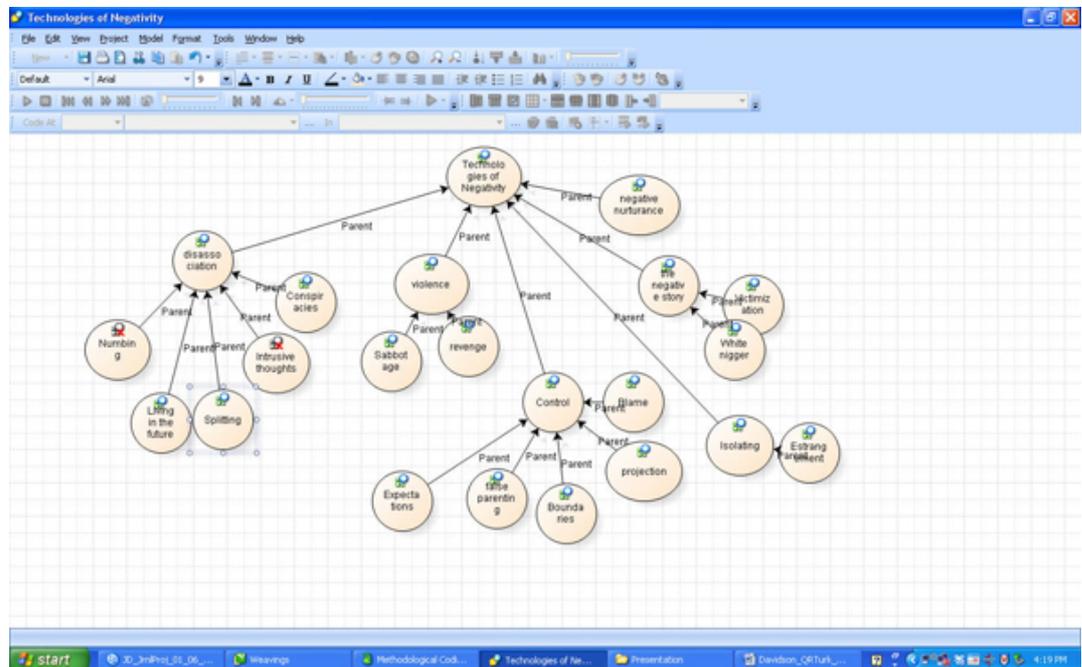


Illustration 27: NVivo model of "Behaviors negative" (b) [68]

At the same time I was working on the development of my ideas about "technologies of negativity," I was also writing about my technical choices and decisions in my methodological log. Here are excerpts from the log of June 16, 2010:

"Now I am working in the technologies of negativity area. I am going to cut the code for numbing because it is already in the disassociation category—not enough stuff here to warrant a separate code."

"I am experimenting with different visualizations—including them in the text: tree shot; model shot; I find myself checking the summaries when I first go into a code to work with it. So a summaries shot ... or a shot of the thumbnails is an important way by which I 'see' the contents.

Under 'isolation' I just created a new code of 'triangulation'—this was in 'splitting' before but I realized they were two separate areas.

OOPS! 'Intrusive thoughts' has no coding—what happened there? I was sure there was information in that area ... has something decoded major areas?

OK—I just realize that 'diassociation' was a 'merge up' node ... everything from the lower categories had been moved into the higher category. So I can go with the finer categories or not.

This means that the screen shots and the model will have to be redone. This is why working from the model ... jumping into the data from the model is a very, very valuable way to work.

It's weird—I feel that I am doing something wrong when I look at a small/thin category of coding ... I feel like I need to go back to the 'thick/fat' codes for real information. Even though I know that I 'merged up' and I have the right to work at thick or narrow level ... I still feel this way.

As I am writing about the 'Technologies of Negative Nurturance', I realize that I am developing passages that may belong some place else. For instance, a discussion of triangulation may be better in 'Families of Origin.'

One thing I realize I am doing with visualization is that I am building and destroying visualizations and then rebuilding them. This reminds me a lot of what we were doing in Cathy's class [my art class] as we would create multi-layered surfaces, then drill down/sand down into them; recreate them and redestroy them, we had really rich build-ups after a while. Our thinking about what made a good design/how pieces were fitting together changed greatly in the process.

I've written now a significant amount on Technologies of Negative Nurturance. (It is still really bothering me that the materials on prayer ... the analysis of prayer are missing.) It is opening up new arenas for me. I have to stop thinking about having this done, but stay with the process—think about what has been accomplished today; it's always baby steps. There is no way it can be done before you go through the process." [69]

In both the development of the art materials for the exhibit and the text materials for what I imagined would be a book, products or presentation developed from the grounding of the project—the organization of the journals in a QDAS container equipped with certain affordances. [70]

4. Discussion

In looking back over the growth of the project in its different forms—handwritten journals, e-project, and then art responses of various sorts—I see technology and art as deeply intertwined. Trading roles and information based on situation and changing context. [71]

I know that naysayers could raise the question: Well, everything you did with the arts-based research and qualitative data analysis software—you could have done it without the software! So, why use the software? Why do you insist upon it? I think that is what it looks like on the surface, but I hope I demonstrated that the underlying affordances of the software do not just mimic the non-computing manner of doing qualitative research, but actually offer ways to go beyond. A good example is my use of the NVivo live model—I jumped into the text and visual images from the model and back and forth—to create a better coding design. I could not do that without the digital tools. [72]

Based on this experience trying to build a bridge between qualitative computing and arts-based forms of qualitative research, I would now approach or evaluate any similar project with these questions:

Qualitative Computing	Arts-Based Approaches
How have I made use of the full range of tools within this tool box?	What kinds of art did I create in this project?
How have I used visual as well as textual components?	What functions did the art serve to the interpretive tasks?
What value has their interaction had to the quality of my knowing?	How was the art integrated as data AND analysis within the qualitative computing analysis?

Table 2: Questions for integrated use [73]

As demonstrated by the journal project, I have been living the technology/aesthetics divide—personally and professionally over the last couple of years. Living on this divide has been good and bad—painful and absorbing, confusing and exciting. I deliberately chose to operate at this place because I wanted to understand why the divide had developed and why it seemed so resilient in our field. [74]

My experience living on this edge has reinforced my increasingly strong belief that the ongoing division between mainstream qualitative researchers (many of who are engaged in arts-based and humanities oriented approaches) and those qualitative researchers engaged in qualitative computing is a useless distraction. Get over it! Get a life! Digital technology is not going away. You have accepted word processing and the Web—now it is time to accept qualitative computing. While this is certainly not the first example of a field embracing technophobia as a means of maintaining power, we know that this tactic has never been a good solution in the face of evolving technology. [75]

However, bringing together the pieces—qualitative computing and the multiple strands of humanistic or artistic interest in qualitative research—is not just about the inevitable march of technological progress. The journal project demonstrates that technology is not necessarily unaesthetic. Similarly, arts-approaches in qualitative research do not have to be something divided or distant from qualitative computing to safeguard its aesthetic nature. [76]

Indeed, qualitative computing is highly aesthetic in all the respects that qualitative research is or can be seen as an aesthetic pursuit. In qualitative computing we make choices about style, form, presentation—and all of these are informed by sensitivities to genre, standards, materials, and other issues that are highly aesthetic in nature. [77]

As also demonstrated by the journal project, arts-based or autoethnographic approaches are not anathema to qualitative computing. The affordances of qualitative data analysis software offer many ways to enrich our use of the arts in qualitative research. They add value. I can "see" the visual pieces better with this

tool. It allows me to actively integrate text and visual image through the analytic folders or codes in a dynamic manner. [78]

5. Conclusions

Today, qualitative computing is on the edge of a massive revolution, which I term "Cloud QDA" (DAVIDSON & Di GREGORIO, 2011b). The kinds of programs that might be available in ten years from now in a world of *Big Data* where Aps reign and the Web is all inclusive—well it is going to be very different from what we are using now (RAENTO, OULASVIRTA & EAGLE, 2009). [79]

This makes it all the more important, in my mind, that we dissolve the divide, bring the pieces together, and get to work on making our field relevant to the 21st century. I believe that we can do this by attending to creating a new kind of qualitative research in which technology and aesthetics find a way to converse in a globalized world. [80]

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In writing this article, I wanted to acknowledge the many years of private tutoring in visual critique provided by my friend, Paula CARNS, a specialist in medieval ivory boxes and related crafts of the 14th century. Since we met in graduate school, I have listened to her work evolve and learned how she used clues from narrative, technique, historical materials, knowledge of dress and culture, to create an interpretation of the meaning of a small, restricted set of artifacts with which she works. As I developed this presentation, I suddenly became aware of how much I had absorbed about visual critique from talking with her about her work. Excited by this revelation, I called her and demanded she send me all of the published articles we had talked about over the years. Reading them for the first time (as opposed to hearing them talked out), I realized the extent of what she had taught me and how it had influenced the ways I looked at art I was making and my views of interpretation in qualitative research (CARNS, 2006, 2009, 2010). CARNS's perspectives on how to examine visual data is an important part of the way I undertook the fine grained analysis of the art pieces using the analysis tools available to me through NVivo.

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Author

Judith DAVIDSON has been teaching qualitative research at the University of Massachusetts-Lowell since 1999. She has strong interests in qualitative computing and arts-based research. She continues to combine these two interests beyond the journal project in her current project examining teens' views of sexting.

Contact:

Judith Davidson

Associate Professor, Graduate School of Education
University of Massachusetts-Lowell
61 Wilder St., Lowell, MA 01854
USA

Tel.: +1 978-934-4611

Fax: +1 978-934-3005

E-mail: Judith_Davidson@uml.edu

URL: <http://qrfrag.blogspot.com/>

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