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Collaborative Anthropologies, Volume 7, Number 1, Fall 2014, pp. 26-49
(Article)

Published by University of Nebraska Press

DOI: <https://doi.org/10.1353/cla.2014.0005>

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Together, We Can Show You

Using Participant-Generated Visual Data in Collaborative Research

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Introduction

Researchers interested in collaborative anthropology seek active ways to involve participants throughout the research process (Fluehr-Lobban 2008). Collaborative anthropology aspires to go “beyond participant-observation” by co-theorizing with participants, thus involving local viewpoints in the construction of anthropological theory (Rappaport 2008). This article focuses on how participant-generated data is effective in enhancing communication between researchers and participants, thus fostering collaboration throughout the research endeavor. In the research settings discussed here, collaborative opportunities were created through multimodal communicative practice between researchers and participants. For the purpose of this paper, multimodal communicative practice is defined as a dialogic process involving diverse modes of communication to co-construct knowledge. We discuss the co-construction of knowledge between researchers and participants at different stages of the research process: in the exploration of research themes, during participatory analysis of visual data, and in preparing the dissemination of findings.

The research methods discussed here took place in distinct research contexts and involved the creation of visual works that were utilized as ethnographic data. Anne E. Pfister’s research in Mexico City, Mexico,

developed personal history timelines that served as a starting point for interviews to explore research themes with deaf youth participants. Ginger A. Johnson's research in Cairo, Egypt, with Sudanese refugee women utilized images created through photovoice methodology for participatory analysis of their photos. Cecilia Vindrola-Padros prepared images created by child participants undergoing cancer treatment for use in the dissemination of research findings among this population. This article highlights current trends in the use of visual methodologies in collaborative research and discusses potential limitations as they emerged within particular research contexts. The authors illustrate how each of their respective methods produced original visual data that served as a departure from, and complement to, verbally derived knowledge, and they suggest that these data generated collaborative results through multimodal communication.

Co-Construction of Knowledge Using Participant-Generated Visual Data

Academic knowledge production in Western contexts privileges verbal and written language (Singhal and Rattine-Flaherty 2006), and qualitative researchers rely heavily on interviews with participants (Denzin 2001). However, visual methods may allow for the thoughtful consideration of data sources in mediums that are not language-based. Settings in which participants create novel data outcomes are inclusive and interactive (Literat 2013) and may help researchers explore human experience in its "multiplicity of dimensions" (Bagnoli 2009). Visual methods are thought to complement traditional language-based exchanges, as methods using participant-generated data offer participants different modes of communication and alternative formats to describe their experiences (Bagnoli 2009; Gauntlett 2007; Literat 2013; Pink 2001; Pridmore and Lansdown 1997). Linguistic anthropologists recognize co-construction as a process that can "elucidate the fundamentally interactional basis of the human construction of meaning, context, activity, and identity" (Jacoby and Ochs 2005). Thus engagement with methods that utilize participant-generated data provide empirical opportunities for researchers and participants to co-construct knowledge from emic and etic perspectives.

Methods for visual data production are understood to "engender

participatory practice” (Mannay 2010, 2013). Qualitative researchers use visual methods to encourage participants to appropriate the method, personalize the research experience, and make decisions regarding what is documented and shared (Carter and Ford 2013; Clark 2007; Johnson et al. 2012; Keller et al. 2008; Power 2003; Veale 2005). For example, researchers working with children and young people have involved participants in the creation of visual data outcomes, believing they encourage greater participation because these methods often involve enjoyable activities (Barker and Weller 2003; Carter and Ford 2013; Johnson et al. 2012; Mitchell 2006;).

Methods for using participant-generated visual data sometimes provide very literal or direct representations of views, situations, or feelings (Liebenberg 2009) and can also offer creative outlets for reflection (Sheridan et al. 2011). During this collaborative process, participants are required to think about their lives in ways that could be translated into a visual representation of their experience. Later, participants reflect on their creations through dialogue or other forms of communication with the researcher (Liebenberg 2009). Co-construction of knowledge occurs during the creative process and in subsequent discussion about the meaning of these new creative works (Basu and Dutta 2007; Crivello et al. 2009; Jacoby and Ochs 2005; Schensul et al. 2008; Tay-Lim and Lim 2013). Furthermore, researchers and participants are liberated to occupy different positions during this process of co-construction of knowledge (Carter and Ford 2013; Josselson 2006; Tay-Lim and Lim 2013; Mannay 2013). Collaborative researchers interested in demystifying research-based knowledge (Schensul et al. 2008) and democratizing research (Schensul 2002) acknowledge the importance of disrupting traditional power imbalances in research environments.

Without discounting the important contributions of research using visual methodology, limitations have been identified (Darbyshire et al. 2005; Mannay 2013; Mitchell 2006; O’Donoghue 2009). For example, some of these methods have been considered more intrusive than more traditional research methods. The use of photographs where participants are identifiable has led to concerns regarding the maintenance of privacy and confidentiality (Keller et al. 2008; Lapenta 2011). The suitability of visual research methods for specific age groups and all research contexts continues to be problematized (Clark 2011; Harrison

2002), and cross-cultural research suggests that these methods must take into consideration the cultural, linguistic, and developmental needs of participants (Johnson et al. 2012).

Researchers using a mixed verbal-visual approach often struggle to balance the two types of data when analyzing and presenting findings (Grady 2008), and visual data are often subsumed under a textual interpretation (Bohnsack 2008). Researchers tend to value “word-based data” (Carter and Ford 2013), but Power has indicated that “even if images are able to capture some of the unarticulated aspects of practice and experience . . . there will remain the problems of translating practical acts into the rational logic of words, and translating into words aspects of experience for which there is no language” (Power 2003:18). As Wang and colleagues have argued, “the visual image is a communication tool that can educate, inspire and influence decisions” (Wang et al. 1996:1392). Thus methods using participant-generated images have been suggested for use in policymaking processes (Lorenz and Kolb 2009).

Visual methodologies in social research are characterized by increasing popularity but also lack a “cumulative and integrative stance” (Margolis and Pauwels 2011). For example, different epistemological stances have been proposed for analyzing imagery (Harper 2003; Rose 2001). These approaches differ with regard to the researchers’ influence on images and how they assure that the integrity of visual data is maintained. Some believe the researcher should abstain from tampering with images produced by others and are uninterested in the intentions of images’ creators (Rose 2001). On the other hand, community-based researchers seek active participant engagement throughout visual data analysis and presentation (Wang et al. 1996). In the process of participatory analysis, researchers and participants come together to make sense of the data, establish ways to code or systematically review the material produced throughout the study, and discuss the different ways in which data can be presented to the targeted audience (Lorenz and Kolb 2009; Wang et al. 1996).

Collaborative processes require researchers to find ways to engage participants continuously and to respect their contributions without compromising the scientific validity and reliability of analytical methods (Pain and Francis 2003). Auteur theory, with origins in film studies, asserts that the intention of an image’s creator is central to un-

derstanding visual imagery (Mannay 2010, 2013; Rose 2001). Mannay (2010) suggests that image viewers' interpretations may not reflect the intentions of the image creator. In alignment with that thinking, the authors of this paper collaborated with participants to ensure that their intentions and perspectives were part of the analytical process.

This article addresses a challenge proposed by visual researchers to integrate our approaches and terminology in order to create "a more mature methodology" (Margolis and Pauwels 2011). In each of the contexts described here, research participants contributed to the co-construction of knowledge by engaging directly with the images they produced. Each of the authors prioritized the intentions of the graphic biographers, photographers, and artists, respectively. Through the review and critique of three methods for collaborative creation of visual data, the authors draw readers' attention to the unifying components of these visual methodologies. Specifically, we suggest that the use of participant-generated visual data creates unique opportunities for collaboration in which participants can actively contribute their knowledge surrounding cultural phenomena. If the image is a tool that can produce a direct emotional response from the viewer and thus encourage action (Lorenz and Kolb 2009), we suggest that participant-generated images are fortified by collaborative enterprise between the researcher and participants.

Exploration of Preliminary Themes Using Participant-Generated Data

PROJECT CONTEXT: DEAF YOUTH IDENTITY IN MEXICO CITY

Anne E. Pfister used visual methods to explore research themes in her collaborative, ethnographic research that investigated deaf youth identity from August 2012 to July 2013. The research discussed here involved nineteen sixth grade student-participants from Instituto Pedagógico para Problemas de Lenguaje (IPPLIAP). She incorporated collaborative methods for visual data production among deaf youth participants to access their visually based understandings of the world. The creation of personal history timelines facilitated the identification of research themes that participants were interested in exploring.

Personal history timelines, referred to in recent literature as *timelining* (Sheridan et al. 2011), *life-course timelines* (Crivello et al. 2009),

and timelines (Bagnoli 2009), were useful for inviting participant reflection on a particular period in their lives. This method for eliciting data and exploring research themes encouraged participants to investigate their own life histories in ways that traditional research methods alone may not have inspired. The use of multimodal communication in follow-up interviews (i.e., graphic and written communication as well as signed and spoken language) drew the researcher's attention to participants' use of specific expressions in Lengua de Señas Mexicana (LSM, Mexican Sign Language). These LSM expressions illustrated the restricted access to information that deaf youth experienced in predominantly hearing environments. Collaborative engagement with participant-generated data revealed the importance of this research theme in the lives of the participants.

COLLABORATIVE PARTICIPANT-GENERATED DATA: PERSONAL HISTORY TIMELINES

Pfister recognized the necessity for multimodal and visual communication choices with deaf youth participants. She and co-investigator Marcela Gómez de los Reyes asked each deaf youth participant to design a timeline illustrating chronological high and low points of their life histories and to include hopes for the future.¹ The motivation to use personal history timelines came from Pfister's desire to discover how and when these participants learned sign language.² Participants were free to use the communicative mode most comfortable for them, and they used a combination of written Spanish, illustrations, and photographs to document significant life events on their timelines. The timelines were used as guides and visual cues to augment interviews with youth participants. This created a multimodal communicative practice in which participants guided the researchers toward salient research themes.

Participants shared timelines and broadly narrated their life histories in LSM for researchers and peers during weekly workshops. Nearly half of the participants were then selected for subsequent follow-up interviews in LSM with Pfister and co-investigator Fabiola Ruiz Bedolla.³ The timelines were placed where participants could use them as visual cues while researchers periodically asked about topics represented on the timelines. Participants relayed school and language experiences before and after coming to IPPLIAP, which usually coincided with their first contact with LSM and a signing community.

CASE EXAMPLE: COLLOQUIAL EXPRESSIONS IN
LENGUA DE SEÑAS MEXICANA (LSM)

In the initial stages of research Pfister learned that many of the youth participants either did not know the cause of their deafness or expressed doubt or confusion about their deaf etiologies. Alexis, a participant who was fourteen years old at the time of this research confided that he did not know the cause of his deafness until he asked his parents for help with his personal history timeline. While working on his timeline at home, he asked both his parents, “Why am I deaf?” Alexis had a detailed personal medical history, much of which he learned about for the first time while preparing his timeline. When Pfister and Ruiz Bedolla inquired about these medical events, including the cause of his deafness, Alexis repeatedly stated that he “learned (or understood) late.” He indicated that the medical events, including his deaf etiology, had not been previously (or sufficiently) explained to him.

The LSM expression that Alexis used can be glossed in Spanish as simply “TARDE” (late).⁴ This expression references the experience of learning or understanding something after the fact (in this case, significant medical events). This colloquial LSM expression draws our attention to participants’ limited access to auditory information in hearing environments. A consequence of this restricted access to information is illustrated through the personal discoveries Alexis made while creating his timeline (fig. 1). At age fourteen he arrived at an understanding about significant medical events, including the etiology of his deafness, albeit “TARDE.”

The creation of personal history timelines also helped elucidate the role of language in participants’ memories of confusion and limited access to information. A timeline-based interview with another fourteen-year-old participant, Leo, illuminated another LSM expression. Using his timeline as a guide, Leo described his inability to understand hearing teachers and peers at the center for disabilities that he attended prior to transferring to IPPLIAP. Leo used the expression “MENTE NEGRA” (black mind) to describe the state of confusion and uncertainty he experienced among teachers and peers who did not use LSM proficiently.⁵ His limited ability to access spoken Spanish made it difficult for him to access basic information in the predominantly hearing environment of the center for disabilities. Leo contrasted this dark time with his experience at IPPLIAP, where teachers and students communicated

Fig. 1. A section of Alexis's personal history timeline detailing medical events when he was very young. His parents realized he was deaf when he was two years old, after he had spent much of his infancy in the hospital. Translations (from top left, following arrows): "Rehabilitation in the hospital, Nov. 5, 1999. At two years old I fell from the bed and cut my cheek, May 13, 2001. At three years old I entered kindergarten and I was very whiney and mischievous. At two years old my parents realized that I wasn't hearing." Given participants' varied command of written Spanish, the translations are not direct; daily participant-observation over seven months and recorded interviews using LSM interpreters also inform the translations.

fully in LSM, and his ability to understand became "más claro" (clearer). In the bilingual context of IPPLIAP he learned to communicate in LSM and began to understand and learn more (fig. 2). Symbolically, the mental darkness was cleared when visual language (LSM) became accessible to him.

"MENTE NEGRA" is another common LSM expression that utilizes visually based symbolism and imagery to depict confusion and lack of understanding. Participants used this expression to reference a mental void prior to learning sign language (fig. 3). This expression creates a powerful visual concept that lends insight into the experience of not having access to the dominant auditory language.

The creation of personal history timelines provoked participants to research their personal histories, and follow-up interviews created the opportunity to reflect upon the themes most relevant to the par-

Fig. 2. A section of Leo's personal history timeline contrasting his school experiences. Symbols augmenting his writing (i.e., arrows, question marks, emoticons) help us interpret this emotional time in his life. Translations (from left to right): "I'm Leonardo, hearing!! I'm sick with deaf[ness]. First grade in the deaf school CAM. I didn't like the school CAM. I want another school. Looking to find a school, I like IPPLIAP!! IPPLIAP first grade, I know more and study more (1st to 5th grade). July, with luck I'll finish 6th grade and hopefully go to middle school."

ticipants. Thus researchers and participants co-constructed contextual knowledge about salient research themes. Co-construction of knowledge revealed that the inability to hear and fully understand Spanish affected participants' ability to receive information fully from hearing family members, peers, teachers, and the community at large. The LSM expressions described here offer insight into the social isolation participants experienced, especially prior to learning sign language. The existence of these LSM expressions suggests that these are not uncommon experiences among deaf Mexicans living in predominantly hearing settings.

Fig. 3. Fabus (a pseudonym), a deaf teacher at IPPLIAP, demonstrates the LSM expression “MENTE NEGRA.”

METHODOLOGICAL STRENGTHS AND LIMITATIONS

Communication in the participants' natural language (LSM) is the preferred communicative mode to access the emic perspectives sought in this research. Multimodal communicative practice between researchers and participants (i.e., graphic, written, spoken, and signed) drew Pfister's attention to the LSM expressions described here. Nonetheless, barriers to accessing emic perspectives were inherent in the research environment. Her own limited communication skills in LSM, paired with the bilingual school setting in which the project was conducted, may unintentionally have over-emphasized the use of Spanish. This is evidenced in both personal history timelines presented here. Participants were not explicitly instructed to use Spanish to create their timelines, but the bilingual environment at IPPLIAP encouraged the use of written Spanish alongside LSM. The fact that these LSM expressions nonetheless emerged to permit insight into the social worlds of these deaf Mexican youth points to the utility of collaboration using multimodal communication and participant-generated data.

Participatory Analysis of Participant-Generated Data

PROJECT CONTEXT: SUDANESE WOMEN REFUGEES IN CAIRO

Ginger A. Johnson's research aimed to produce a visual ethnography of the everyday lives of Sudanese refugee women, displaced in the Second Sudanese Civil War and now living in Cairo, Egypt—the “Lost Girls” of Sudan. The best known Sudanese displacement narrative is that of the “Lost Boys.” Gripping images and narratives prevailed during the 1990 of thousands of Lost Boys seen walking across Sudan, bravely enduring attacks, hunger, and forced military servitude to reach refugee camps in Ethiopia and Kenya. Yet it was not until more than a decade later that the question began to emerge: Where have all the girls gone? Sudanese women's daily lives have rarely been investigated, particularly in the years after violent conflict. Ginger A. Johnson chose photovoice methodology to reveal the experiences of Sudanese women through a collaborative visual approach.

The aim of this research was to provide an accessible way to describe the everyday violence that African refugee women are subjected to in Egypt. Visual methods were planned to ameliorate the systematic dele-

gitimization of these women's voices during the war and through the legalized process of becoming a refugee, in an effort to create collaborative ethnographic representation of refugee women's daily lives. Participant-generated visual data and multimodal communicative practice illuminated the collective nature of their experiences with violence and marginalization. These themes became apparent through visual storytelling and collaborative analysis of the images these participants created.

COLLABORATIVE PARTICIPANT-GENERATED DATA: PHOTOVOICE

Photovoice involves providing research participants with cameras to self-document their lives. Photovoice captured how women participants viewed their urban world and their positionality in this environment by giving them control over the presentation of aspects of their lives deemed most important (Collier 1967; Pink 2001; Wang 19993; Wang and Burris 1994). The use of visual participant-generated data and interviews contributed toward "multivocality" in presenting a more complete ethnography of women's lives (Pink 2001).

Each week photographers discussed the images they produced in response to photo prompts (e.g., "photograph people of importance to you" or "photograph your urban environment"). Participatory analysis of images was ongoing throughout fieldwork from August 2011 to March 2012. Weekly photo sessions consisted of collectively viewing women's photos taken the previous week, and classes were structured around spontaneous discussions of particular images. Johnson noted which images produced the most discussion and which corresponded to pertinent research questions. In one-on-one photo-elicitation interviews during the final stages of research, photographers chose a set of their images to illustrate the "photostory" they wished to tell about their lives in Cairo. Participants organized the images they produced thematically, fostering collaborative analysis. These themes affected the selection, organization, and analysis of the images throughout the research process.

CASE EXAMPLE: BENEFITS OF COLLABORATIVE ANALYSIS

Women shot the images in figure 4 from concealed cameras held at hip level, quickly pulled from a purse or hidden in the folds of a dress, producing erratic camera framing and exposure. The haphazard composition of images was evident in hundreds of participant-generated images taken in

Fig. 4. Literally shooting from the hip, refugee women documented aspects of their new lives in Cairo (clockwise from top left): Groups hanging around in the streets are scary, especially at night for women walking alone; you never know when you may be harassed going into and out of the crowded metro station; a hidden view of a commonly encountered food vendor; nice apartment complexes passed on the way to work.

public spaces. On most occasions women did not feel comfortable carrying their cameras openly or taking pictures of Egyptian society without some form of barrier. Participants expressed this sentiment in a variety of ways—"I'm worried someone will think I stole the camera, and take it away from me"; "I don't want to anger Egyptians"; "They will think I am spying"; "I don't want to bring attention to myself."

Johnson grouped the images in figure 4 to represent one of the dominant themes that resulted from collaborative analysis. These images—grainy and blurry with tilted horizons or shot through the cover of trees and windows—illustrate the disconnection and fear refugee that women felt when traveling around Cairo's urban environment. This important finding—photographers' desire not to call attention to themselves but to remain hidden in public spaces—would not have occurred without the collaborative analysis of participant-generated data. Interviews with participants confirm their feelings of unease in Cairo:

I have trouble sleeping at night in this city. Sometimes I forget where I am when I wake up. I look out the window and see where I now live and it doesn't feel real, sometimes, this landscape. Like I am not part of this place. —Sudanese refugee, 47 years old

I feel unsafe here in Cairo. I am harassed on the streets by men. People in this city, they do not care. Last month, I was almost hit by a car and fell down. When I was on the ground, someone stole my bag. No one came to help. —Sudanese refugee, 32 years old

When one of the most prolific photographers in class was asked why she continued to take photos in public Cairene spaces despite her fear of being seen, she related that she liked seeing and describing her experiences in class with other women. It was an experience of the city they shared, and as with their laughter together in class, she found comfort in reflecting on the collectivity of their experiences. Discussing their images among other refugee women with similar experiences in Cairo contextualized their feelings of isolation and marginalization but also brought them joy and comfort.

METHODOLOGICAL STRENGTHS AND LIMITATIONS

The participants in this study failed to produce the technically "good" documentary photos of urban spaces that Johnson had initially anti-

pated. However, collaboration with photographers aimed to reveal unacknowledged aspects of their lives, and the visual data created by refugee women (fig. 4) succeeded in revealing their experiences in urban Egyptian society. The discomfort women felt taking photos publicly was overshadowed by a desire to describe their creativity and ingenuity to other women in class when discussing the images they captured while traveling through urban spaces. Participant-generated data, paired with the photographers' reflections, illustrate the effectiveness of collaborative visual data analysis when working with this "hidden" population of women.

Dissemination of Findings Using Participant-Generated Data

PROJECT CONTEXT: EATING EXPERIENCES OF PEDIATRIC ONCOLOGY PATIENTS IN LONDON

The "What's it like when you find eating difficult" study by Gibson et al. (2012) sought to document children's eating experiences during hospitalization for cancer treatment and the problems encountered by parents when attempting to maintain children's regular food intake. The study took place in a children's hospital in London, UK, in 2008 and used a combination of participatory visual methods and interviews to generate and collect data. This section focuses on the way in which Cecilia Vindrola-Padros worked with the researchers to use participant-generated visual data for the dissemination the study findings.

The study documented the eating experiences of 24 children in different stages of chemotherapy and shed light on the nutritional challenges faced by these families. At the beginning of the study, children ages 4–12 were given a single-use camera, craft materials, and a scrapbook (older children, ages 7–12, were given diaries). They were asked to create scrapbooks or diaries using multimodal communication to describe their eating experiences at home and in hospital. They used a combination of drawings, photographs, craft materials, and writing, and these books were then used to guide interviews with the children. The researchers also conducted in-depth interviews with the parents (Gibson et al. 2012).

Children described the effects of chemotherapy on their taste and hunger, the cravings they had at specific moments of their treatment, and their negative experience with hospital food. Parents talked about

the anxiety generated by their children's eating problems, the lack of information they received to deal with these problems, and the informal strategies they developed to promote good nutritional practices at home and in hospital. The study provided valuable insight into children's eating practices during chemotherapy and pointed to possible areas for systemic improvement (Gibson et al. 2012).

COLLABORATIVE PARTICIPANT-GENERATED DATA: REPORTS AND BOOKLETS

In the same way that visual methods provide unique opportunities for collaboration during the exploration of research themes and data analysis, the combination of multimodal communicative practice when disseminating the findings of a study allowed the researchers and participants to transmit collaborative ideas and information to the viewer. Images became tools for ensuring that participant-generated data were valued and prioritized.

In the "What's it like when you find eating difficult" study, the researchers used children's original images, words, and other forms of artistic creation to share the findings of their study with other child patients and parents. These participant-generated data were summarized into a booklet that was made available in the hospital ward. The researchers felt that children in treatment and their parents would understand and relate better to the results of the study if they heard it from other children and parents who had gone through similar experiences. They also considered children's images more illustrative than textual summaries of the findings and hoped the images would encourage children and parents to engage better with the booklet.

The research team also incorporated the images into the report for hospital authorities and their funding source. They hoped that children's images regarding their negative experiences with hospital would inform the transformation of hospital menus and mealtimes (Gibson et al. 2009). Figures 5 and 6, in which the child drew a self-portrait and then described a negative eating experience, were chosen because they directly involved the children in the problematization of the issue. One participant included a self-portrait to indicate that food was an issue that generated worry and anxiety and then drew an accompanying image to describe the severity of the problem (fig. 5). Specifically, this participant described an experience that started with an aver-

Fig. 5. A participant's eating experience during cancer treatment: the self-portrait illustrates food-related anxiety, and crossed-out names depict a developing aversion to particular items and then to all food. Courtesy of Faith Gibson, Lisa Shipway, Ailish Barry, and Rachel Taylor.

Fig. 6. A hospital meal on a tray is an unappetizing-looking assemblage that sums up the problem. Courtesy of Faith Gibson.

sion to specific food items and worsened to a complete loss of appetite and the incapacity to eat.

Other images were chosen because they reflected children's reality of eating hospital food. A child's photographed image of a hospital meal (fig. 6) was included in one scrapbook as an explanation of why the child had trouble eating. In the study, children described hospital food as "hard," "tasted funny," and "dodgy" (Gibson et al. 2012: 6). The research team decided to include this image in their report to portray exactly what children see when they receive their hospital meals. They hoped this would be an effective way of influencing changes in hospital policies and food-related practices at the ward level.

METHODOLOGICAL STRENGTHS AND LIMITATIONS

Typically, studies that used this mixed-method approach present the results using verbal explanations of visual data, or focus on interview transcripts, using few (if any) examples of the visual data. Visual data translated into words often lose complexity of meaning (Power 2003). In some cases the visual data appear to play a decorative role instead of providing insight into visually constructed knowledge. The validity of the use of visual data continues to be a topic of discussion, and interpretive processes have been critiqued as being arbitrary or less rigorous (Bohnsack 2008; Grady 2008). Despite the challenges of working with mixed-method results, the examples from this study show that visual and textual data can successfully be integrated to disseminate research findings.

Conclusion

Visual data provide a window into our participants' lives that cannot always come across through text (Bagnoli 2009; Denzin 2001; Literat 2013). Participant-generated data have the power to show aspects of life not readily apparent through traditional, language-based methods alone. The research examples presented here illustrate how multimodal communicative practices result in the revelation of a richer, more complex understanding of human life.

Anne Pfister's research using personal history timelines provided an opportunity for deaf youth to reflect upon specific life events, particularly their lives prior to learning sign language. Subsequent interviews with deaf youth about their timelines drew researcher attention to the use of colloquial expressions in LSM, suggesting the utility of multimodal resources in generating collaborative research themes. Ginger Johnson's photovoice project with refugee Sudanese women in Cairo utilized collaborative analysis of participant-generated data. The findings discussed here may not have been identified without the co-construction of knowledge surrounding the significance of participants' images. The research by Gibson and colleagues (2012) that Cecilia Vindrola-Padros analyzed illustrated researchers' motivations to use participant-generated data in the dissemination of findings. Child-participants produced photographs and drawings that provided insight into their eating experiences, and these personalized perspectives were offered to new patients and as suggestions for hospital improvements.

Anthropologists have contributed valuable discussion on the virtues of visual data in ethnographic research. In this paper we have aimed to further that discussion through the review and critique of visual methods to foster collaboration with participants throughout the research process. Future researchers can build upon collaborative models, such as the examples presented here, through their own creative interpretations and approaches. As the base of literature for these methods grows, techniques will emerge to resolve methodological limitations and to legitimize further the use of participant-generated data throughout the qualitative research process.

This article demonstrates how participant-generated visual data can enrich collaborative efforts at three stages of the research process. The examples show how participants personalized the research process by distilling relevant research themes and by collaboratively analyzing and presenting data in ways not previously envisioned by the researchers. Multimodal communicative practices between researchers and participants facilitated the co-construction of knowledge in each of these studies. We suggest that participant-generated data foster collaboration between researchers and participants by incorporating emic perspectives throughout the research process.

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ANNE E. PFISTER is a PhD candidate at the University of South Florida. Pfister's current research investigates deafness as it is experienced by deaf youth and their families in Mexico City, integrating sociocultural linguistic theoretical approaches with the analytical lens of biocultural-medical anthropology.

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GINGER A. JOHNSON, PhD, MPH, LLM, is a senior research associate at Anthrologica, a research-based organization in Oxford, UK, that specializes in applied anthropology in global health. Johnson is currently engaged in research projects in West Africa exploring community care-seeking behavior, children's involvement in integrated community case management (using photovoice methodology), and women's reproductive and sexual health rights in the wake of the Ebola outbreak.

Notes

1. Gómez de los Reyes is deaf and fluent in LSM and Spanish. During their work together, Pfister used spoken Spanish and some signs with the participants, and Gómez de los Reyes interpreted and contributed to the discussions in LSM.

2. The creation of life history timelines came out of Pfister's photovoice (self-photography) project with the same youth participants.
3. Ruiz Bedolla is a child of a deaf adult (CODA) and a native user of LSM. During their work together, Pfister used spoken Spanish and some LSM signs with the participants, while Ruiz Bedolla interpreted and contributed to the discussions in LSM.
4. When writing LSM expressions, I follow American conventional standards, using all capital letters to denote glosses. Glosses are words in the corresponding spoken language that closely match the referenced sign.
5. Leo relayed that he and other deaf classmates used a handful of signs with one hearing teacher at the center.

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