

Visual Methods Primer: Complementary and alternative sources of data in LIS research

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Abstract:

The appearance of visual research methods across disciplines has recently sparked growing interest among Library and Information Science researchers as well. This paper examines the concept, techniques, implementation and implications of collecting both participatory and non-participatory visual data as part of qualitative library and information science research. Terminological variations are explained, supported by interdisciplinary and LIS examples of practical applications. Analysis of strengths, weaknesses, and ethical considerations suggest that images are a robust source of complementary and alternative data in LIS research.

Introduction

Researchers operate in the theatre of language, and usually in a language of words. Unfortunately, language and words are often as imprecise as they are satisfying. In the discipline of Library and Information Studies (LIS), for example, Donald Case noted that literature reviews identified between 17 and 29 different definitions of the word 'information' published between 1968 and 1980 (Case, 2007). The terms method(s) and methodology exist on a similarly imprecise plane (Case, 2007, Dervin, 1999, Powell, 1999), and not surprisingly, imprecision permeates the level of individual methods as well. Case attributes part of the challenge to inter-disciplinary adoption of the same terminology in very different contexts, and inter-related and overlapping concepts. Another dimension lies in the

notion that languages are not static, but evolve as our understanding does; vocabularies grow and shrink, and meanings change over time.

Visual methods of data collection are one such family of methods that has recently appeared in LIS research, and around which imprecision in terminology exists. This paper arises out of a need to understand not only the breadth of terminology attached to different visual methods of data collection, but also the subtleties of how this method influences the data itself, the interpretation, and the diffusion of research results.

Based on a literature review of library science and social science studies employing visual methods, this paper proposes a framework for organizing visual methods, describing photographs, film, and visual arts specifically. Content focuses on breadth, rather than depth, offering a brief introduction to various techniques, and highlighting points of overlap. The article concludes with a discussion of advantages, disadvantages, and ethical considerations associated with using visual methods.

The Case for Visual Methods

Discussion of visual methods in LIS are timely, since the availability and use of cameras has become nearly ubiquitous in everyday life through digital photography and electronic communication devices that are nearly as well adopted in developing countries as in the western world. As technology improves, prices drop, and accessibility to both the technology and the understanding of how to use it improves, cameras in all facets of life are likely to become even more commonplace. Proliferation of this technology necessitates a better understanding of how visual data can be used in research.

Although a complete discussion of the invention of the camera is beyond the scope of this article (see Reid, 2003 for more information), a brief introduction to the early years of its life offers not only insight into the context in which images exist in science and art today, but also justification for the place of visual methods in the methodological toolbox.

Wilder notes that metaphorically “linking the human eye with the acquisition of knowledge is a practice as old, if not older, than the philosophy of Plato” due in large part to the amount of information we process visually (Wilder, 2009). When Louis Daguerre’s mechanical device that could not only see everything, but remember everything was introduced to the public in 1839 by the British Royal Society, researchers were quick to appreciate its scientific advantages, which primarily included the ability to reliably capture and preserve objective, factual data (Wilder, 2009). Other metaphors and ideologies that supported this empirical use of imaging followed, some of which persist yet today. Photographs are commonly compared metaphorically to vision, eyes, mirrors, reflections, windows and eyeglasses. No doubt, the reliability of quantitative data provided by scientific imaging alone has proved revolutionary in fields such as engineering and medicine (think of satellite imagery or CAT scans) for example.

What quantitative science didn’t account for, however, is the inherently subjective influence, as Ansel Adams describes it, of the two people who exist in every photograph: the photographer and the viewer (Adams, 2006). By the end of the nineteenth century, artistic challenges to the scientific appropriation of the camera had already pushed its use in more creative directions such as portraiture, landscape photography, and documentary photography, where social scientists began to explore the value of images in qualitative applications. Advancements over time improved the accessibility of photo technology, bringing it into use among average people in everyday contexts. Thus began the symbiotic relationship that continues today between photography as both quantitative and qualitative science, and photography as art, where practice and use in one discipline continually informs the evolution of the other.

The metaphor of the camera as eye is as much about “the way knowledge is gathered with photography, and the way that knowledge is valued” (Wilder, 2009) as it is about the science behind mechanical reproduction. The viewpoint from which the camera collects its images is central to our

growing understanding of when, where, and why visual methods are useful and appropriate in qualitative research in all disciplines, including LIS.

Visual Methods in Qualitative Research

The use of imagery in research, particularly qualitative research, has straddled the line between data and decoration for centuries, where scientific research and communication has a history of privileging text-based inquiry and reporting. Consequently images that support or represent textual or numerical information (such as charts, graphs), and which are designed to narrow or hone our understanding of the topic under study, are also privileged.

In a more contemporary definition, however, Jon Prosser describes visual research more broadly as “concerned with the production, organization and interpretation of imagery” (Prosser, 2007). This definition encompasses both quantitative modes of visual inquiry and reporting, as well as qualitative modes that represent primarily non-numerical characteristics of the physical, affective, social, scientific and political realities of an item or subject. Imagery can originate from a multitude of sources, including photographs, film, and other forms of visual art such as drawings or sculpture. Due to the often exploratory, highly social and contextual nature of the data they represent, data obtained through qualitative visual methods often introduce degrees of variability and uncertainty to textual descriptions.

Hartel points out the terminological inconsistency, indicating that visual methods, visual research, and visual approaches are essentially the same thing, and can be both methodology, thus “steer[ing] an entire research design”, and “one data-gathering technique [or method] within a multi-method study” (Hartel & Thomson, 2011). Further, multiple varieties of visual methods can be combined within a single study, and are subsequently given independent names to describe the use of a particular group of techniques.

A Framework for Visual Methods

Studies examined for this literature review supported the idea that there is little “consensus about how [visual] methods should be used,” (Cross, Kabel, & Lysack, 2006), and even less consensus about the component parts of the methods, or even the names of the methods themselves. Some of this uncertainty arises as a result of the natural development of the method, and the ways in which “photovoice has been widely adapted to fit the particular needs of research and documentation projects” (Catalani & Minkler, 2010). Further, “there is considerable debate and disagreement about the relative merits of different approaches to the use of photography in research” (Hall, 2009). Researchers drew on many different disciplinary traditions for their study designs, from sociology and anthropology, to health sciences, to visual or performing arts, and geography just to name a few. Articles often lacked explicit method definitions, tending instead to focus on either descriptions of the procedures used to collect the photographs, or the theory justifying the method. In many cases, it was left up to the reader to identify one or more of methodology, process, or assumptions. Consequently, despite some shared characteristics, discernible standards were rare between studies and disciplines. Patterns of evolution in method were reserved mainly for sequential investigations carried out by the same researcher, presumably due to increased experience with the chosen method over an extended period of time.

The primary challenge of parsing visual research methods, then, appears to be a lack of overarching framework in which to situate individual methods. Thus, confusion arises about how to place multiple visual methods in relation to science, art, individual disciplines, each other, the researcher, the participants, and the broader social context. This is not to say, however, that the totality of visual approaches, or any of the approaches individually, are incorrect. Case advocates that “methods offer us a choice of plans for asking questions and finding answers to them” (Case, 2007). Weingand notes that methods need to be responsive to the population and problem under examination, and that “certain problems and clients will respond to one type of approach, while other problems and clients may be better suited to another strategy” (Weingand, 1993). Visual methods therefore can be seen to

provide an array of valuable, appropriate, and currently underutilized choices in terms of collection and reporting methods not only in the social sciences, but specifically in LIS research.

How then, are visual methods organized? What are the similarities and differences between individual methods? If we consider the idea once again of 'camera as eye', and how images gather, create and embody knowledge, authorial perspective becomes the primary dividing line between varieties. Visual methods fall essentially into two categories – non-participatory and participatory – depending on who the creator of the image is.

Following is a synthesized, description of the characteristics of each category of visual method (note the multiple naming conventions), followed by explanations of individual methods based on those characteristics. As with all discussions of visual methods that have come before, this description is necessarily incomplete. Visual methods are evolving across disciplines, and our understanding and use of visual methods will continue to evolve both in and outside of Library and Information Science as well.

Non-Participatory Visual Methods

Non-participatory visual methods have a long history in scientific research due in large part to the epistemological belief that the camera is a tool of realism and can capture physical truths with objectivity. Often involving purposes related to the content of images (record-keeping or factual description for example), non-participatory visual images are intentionally captured by the researcher under varying degrees of control. Both creation and interpretation remain under the control of the researcher at all times. Under some circumstances (such as in the case of archived images for example), images can be repurposed at a later time by third parties for different studies unrelated (or loosely related) to the original research for which they were obtained.

Photography, Videography, Filmography, Photo Survey, Photo Inventory

Usage: Data Collection

Data Type: Still or moving images

Creator: Researcher

Interpreter: Researcher

Explanation: Researcher makes a visual record of objects, people or locations. The value in images of this variety tends to be content-based.

Purpose: To document, describe or compare items under study; to provide evidence; to help prod the researcher's memory of field experiences; to immerse the researcher in the context under examination.

LIS Examples: Jenna Hartel's dissertation on the hobby of gourmet cooking uses still photography to document the information spaces of the hobby gourmet cook in a "photographic inventory" (Hartel, 2006). Marshall, Burns and Briden used photo-survey methods in a qualitative ethnographic examination of the information behaviors and activities of students at Rochester University Library (Marshall, Burns, & Briden, 2007). McKenzie and Davies collected photographs of tools people use to keep track of information in everyday life (McKenzie & Davies, 2012).

Interdisciplinary examples: Hall describes photo-survey as one "element of the description of places studied" and notes that it is common practice in the work of human geography (Hall, 2009). Erim conducted a video-ethnography of the experience of dance (Erim, 2011).

Notes: Moore uses the term photographic survey to describe the participatory visual 'photo-elicitation' method (Moore et al., 2008). Huck used 'documentary photography' in a study of knowledge management needs in a volunteer-operated bicycle repair shop in Canada. Unfortunately, the method description stated simply "photographs were taken of the workshop" (Huck, Al, & Rathi, 2011). In this regard, it seems Huck's definition of documentary photography is aligned more closely with the above description of photography.

Repeat Photography

Usage: Data Collection, Data Reporting

Data Type: Still images

Creator: Researcher, Other (Salvage, Historical photography)

Interpreter: Researcher

Explanation: Involves taking identical photographs (for example, in the same location from the same perspective) at different times.

Purpose: to monitor physical changes and transformations in settings over time; "to construct knowledge about place, environment and people's relationship with it" by creating "a new way of seeing that allows the viewer to know the world differently" (Smith, 2007); to allow contemporary researchers to share location-based experiences with historical researchers.

LIS Examples: None at this time. There is potential for use of this method in exploring information spaces and places (including but not limited to libraries) over extended periods of time.

Interdisciplinary examples: Smith used repeat photography to conduct a study into the physical and cultural spaces at Waterton Lakes National Park in Alberta, Canada. Her literature review describes studies in the natural sciences examining glacial movement with this method dating back to the 1880s (Smith, 2007).

Notes: As described by Smith, this technique specifically makes use of salvage photography to compare current images to archival images retrospectively. It also has potential to be used to longitudinally compare images captured in current times to those that will be taken in the future.

Salvage Photography, Domestic Photography, Ordinary photography

Usage: Data Collection, Data Reporting

Data Type: Still images

Creator: Participant, Other

Interpreter: Participant, Researcher

Explanation: The researcher collects pre-existing photographs that were likely created for reasons unrelated to the current research project. This can include images from personal collections, institutional collections, or archival collections, for example. It could also include images published in the media or otherwise available publicly.

Purpose: To “catalogue and order historical persons, objects, and actions, to document what happened during historical periods, to understand how people in the past viewed their world, and to analyze contemporary society by examining how we visualize our history” (Perlmutter, 1994). Images can also be used in combination with elicitation techniques to enrich the interview process with more detailed descriptions of historical people, places or events.

LIS Examples: None published at this time. However, Pollak (2013) uses this method as an elicitation technique during the interview process in an exploration of experience as an information source in a remote, rural population. Other studies could be undertaken examining the history of libraries or information grounds for example.

Interdisciplinary examples: Kuhn used salvaged personal photographs to examine cultural memory (Kuhn, 2007). Arreola and Burkhart used historic postcards to examine urban landscape change (Arreola & Burkhart, 2010).

Notes: David Perlmutter provides an excellent framework from which to examine the content of historical photographs (Perlmutter, 1994).

[Documentary Photography, Documentary Filmography](#)

Usage: Data Collection, Data Reporting

Data Type: Still or moving images

Creator: Researcher

Interpreter: Researcher

Explanation: The researcher, who is often a photographer, uses images possibly accompanied by narrative descriptions to deliver a story, usually to a public audience. The delivery method is visual and can take many forms including book, video or public exhibit. This method of data collection exhibits a more artistic, social, ethnographic flavour. Results are intended to be shared with broader audiences and serve to educate people about a particular context. Documentary visual methods are often used in media applications.

Purpose: To tell a story; to educate; to draw attention to an interesting or noteworthy context; to mobilize audiences to support a cause.

LIS Examples: Some informal documentary ‘shorts’ exist, particularly in library fundraising contexts (for an example see the Biblioburro (<http://www.youtube.com/watch?v=wuTswmx9TQU>)). This method holds significant promise in diffusion of information, particularly when the goal is to disseminate information to public audiences.

Interdisciplinary examples: For examples of documentary photography, see the works of Sebastiao Salgado studying Central and South America (Salgado, 1986), Ansel Adams documenting the Sierra Nevada (Adams, 2006), or Dorothea Lange who examined rural poverty in the west during the depression (Lange, 1969).

Participatory Visual Methods

Participatory visual methods by contrast, involve the researcher commissioning images as part of the research project, with the task of creation assigned to a community of informants. Informants are given the tools and instruction on how to use them, and asked to photograph aspects of the subject under study in their environment. Interpretation can happen by researcher, participants, or both.

Participant-generated images are generally introduced for their contextual value, and allow the researcher to metaphorically see through the participants' eyes. Not surprisingly, data collection of this variety leads to highly personalized, subjective data that might not otherwise be available to the researcher. Analysis usually concerns affective components and meaning. Although participatory visual methods are seen as a way of neutralizing power differentials that exists inherently between researcher and participant, or between the participants and other hegemonic institutions and cultures, it is generally understood that it is impossible to remove the researcher from the facilitation process entirely.

Elicitation (Photo, Film, Graphic, Art), Auto-driving

Usage: Data Collection

Data Type: Verbal explanations

Creator: Participant, Other

Interpreter: Participant, Researcher

Explanation: Based in part on principles of participatory communication, elicitation methods use images during the interview process to direct discussions, including images that originate from any number of different participatory and non-participatory sources. In the absence of specification, they are likely assumed to be participant-generated. The term auto-driving derives from the fact that the participant controls or 'drives' this type of interview.

Purpose: To invest people individually and collectively in the research process; to allow "a dynamic, interactional, and transformative process of dialogue between people, groups, and institutions" (Singhal, Harter, Chitnis, & Sharma, 2007); to gain access to perspectives on the research topic that otherwise might be unavailable to the researcher; to improve participants' recollection; to enrich the quality of verbal descriptions; to equalize power imbalances inherent to the research process.

LIS Examples: Haberl used photo-elicitation methodology to study client perceptions of space at the Edmonton Public Library (Haberl & Wortman, 2012).

Interdisciplinary examples: Pioneered in anthropology by John Collier Jr. (Collier & Collier, 1986), and inspired in part by the works of Paulo Freire (Freire, 2000), visual elicitation methods (see photovoice below) are often employed in an effort to empower disadvantaged communities for change.

[Photovoice, Photo-projective, Photo-interviewing, Photo-diary, Auto-photography, Reflexive photography, Photo novel/novella, photo-essay, photo-narrative](#)

Usage: Data Collection, Data Reporting

Data Type: Still images and accompanying verbal explanations

Creator: Participant, Other

Interpreter: Participant and/or Researcher

Explanation: A combination of elicitation and, specifically, participant-generated images. Participants are given the responsibility of creating images that represent specific aspects of the subject under study. This method is generally followed by elicitation and discussion of the images during individual and/or group interviews. Wang notes that the participants' "familiarity with their surroundings gives community members a distinct advantage over professionals in their ability to move through the community, [and to] portray its strengths and concerns" visually (Wang & Redwood-Jones, 2001).

Purpose: To assess a community from the perspective of members; to communicate participant views to policy makers (Wang & Redwood-Jones, 2001); to highlight and neutralize power and agency imbalances in research and policy (Wang & Burris, 1997); the photo-projective method attempts to "understand the individual's internal mental world" based on their reflection and relationship with the external context illustrated in their photographs (Okamoto et al., 2006).

LIS Examples: Gabridge reported on a study using photo-diaries to examine the information seeking behavior of 32 academic students at MIT (Gabridge, Gaskell, & Stout, 2008). Keller used photo-diaries and photo-interviews to examine reading habits of undergraduate students (Keller, 2012).

Interdisciplinary examples: Caroline Wang is a pioneer of photovoice/photo-novella in public health research examining rural women in China (Wang, Burris, & Ping, 1996). Allen used the 'photo-diary method' to examine agency in the representation of sexuality among New Zealand teenagers (Allen, 2008).

Notes: The broad term 'collaborative methods' are related to the proportion of responsibility assigned to researcher and participant for co-creating visual images. For example, the researcher may take the photographs under the direction of the participant (Hall, 2009). It can also include other mediums such as pictures, paintings or comics.

[Image/art/sensory/multi-sensory based methods](#)

Usage: Data Collection, Data Reporting

Usage: Data Collection

Data Type: Artistic images and verbal explanations based on images

Creator: Participant, Other

Interpreter: Participant, Researcher

Explanation: Involves participants using sensory apparatus (paper, pens, pencils, paint, modeling compound and so on) to create non-photographic visual images and objects (for example, drawings, sculptures, paintings and so on). The use of participant-generated images and art "can involve reflecting upon inner reverie, or dialogue, the experience of fleeting emotions, and very visceral embodied emotions can be stimulated by the different [tactile] qualities of the art materials" (Pink, Hogan, & Bird, 2011).

Purpose: To open possibilities for non-verbal ways of knowing and communicating (Bishop, 2006); to offer a different communication tool to researchers and participants who do not share a common language (Pink et al., 2011).

LIS Examples: Denham used participant-generated drawings to examine how youth aged 9-14 understand the concept of computers (Denham, 1993).

Interdisciplinary examples: Sarah Pink uses art-based methodology to explore women's experience of domestic violence (Pink et al., 2011).

Notes: This method reflects "a 'sensory turn' stretching across the social sciences, humanities and arts practice" as well as "growing consideration of the role of all of the senses in the construction and representation of experience" and knowledge (Pink et al., 2011).

Advantages and Disadvantages of Visual Methods

Visual methods of data collection are gaining inter-disciplinary popularity, which suggests they present some unique advantages over traditional methods of qualitative data collection. It is reasonable to expect that these benefits can be achieved in Library and Information Science research as well. Although researchers have noted a wide variety of benefits, Meo, in her critique of photo-elicitation indicates that "not all [studies exhibit] all these advantages in full" (Meo, 2010), and while benefits associated with visual research methods exist, Packard noted that "these methods [are] far from perfect, with much theoretical and empirical work still to be done" (Packard, 2008). Success ultimately depends on the skill of the researcher and the implementation of the research design. For that reason, consideration should also be given to areas where visual methods present unique challenges. Following are the more common advantages and disadvantages researchers expressed.

More Comprehensive Data

Many researchers noted that participatory visual methods improved the quality of data collected during the research process. Specifically, Collier noted that the use of photos "elicited longer and more comprehensive interviews but at the same time helped subjects overcome the fatigue and repetition of conventional interviews...This was its compelling effect upon the informant, its ability to prod latent memory, to stimulate and release emotional statements about the informant's life..." (Collier & Collier, 1986).

Better Access

Participatory visual researchers claimed that treating their participants as experts in their own right overcame access issues because they did not need to "adopt any role to legitimize or justify their

presence, since they are members of the community, not outsiders” (Wang et al., 1996). Wang explains that “the significance of this advantage should not be underestimated, since access is often one of the most difficult aspects confronting photographers.” In studies that were less participatory in nature, researchers noted that visual methods promoted rapport between researcher and subject (Meo, 2010), helping to establish “trusting relationships among researchers, practitioners, and members of underserved communities” (Catalani & Minkler, 2010).

More Accurate Data

The claim that visual methods provide better data was common, although a definition for ‘better’ was somewhat elusive. Hartel’s reflection on non-participatory visual photographic methods supported the idea that better means ‘more complete’ and ‘more accurate’ in situations where data can be hard to obtain. For example, Hartel suggests that photographic methods are useful in “busy research environments in which the fieldworker is not able to observe everything of relevance in a limited timeframe” (Hartel & Thomson, 2011). In such cases, visual methods help the researcher establish “scale, size, and layout, among other things, and to survey, quantify, characterize, and typologize the artifacts therein” (Hartel & Thomson, 2011). Practitioners of both participatory and non-participatory visual methods also noted repeatedly that photo methods can assist with data triangulation (Catalani & Minkler, 2010; Hartel & Thomson, 2011, Bishop, 2006).

Multiple Perspectives

While some studies made explicit attempts to discuss the importance of researcher perspective, it was often overlooked or assumed. Crucial to interpreting the data, point of view permeates every aspect of research design, especially when using visual methods. Some researchers noted that non-participatory research methods are well positioned to “situate the [researcher’s] own observation at the heart of the research process, promoting an active engagement with the subject studied” (Hall, 2009). On the other hand, Singhal explains that participatory methods shift the research perspective to that of

the participants themselves, and mean “working with and by the people, as opposed to working on or working for the people” (Singhal et al., 2007).

Support Inductive Methodologies

Many researchers reported that their research design changed fluidly as a result of feedback during the data collection process. Catalani and Minkler noted that “photovoice discussions varied in frequency and in style,” and that “the more participatory projects tended to engage community photographers in a cycle of photography or documentation and discussion over several months” (Catalani & Minkler, 2010). Hall supported this finding, indicating that “in many cases, researchers have found the process to be iterative and fluctuating as the research develops” (Hall, 2009). The flexible, reflexive nature of the method supports similar methodologies, particularly exploratory research and inductive methodologies such as grounded theory designed to describe social phenomena that are not yet well understood. These methodologies are already well accepted in LIS research, and can be further supported by visual methods.

Diffusion of Findings

Most scientific research is communicated to specific stakeholder groups through text. Visual methods, however, are uniquely positioned not only to “arouse interest and curiosity within the larger population” (Wang et al., 1996), but also to support new, creative methods of reporting, including “photo-essays, exhibitions, mixed media or experimental texts [which] look very different from the academic texts ... [we] are familiar with” (Hall, 2009). New methods of report assist with diffusion of findings to non-traditional stakeholders as well.

Empowerment

One of the primary tenets of participatory visual methods is the potential for the method to shift the balance of power from researcher to participant (Wang & Burris, 1997). Based on Freire’s (Freire, 2000) work and Feminist methodology, Wang explains that putting cameras in the hands of research subjects mobilizes them to ‘record and catalyze’ their communities, “rather than stand as

passive subjects of other people's intentions and images" (Wang & Burris, 1997). Catalani reports that, in particular, "two iterative processes...facilitated empowerment: documenting community strengths and concerns using photography and engaging in critical dialogue with other community members" (Catalani & Minkler, 2010).

Modes of Expression

Visual methods have the potential to bridge gaps where language may be a barrier, for example, among the very young, the disabled, or among populations where the researcher and the participant do not share a common language. Non-textual and non-verbal methods of communication invite non-textual and non-verbal modes of expression, which provide access to populations of differing abilities and demographics. For example, "drawing is particularly well-suited for the young adolescent who, grappling with tremendous developmental changes and the emergence of life's quintessential questions, at times lacks the language to describe the increasingly sophisticated understandings that emerge at this stage of life" (Bishop, 2006).

Sensitive Issues

An interesting advantage of image based research possibly associated with the idea of modes of expression is the idea that visual images in research may allow "participants to introduce new and possibly contentious topics in ways that are not possible in a purely verbal exchange" (Croghan, Griffin, Hunter, & Phoenix, 2008). Researchers have noted that the use of images allowed researchers to discuss "aspects of experience that do not fit with cultural stereotypes... [and] positions that are usually silent" (Croghan et al., 2008).

Diverse populations

Also related to modes of expression, visual methods have found successful applications working among diverse populations, including homeless people, immigrant women, indigenous groups, and older individuals (Novek, Morris-Oswald, & Menec, 2012). It has also been used with adults and children

(Clark, 2011), young people (Croghan et al., 2008), post-secondary students (Keller, 2012), teachers (Stockall & Davis, 2011), and rural women (Willson, Green, Haworth-Brockman, & Beck, 2006). Image or art-based visual methods have shown particular promise populations participating in therapeutic interventions (Pink et al., 2011).

Disadvantages of Visual Methods

The primary drawback of visual methods, as Hall explains, is that “photographic surveys will inevitably be partial and will represent the choices made by those responsible for their construction and the constraints they were working within” (Hall, 2009). Although this criticism is something to be aware of, it should be noted that this is also a criticism of a great many other, more traditional qualitative research methods in all sciences, including LIS.

Requires more Resources

Visual data can often be easily collected in great quantities, but it is complex, difficult and time consuming to analyze, and requires more financial commitment, planning, and technology. Meo described her experiences succinctly: “in practical terms, conducting [photo-interviews] were more expensive and time consuming than traditional ones. They were also more challenging and demanding... [Photo-interviews] demanded more time before, during, and after the interviews” (Meo, 2010). Keller noted, however, that with the proliferation of digital technologies and real-time sharing of images, “some of the technical and organizational disadvantages reported in other studies,” are disappearing, (Keller, 2012). Packard also indicated that “the cost of conducting such research has fallen dramatically in the past decade” (Packard, 2008).

Limited Availability

In cases where researchers are attempting to examine historical or salvage photographs, practical considerations of availability must be considered. Arreola and Burkhart identified the “limited extent and availability of historic imagery” (Arreola & Burkhart, 2010) as a challenge in visual geographic

research. Sometimes the historical images the researcher would like to use are simply unavailable. Additionally, Pollak (2013) found that personal photographic collections among her remote, rural study population had been compromised by both poor access to the technology due to prohibitive costs, and by house fires which were a common occurrence in the area historically. Further, identification of and access to large or significant private collections can be 'difficult' (Arreola & Burkhart, 2010).

Recruitment

Despite the many advantages to participatory visual methods, researchers "continue to grapple with the ideal of community participation in all stages of the research process" (Catalani & Minkler, 2010). Researchers also noted the tendency of participants to opt not to complete the process once recruited (for example, accepting, but not returning cameras, or taking photos but not giving permission to use them).

Validity

Bishop addressed the issue of validity of data obtained through visual methods, which can potentially be subjected to "over-analyzing, misinterpreting and/or incorrectly attributing emotions or actions to certain depictions" (Bishop, 2006). Researchers suggested that visual methods were ideal in mixed-method studies (often including interview protocols) which help triangulate data and overcome validity issues.

Objectification and False Neutrality

A common criticism leveled against visual methods suggests that it tends to "exoticize or objectify 'others' of various kinds" (Buckingham, 2009), by representing a falsely neutral reflection of reality. No doubt, visual methods of research are highly contextual – this is one of the attractive features of it. Researchers must, however, be aware that choosing a particular research method is not a neutral action, (Erim, 2011) and make a conscious effort to identify the "lines of power and knowledge" (Croghan et al., 2008) at play in their particular context.

Power and Control

Power dynamics are inherently part of the visual method context. Even in highly collaborative designs, the researcher still needs to address power and control associated with, for example, finance, authority, and editorial rights that determine ownership, evaluation, and inclusion or exclusion. Recruitment, often limited by knowledge and access, further enforces hidden issues of power and control. Even matters as simple as instructions on what to photograph or how to use the imaging device raise questions. As Packard explains, “an unequal power dynamic is immediately and irrevocably established the moment the researcher must instruct a participant on how to operate a piece of equipment” (Packard, 2008). Finally, Wang points out that although participatory visual methods “implicitly assume that the community priorities will be communicated to policy makers who have the influence and control to bring about change,” diffusing results through the existing hegemonic hierarchy sometimes inadvertently reinforces the power/victim roles (Wang & Redwood-Jones, 2001).

Ethical Considerations

The most comprehensive discussions of ethics in visual research examined for this paper included those by (Wang & Redwood-Jones, 2001) (including a list of ethical ‘best practices’) and (Barrett, 2004). Capturing video or still photography is an inherently political act, and individuals who participate may face uncertain or unpredictable outcomes, especially when combined with audio-recorded interviews. Following are some of the ethical concerns that emerged.

Legal Risks

Researchers identified legal risks to participants and/or researchers that emerged from visual study designs. This can include situations where identification of individual participants might place them in a ‘false light’ (Wang & Redwood-Jones, 2001) or where participants’ input may be valuable specifically because they participate in illegal activities (Barrett, 2004) or a politically charged situation or location. Legal consequences can also involve ownership and copyright issues for the photographs

that are taken, and protecting individuals from use of their images for commercial benefit (Wang & Redwood-Jones, 2001).

Safety Risks

Because visual methods of research may be conducted in a wide array of geo-political contexts, Wang admonishes researchers to “hold the safety of the participants above the spontaneity or power of the image” (Wang & Redwood-Jones, 2001). Although permissions may be obtained, “the camera is not a shield, and participants must be aware of their surroundings and potential dangers at all times” (Wang & Redwood-Jones, 2001). Barrett also notes that occasions may arise where, even with permission of the participant, it may be prudent not to use certain photographs due to the potential of repercussions or change of heart at some future time (Barrett, 2004).

Identification Risks

As is standard with all research protocols involving human subjects, both participatory and non-participatory visual methods require consideration of whether and how to preserve the anonymity of all parties involved. Anonymity protects both photographers and the people photographed from intrusions into personal space (Hartel & Thomson, 2011) and “disclosure of embarrassing facts” (Wang & Redwood-Jones, 2001) that may be apparent from inclusion in or exclusion from photographed contexts.

Conclusion

As Jim Horn notes, rather than an accident to be corrected, “it should be expected ... that library and information studies, a discipline that provides crucial links among various social settings and many domains of knowledge, would continue to pursue research methodologies that are themselves adaptive and open to the continuing evolution of human culture” (Horn, 1998). This paper introduced and expanded on our understanding of one such group of methods steeped in interdisciplinarity, the evolution of human culture, and in terminological imprecision. Based on a literature review of peer-

reviewed social science and LIS research, it introduced a framework in which visual methods can be situated, and identified and explained individual techniques. Finally, merits, drawbacks, and ethical considerations were presented.

Since the “social world is not a definite, static, fixed and simply organized matter that passively waits to be analysed or seen” (Erim, 2011), LIS researchers require equally flexible methods to capture its “spiralling and kaleidoscope like images” (Erim, 2011) of reality. Although not wholeheartedly embraced as of yet, both participatory and non-participatory visual methods certainly have a future place in LIS research. They are well suited to an interdisciplinary field like LIS, and in particular, to the group of qualitative researchers who are comfortable – even excited about – exploring information worlds filled with vagueness, contradiction, fluidity and movement. They also open a new world of creative possibilities in terms of reporting and making research accessible to non-academic audiences.

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