

Reflections on using pinhole photography as a pedagogical and methodological tool with adolescents in wild nature

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Abstract

This paper shares our experiences using pinhole photography with adolescents as both a pedagogical tool to support and deepen adolescent experiences in wild nature, and as a visual methodological tool to elucidate their experiences. Reflecting on a journey that explored the nature-based experiences of two adolescents on a family canoe trip in Northern Canada, examples of findings are presented that contextualize study participants within the literature to illustrate pinhole photography's viability for the study of adolescent experiences in wild nature. Pinhole photography proved to be a medium to intensify the adolescents' embodied presence and sense of place, and helped them to anchor their experiences in wild nature for ensuing reflection and focused discussion. Pinhole photography's inherent strengths and challenges are discussed and recommendations presented for its future use as a methodological and "slow" pedagogical tool in the study of outdoor education and/or environmental education.

Keywords: outdoor education, environmental education, adolescents, pinhole photography, photo elicitation, slow photography, slow pedagogy, pedagogy of place

Introduction

Opportunities for adolescents to participate in extended journeys in remote and challenging environments are rare; as such, our remote 16-day canoe journey in Northern Canada's Yukon Territory afforded a unique opportunity to learn from two adolescent participants (Andrew, 13 years of age, and Stephanie, 15 years of age) about the nature/essence of their experiences in wild nature, and in particular, the use of pinhole photography as a medium to capture and support these experiences. The group members included a family of four comprised of two parent-researchers (co-authors Teresa Socha and Tom Potter), their two adolescent children (Stephanie and Andrew), and two other adults (including co-author Bob Jickling). A description of the river journey is published elsewhere (Potter, 2012).

Research acknowledges that children and adolescents experience things differently than adults, even while participating in the same activity, and that gaining insight into their perspectives is valuable (Schänzel & Smith, 2011; Small, 2008). Young people know things that adults do not; they have different perspectives (Matthews, Limb, & Taylor, 1998). As such, researchers need more inclusive and participatory child- and adolescent-centred methodologies that reflect a shift to position participants as subjects of research activities rather than objects to be researched (Farrell, 2005; Schänzel & Smith, 2011). Participant-generated visual methodologies, such as photo elicitation, are well documented (see Hughes, 2012). Guillemin and Drew (2010) describe these types of methodologies as enabling and empowering, ones that can foster a sense of participation for and give voice to young people and other groups whose perspectives

have been often marginalized in research; it is an "... approach that takes seriously participants as knowers" (p. 178). Participant-generated visual methodologies give participants opportunities to produce images that "confer importance" (Sontag, 1990, p. 28) and enable them to express emotions and/or experiences that are often difficult to express in words, at times resulting in a "positive consciousness-raising effect" (Guillemin & Drew, 2010, p. 178).

Participant-generated photo elicitation has become a popular research strategy within qualitative research. Its application has been found particularly useful with young people in a wide range of disciplines, such as sociology and anthropology (Clark-Ibáñez, 2007; Rasmussen, 2004; Samuels, 2007), education (Allen, 2011; Clark-Ibáñez, 2004), health-related fields (Drew, Duncan, & Sawyer, 2010), and tourism (Schänzel, 2010; Schänzel & Smith, 2011), and serves to address gaps within conventional interview techniques. As tangible interview prompts to focus discussion, participant-generated photo elicitation interviews have shown the following benefits in that they can facilitate rapport and communication between participant and researcher, break down power dynamics or bridge the gap between participant and researcher, and enhance the production of rich data (Clark-Ibáñez, 2004; Drew et al., 2010; Pain, 2012). However, the application of this method in research examining outdoor and/or adventure education, environmental education or nature-based experiences is less common, albeit some examples exist (see Heppner, 2009; Loeffler, 2004a, 2004b, 2005; Smith et al., 2010, 2012). These studies suggest that the participant-generated photo elicitation interview method, relying on modern style cameras, is well suited to the study of nature-based experiences. However, the benefits of using pinhole photography

as a form of slow photography to facilitate the collection of participant-generated research data for conducting interviews with adolescents, are just emerging. In this paper, we develop methodological understandings of this technique, specifically in ways that are pertinent to outdoor and/or environmental education. This is significant, as generally, the outdoor field has done little to contribute to the advancement of understanding in research methods and methodologies (Dyment & Potter, 2015).

We begin with an argument to support the use of pinhole photography as a method for facilitating the collection of participant-generated research data and a tool that lends itself to a “slow pedagogy of place” (Payne & Wattchow, 2008, 2009). We then reflect on our own work that explored Andrew and Stephanie’s adolescent participation with pinhole photography as a means to capture their experiences in wild nature.

Encapsulating adolescent experiences in wild nature

Participant-generated photo elicitation can be a powerful research tool because the self-taken, self-selected images often evoke deeper elements of human experiences than do “words-alone” interviews (Clark-Ibáñez, 2004; Harper, 2002). However, we are of the opinion that for many, the act of conventional film or digital photography (“fast photography”) is often an unconscious, reflexive process. We were concerned that in using only digital cameras the adolescents would take many photographs and risk experiencing, or filtering, the journey “through” their cameras instead of through their personal lenses, thus diluting their experience. Our aim was for participants to minimize their use of “fast photography” and focus their energy on “slow,” or the more sensory intense traditional pinhole photography, to evoke strong personal memories of their experiences. John Berger, in writing about the connection between photography and memory, eloquently wrote:

Memory is a strange faculty. The sharper and more isolated the stimulus memory receives, the more it remembers; the more comprehensive the stimulus, the less it remembers. This is perhaps why black-and-white photography is paradoxically more evocative than colour photography. It stimulates a faster onrush of memories because less has been given, more has been left out. (As cited in Harper, 2002, p. 13)

We argue that this is also true of slow photography, and in particular, pinhole photography.

Slow photography

We live in a culture that nourishes itself through technologies that produce an abundance of instant information. This fast-paced world of technology habitually renders us time-starved and stressed. In fact, “Speed seems to have gained ascendance over everything” (Wu, 2011, para. 2). In response to this “cult of speed” (Honoré, 2004), slow movements have emerged, including slow food, slow home, slow cities, slow work, and “slow pedagogy” (see Payne & Wattchow, 2008, 2009), all advocating a slowing of time and process and greater connectivity. More recently, photography joined these global movements. Advocates of slow photography note that what gets lost in today’s marvel with fast photography is the idea that slowing down the photographic process might force the photographer to spend more time looking at what is in front of them, noticing what might otherwise be ignored (Wu, 2011). On the plight of fast photography and thereby defining slow photography, Wu wrote:

No, the real victim of fast photography is not the quality of the photos themselves. The victim is us. We lose something else: the experiential side, the joy of photography as an activity. And trying to fight this loss, to treat photography as an experience, not a means to an end, is the very definition of slow photography. (Wu, 2011, para. 10)

To this end, we deliberately wanted to slow down our participants’ creations of visuals by encouraging them to process and create meaning of their experiences through pinhole photography; we hoped the pinhole camera would offer them a “new lens” through which to view and experience the world.

“In a rapidly digitizing historical context, it [pinhole photography] offers a challenging way of seeing and experiencing the world ... [and requires] a photographer who is, in varying degrees, present during the artistic process” (Jickling, 2009, p. 2). In essence, the pinhole camera pulls from our past (see Grepstad, 1996, for an historical account of pinhole photography). It is a simple device that can be purchased or, more commonly, self-made. It is often constructed from a box, or a tin can with a tight-fitting lid; yet, the creative possibilities are limited only by one’s imagination (see Unique Sites, 2014). A pinhole camera has no lens, viewfinder or light metre. A pin-sized aperture is used in place of a lens to allow light to reach photographic paper, which renders everything to be in a “soft” focus with a nearly infinite depth of field. The photographer controls the exposure time by allowing light to pass through the pinhole, usually by

lifting a finger or sliding a cover. Since exposure times can range from seconds to months (see Rankin, 2012 for a year-long exposure), stabilizing the camera is essential.

The process of creation with a pinhole camera demands a “sensual presence” as the “photographer literally feels his or her way across the landscape” (Jickling, 2009, p. 16). The photographer must learn to see without a viewfinder and gauge exposure time without a light metre. Since the photographic process can extend to well above one hour, the photographer must be able to sense or anticipate what is about to happen well in advance, for example, a sunset with an approaching thunderstorm. In fact, you could say “... you need to be ready to take the picture before you see the picture” (Mario Villeneuve, 2009, personal communication). Unplanned, last minute snapshots are not an option; foresight, thought, planning, and time are of the essence.

For educators, pinhole photography may serve as a pedagogical tool for conceptions of “slow pedagogy of place” (Payne & Wattchow, 2009). Gruenewald (2003), in his work on place-conscious education, asserts that places are inherently pedagogical in that they are settings for human perception and experience with “the phenomenal, ecological, and cultural world” (p. 645). Thus, slow pedagogies of place underline the importance of focused embodied experiences over lingering time to heighten the quality of attention, breadth of perception, and ways of knowing in particular places, and forge pathways to place-consciousness (Gruenewald, 2003; Payne & Wattchow, 2008, 2009). As a pedagogical tool, pinhole photography offers the capability of stretching out time as Osborne [Mandelbrot] eloquently described:

They are more like blotters soaking up light, and time; in them the moment is extended, stretched out. ... Slow photography reveals another aspect of the optical unconscious: the duration of things; time stretched out. (2013, para. 6)

Pinhole photography captures an enduring sense of place. Thus, we explored slow photography as an ideology and pinhole photography as a methodological and pedagogical tool to enable adolescents to capture their emotions and experiences in wild nature during a family river journey.

Methodology

We employed a participatory approach to the study of Stephanie and Andrew’s experiences in wild nature — that is, a collaborative process across all stages of the project and journey. Such an approach

necessitated particular attention to the inherent power dynamics that exist between researchers and participants, and in families between parents and children, as well as consideration of the types of research methods that were used (Harcourt & Sargeant, 2011).

We (co-authors Teresa Socha and Tom Potter) were particularly sensitive to our role as parents and researchers in this project and thus wanted our children to feel a sense of autonomy in their learning and their experiences. For instance, they contributed to the food planning, the decision over the duration of the trip, and the daily logistics such as route, distances, campsites, cooking, hiking, and considerations on paddling white water. In addition to having choice in methods to collect and record their experiences, Stephanie and Andrew collaborated with us on a presentation of the project findings at an international conference where they fielded some of the questions from the conference delegates. So too have they contributed to this paper.

Lessons in pinhole photography

One of the six expedition members (and co-author), Bob Jickling, is a passionate pinhole photographer, researcher, and patient mentor, thus we saw this journey as an excellent opportunity to introduce Stephanie and Andrew to the art of pinhole photography. Both adolescents expressed interest in learning about pinhole photography and using it as a medium to capture their experiences. On the third day of the journey, Bob presented a 45-minute introduction to the pinhole camera. Tips for planning ahead, setting up the camera, assessing the ambient light, and timing the shutter speed were provided. The pinhole camera was constructed ahead of time from pieces of plywood, with a film holder attached to the back, and held in place with elastic bands. Light-sensitive photographic paper was placed in the film holders prior to the trip. Black and white negatives were produced on this paper when exposed to light, and subsequently developed (see Potter, 2012, p. 9 for a complete description of the photographic process and images of the camera and negatives). Due to the size and weight of the camera and the pinhole film plates, Bob, Stephanie, and Andrew were collectively limited to a total of 24 photographs; as such, each photograph required thoughtful planning and evaluation. During the evenings, the group developed the pictures they had taken during the day using a lightproof container, developing chemicals and a wash basin. The negatives, wet from the developing process, were hung to dry in a tent shelter. Mornings would often find group members discussing the pictures’ subjects and quality. Collectively, 10 successful pinhole photographs were created.

The photo elicitation procedure

We employed the principles of photo elicitation (see Clark-Ibanez, 2007; Collier & Collier, 1986; Harper, 2002; Samuels, 2007) to empower the adolescents to create visual expressions that captured their experiences in wild nature. While the aim of the project was to use pinhole photography, we also offered Stephanie and Andrew other modes of expression, including visual (digital and pinhole photography; painting), written (journaling), and oral (audio recordings) representations, to help them explore their inner journeys (see Schänzel, 2010). We were reluctant to restrict the medium to pinhole photography as neither of them had taken pinhole pictures prior to the project, and we only had one pinhole camera and limited film available for the trip. While both adolescents were drawn to the pinhole work, they did choose to include some digital photography, and Stephanie wrote a journal and audio-recorded her thoughts during the river journey.

The data consisted of interview transcripts derived from discussions about pinhole and digital photographs, researcher field notes, Stephanie's journal, and her published article (Potter, 2012), and self-recorded interpretations of selected photographs. Participant-generated and/or participant-selected photographs were used to act as stimuli and encourage participants to reflect upon and communicate their wild experiences. Discussions with the adolescents were based on a semi-structured interview guide. The interviews were conducted by the researcher parents as well as the pinhole mentor and emanated from Stephanie and Andrew's reflections on the pinhole photographs and others that they felt were most evocative. These interviews were conducted in the field, immediately post-trip, and two to three months following the river journey. When necessary, prompts were used to encourage dialogue. They included questions like, "Why is this photograph important to you?", "Talk more about that", "What do you feel when you see that picture?", and "What would you tell your best friend who was not on the trip about this photo?" Field and post-journey interviews were audio-recorded and transcribed for analysis.

We drew upon Morrow's (2005, as cited in Harcourt & Sargeant, 2011) principles of ethical research with children, namely, seeking Stephanie and Andrew's input during the analysis to address power imbalances. Harcourt and Sargeant maintain that

When the research is finally ready for dissemination, the researcher holds responsibility to ensure that children and their views are respectfully reported and the focus is on children's competence

as research participants, upholding the image of child as a reliable and capable informant. (2011, p. 424)

To this end, as researchers, we invited Stephanie and Andrew to review our analysis and to further contribute to this paper. We now turn to our observations and contextualize them within the photo elicitation and slow pedagogy literature to illustrate pinhole photography's potential for the study of adolescent experiences in wild nature.

Reflections on pinhole photography as a methodological and a "slow" pedagogical tool

In this section we focus our attention not on the lived experiences of the two adolescents on an extended river journey, but on pinhole photography as a means to capture their emotions and experiences and its serendipitous use as a "slow" pedagogical tool for outdoor and environmental educators. We have organized our reflections into four categories: (a) constructing meaningful moments in wild nature through pinhole photography; (b) unpacking silence; (c) embodied presence and sense of place; and (d) reflections on pinhole photography. We have chosen to quote liberally from Stephanie and Andrew's transcripts and include their narratives as recent contributions to this project in order to illustrate the nature of their experiences with pinhole photography and the methodological process. In doing so, we wish to "let them speak for themselves".

Constructing meaningful moments in wild nature through pinhole photography

Photography is commonly used to capture memorable experiences of strong emotion, connection to people, wildlife and places, and celebration and achievement (Carlsson, 2001; Loeffler, 2004b), thereby creating lasting photographic memories of the events (Schänzel, 2010; Smith et al., 2012). Stephanie and Andrew also found this to be true for them, whereby reflecting on their images often evoked strong emotions: "... special because it shows a place that really caught me. I really, really loved the mountains and that small area where we camped" (Stephanie, 2-day post-river journey interview, pinhole); connection to wild places: "After paddling we had ... these pools with lots of waterfalls ... you hiked up a little bit to see what it was like and we saw this one pool that was cool" (Andrew, 3-month post-river journey interview, pinhole; see Figure 1); and to achievement: "... it reminds me of getting right to the summit of the [14-hour] hike and looking down on the lake" (Andrew, 2-day post-river journey interview, digital).



Figure 1. Pinhole photograph of a waterfall and pool.

We found that the generation of pinhole photography was unlike that of fast photography. It “Takes more time to take ... and you kind of absorb the scenery around you ... and you can remember more ... what you saw” (Andrew, 2-day post-river journey interview).

Yes, you really have to stop and think ... and if it turns out then the picture will mean more to you than just snapping away ... instead of having 800 pictures you have 10. So those [images] are going to be the ones that really speak to you ... and mean a lot to you ... and that you almost have a relationship with ... because you’ve taken this. (Stephanie, 2-day post-river journey interview)

Stephanie further comments, “This type of photography not only expanded my photographic horizons, but through the freedom of a new way of doing, gave me new ways of seeing” (Potter, 2012, p. 9). The feelings and insights expressed by Stephanie and Andrew illustrate how the pinhole photographs evoked stronger memory triggers and connections than their digital images, and became effective memory anchors to foster reflection, discussion and meaning making:

It’s an experience that’s hard to put into words. Pictures make it easier. Looking at pictures like these [pinhole images], you have feeling, but you can’t put that feeling into words. It’s almost like trying to create an emotion through words. Trying to create a similar emotion in somebody that could resemble the emotion you felt on-trip. Because you can’t tell somebody how you felt, but [through your pictures]

you can try to make them feel something similar to what you felt on trip. (Stephanie, 3-month post-river journey interview)

For Stephanie, as found by Loeffler (2004a, 2004b), the photographs, both pinhole and digital, helped her to find the words to personify the meaning of her experience. Reflecting upon the photo elicitation interview technique and contributing to this paper, Stephanie writes:

Using a photo elicitation approach for talking about experiences in wild nature undoubtedly makes expressing one’s thoughts and feelings much easier. Everyone takes a picture because that particular scene means something to them. As a result, just describing a picture can uncover many thoughts and feelings in regards to an outdoor experience, and when guided with questions, can often reach some deep emotions and connections to place and experiences. It would be much harder to reach the same depth in a conversation without pictures to remind one of their experiences. (Stephanie, 3-year post-river journey interview)

Yet, even so, at times expressing one’s emotions through words can be challenging (Loeffler, 2004a), and particularly for adolescents (Schänzel, 2010).

Unpacking silence

We live in and have adapted to an increasingly noisy society (Honoré, 2004) where, for most, silence now promotes feelings of discomfort. In fact, as researchers we may find silence in interviews deafening. The problematic of silence in qualitative research is not new. An increasing number of researchers (see Maclure, Holmes, MacRae, & Jones, 2010; Maxted, 2011; Mazzei, 2007; Nairn et al., 2005; Poland & Pederson, 1998) have written about their challenges with silence and their seemingly “failed” interviews (Nairn et al., 2005). Having experienced moments of silence in our own work, our thoughts resonated with these authors who acknowledged the potential intricacies, complexities and disorderliness of the research process. To them, silence can be viewed as “words between words” that are “worthy of hearing” and “meaning full” (Mazzei, 2007), and its analysis an integral part of the research process (Mazzei, 2007; Van Manen, 1997).

In our own project, while the pinhole photographs provided a strong anchor for participants’ experiences in wild nature that provided opportunities for

reflection and dialogue during the interviews, at times the photographs, pinhole or digital, defied verbal expression. In particular, various conversations and interviews with Andrew failed to produce the thick description and rich data we had imagined. On occasion we struggled to engage him in reflection and privately questioned how we should handle the “inconvenience” of his silences. At first glance, several of Andrew’s transcripts seemingly evoked emptiness — a “failed interview.” For example, this excerpt from Andrew’s transcript using a self-generated black and white digital photograph as a prompt for an interview 3-month post-river journey, poignantly depicts Andrew’s silence:

Teresa: So, why did you pick this picture?
(see Figure 2)

Andrew: ‘Cause it was the first grizzly bear I’ve ever seen, well, fourth I guess, ‘cause we saw three, um, up above the river, but I wasn’t able to take a photo of them.

Teresa: [pause] OK ... This trip was the first time that you had ever seen a grizzly bear?

Andrew: [affirming nod]

Teresa: OK, anything about grizzly bears that, ummmm [pause], that intrigues you or interests you?

Andrew: No.

Teresa: Just the fact that you saw them and you had never seen them before?

Andrew: Ah, hum. (Andrew, 3-months post-river journey interview)



Figure 2. Digital photograph of a grizzly bear taken from the river.

We found the initial process of making meaning of Andrew’s transcripts to be quite challenging in that they resonated with those of Maxted’s (2011): “their [adolescent boys] silences, grunts, monosyllabic responses, and their inability to adequately articulate thoughts and feelings permeated transcripts” (J. Maxted, personal communication, 2013). We wrestled with the meanings behind Andrew’s silences. Were they intentional and did they represent resistance? Were they expressions of disinterest in our research? Was he unable to trust us with his feelings or did he fear disappointment? Or, was it invoked by our attempt to probe too much? While we reflected on these and other questions we were also confident that Andrew felt more than he could/would articulate (Polanyi, 1969 as cited in Van Manen, 1997) and that his experiences had greater meaning than what he was expressing. In the context of the preceding excerpt, as a parent it was helpful to understand Andrew’s delicate relationship with bears — one of intrigue and trepidation — having experienced a few fearful black bear encounters at home. Perhaps the meaning behind the grizzly bear photo was one of intrigue, an initial interaction and connection with a new species of bear. Perhaps, for Andrew, his experience and associated emotions were best left silent and remain unexplored/uncharted/untouched.

As researchers, we were also reminded to heed Andrew’s “spell of the sensuous” (Abram, 1997), an experience that transcends words and a way of knowing that defies the Cartesian reductionism of talk (see Payne & Wattchow, 2008). To do so may unlock new insights to participants’ experiences with wildness as depicted here. Hiking on the journey, up a “valley of limestone cliffs and lemonade poppies” (Jickling, 2015, p. 154), Bob asked Andrew: “Well Andrew, what do you think?” (see Figure 3). Andrew responded, “I just don’t have a word to describe it — so amazing — spectacular” (p. 154). Then, in an interview two days after the river journey, when Andrew was asked what he felt when he saw his self-selected pinhole photograph of a cliff, all he seemed capable of emitting was “Wow.” “What else?” he was pressed. No answer. Empathizing with Andrew’s inability to verbally engage, Bob noted,

He grasps this place in an exclamation of recognition, the vibrant spoor of what cannot be said. ... The cliff will no longer announce cliffness when reduced to a pile of boulders. And more questions will reduce [Andrew]’s wonder to rubble. ... It is sometimes enough to just point and show. (Jickling, 2015, p. 156)



Figure 3. Pinhole photograph of a cliff.

Stephanie, who was reflective and articulate of her experiences, also struggled with descriptive words to make meaning and communicate her experiences. Contributing to this manuscript, she writes:

The pinhole pictures captured a much deeper and often an unexplainable emotion than with the digital images. I certainly had moments where I felt frustrated that I couldn't put my feelings into words. Many times, I didn't even understand what I was feeling myself. I just knew that it was something beyond my understanding and the vocabulary I had. Still today, I have some of the deepest connections, feelings, and memories to the times during the trip that I was speechless. (Stephanie, 3-year post-river journey interview)

When reviewing the interview transcripts, we also became more reflexive about the role of parent-researcher and the inherent power dynamics in families between parents and children, and between researchers and participants. Clair (1998) refers to a type of silence that surrounds marginalized groups as ideological silence, whereby people use the power of silence as an act of resistance. While the process of generating pinhole photographs can be viewed as empowering for Stephanie and Andrew, the interview in itself, with the dominant question-answer format, is a marked departure from the "self-willed" learning that Jickling (2015) speaks of and that Stephanie and Andrew favour/welcome. Andrew's silences, in part, were attributed to acts of resistance. A few years later, when asked "Why?" he responded, "'Cause it was like school." In the context of school, the questioning, which was all too familiar for Andrew, served to reproduce relations of authority and social control that position adolescents as less powerful (see Nairn

et al., 2005). As a participant and contributing to this manuscript, Stephanie provides an alternative insight into silence during the photo elicitation interview:

The photo elicitation interviews conducted by my parents were more informal and open. It was quite easy to share my thoughts and feelings with them as they guided the discussions. In the past, I had been exposed to conversations like these, so they weren't daunting. In contrast, when Bob, a close friend, was the one holding the voice recorder, the setting felt slightly more intimidating. Because of the nature of our relationship, I felt there was more time pressure to respond. At times I struggled to articulate my thoughts, feelings and experiences, and there was an underlying concern about responding to questions with the 'right answer', providing comments that in part reflected what Bob wanted to hear. (Stephanie, 3-year post-river journey interview)

Through this project, it has become apparent to us that silence during photo elicitation interviews, be it with pinhole, disposable or digital cameras and especially with young populations, should be expected, respected and analyzed further. Research suggests a need for a change in thinking about silence; Lees (2012) calls this a kind of "gestalt switch" — an openness to alternative realities. During this project, as our understanding of silence progressed, so too did our comfort with it; and, through this cyclical process, we became better able to hear its meaning. For us, this evolving process, perhaps we can call it "slow-silent-research," required patience, openness, and engagement with our participants; and, through this, we were able to move through our initial feelings of stone-walled frustration to being open to new meanings.

Embodied presence and sense of place

In reflecting upon her pinhole photography experience 3-years post-river journey, Stephanie writes about her embodied experience with taking pinhole pictures:

What I liked most about using the pinhole camera is how, through my camera, I felt very connected to the place that I was photographing. Very little could get between the 'scene' and me because I physically played every part of the camera. From being the viewfinder as I dropped down behind the camera to

'guess' what I was taking a picture of, and not having a light metre, required pulling out our field notes to make an informed guess on the exposure time, to being the shutter where I had to physically remove and replace my finger on the pinhole very smoothly so as not to distort the image. I spent lots of time staring at the scene, the sky, the sun and a stopwatch to make sure that I attended to all the variables in my control. There's no post editing with the pinhole pictures. Because you only have one attempt to get it right, you're forced to see so much more, and thanks to that, you can't help but become connected to and remember more of the places you photographed. I can still tell you exactly what the light, the weather, etc. was like for those pinhole pictures on the river, where as I would struggle to describe in detail the picture I shot just a few days ago with a digital camera. (Stephanie, 3-year post-river journey interview)

Stephanie's description of her embodied experience resonates with that of Canadian visual artist Melinda Mollineaux's:

The exposure times I estimated depending on the weather (whether it was cloudy, overcast or sunny). In a way, I sort of became an intuitive light meter. The great thing about pinhole is that your own thinking and response to the environment replaces the strictly mechanical processes of a regular camera. (Fatona, 2006, p. 233)

The photographer's body acts as a gauge that responds, in a corporeal fashion, to the outdoor environment (e.g., light, weather, wind, and landscape) (Fatona, 2006). This spatio-temporal experience through the body also helps transform space into place (Tuan, 1977). "Place is what takes place between body and landscape" (Casey, 1993, p. 29). Thus, pinhole photography has the potential to strengthen the photographer's connection to place. Stephanie described her pinhole photograph of her tent with two mountains as backdrops (see Figure 4) as,

special because it shows a place that really caught me. I really, really loved the mountains and that small area where we camped, just that small area in itself ... those two mountains with the water represent life and the actual place. The tent in front represents us passing through, living and growing in such a special place. (Stephanie, 2-day post-river journey interview)



Figure 4. Pinhole photograph of tent and the Wernecke Gap.

For Stephanie, pinhole photography served as a mode of time presented where her self "dissolved" into emanations of wildness (i.e., the landscape); for Stephanie, it helped space be transformed to a valued place. Pinhole photography, in facilitating connection to place, has the potential to support Payne and Wattchow's (2008) concept of "slow pedagogy", proposed as an alternative to the traditions of outdoor education. Slow pedagogy focuses attention and awareness on a particular "socio-environmental location and locale or place," rather than on activities that take place within space where "the possibility of place is diluted, or diminished" (Payne & Wattchow, 2008, p. 35), and thereby provides a pathway toward "place-consciousness" (Gruenewald, 2003). Stephanie provides further evidence of how pinhole photography can support slow pedagogy and thus connection to place:

Pinhole photography made me stop and think before doing. ... This type of photography not only expanded my photographic horizons, but through the freedom of a new way of doing, gave me new ways of seeing. After finding the perfect scene and lighting, and spending the time to expose and develop the paper, the final images encapsulated a powerful relationship between photographer and landscape. ... This method of photography captured a different side of the landscape, and illustrated a tranquil way of life. (Potter, 2012, p. 9)

Reflections on pinhole photography

For methodological and pedagogical reasons, Stephanie and Andrew were encouraged to take pinhole photographs during their river journey. For methodological purposes of research, Loeffler

(2004a, p. 552) warns that modern photography may affect “participants’ experiences by introducing the photographic stimulus.” We believe this possible limitation was surpassed by the learning, joy, embodiment and connection to place gained by the participants through the art of pinhole photography. In fact, when asked during a post-journey interview if taking the pinhole pictures distracted her from the experience, Stephanie’s reply was a resounding “no.” In contributing to this paper, and in agreement with Loeffler, she adds:

When using a digital camera, I had the research in mind and the digital pictures were taken for that sole purpose. I feel they distracted me from the deeper connections made on an extended river journey. In comparison, looking three years back, some of the strongest memories of the journey are when lengthy amounts of time and energy were spent working with the pinhole camera. All of the pinhole pictures were taken because the scenes were visually attractive, not because it represented something that I could talk about in a post-trip interview. Consequently, there was more joy and excitement in using the pinhole camera — it created the experience rather than becoming a distraction. The pinhole pictures captured an emotion and connection to place, rather than demonstrating one experienced previously. Coincidentally, during post-trip interviews, I had more to share about the pinhole photographs than I did about the digital pictures. (Stephanie, 3-year post-river journey interview)

If connection to place is a desired aspect of an outdoor journey and time can be “slowed” adequately to accommodate pinhole photography methods and interests, we, as researchers and educators, encourage others to explore this method, particularly in educational settings. However, it must first be recognized that this form of gathering images takes pre-planning, some skill, and is bulky and time consuming. It is certainly a commitment and enthusiasts must carefully consider all aspects before committing such resources to an extended journey. To render pinhole photography more practical in educational settings, it can be introduced to students in advance of a journey and thus provide them with ample opportunities for practice. Alternatively, pinhole photography may be utilized during short excursions without the complexities of extended travel.

However, countering our suggestion for prior practice and utilising it on shorter trips, Stephanie provides a different perspective:

The less experience one has with a pinhole camera and the less film one brings, the more time pinhole photography takes. While learning, one is forced to open one’s eyes to ‘see everything,’ and transfer those observations into a setting for the camera. It’s through these pauses that some of the strongest connections to place are formed. Because our journey was so long and we only had 24 opportunities to capture a ‘perfect’ picture, I was forced to stop and think, in depth, about how many days we had left, as well as how many shots we had left, the opportunities I saw in the scene that I wanted to capture, etc. This would not have had the same impact on a shorter trip. Because the risk-reward ratio was so high, I felt closer to the place that I had photographed and remembered the pictures as well as the area in much more detail. (Stephanie, 3-years post-river journey)

For our project we decided to develop the photographic negatives while on journey. Even though developing chemicals and related equipment are heavy and bulky, we felt the excitement of visualizing the photographs in the field would be most meaningful and motivating to the adolescents — we were correct in this assumption. “Learning how to develop the photos and learning how to get the positives out of the negatives, and the ‘darkroom,’ that was interesting.” (Andrew, 2-day post-river journey interview). However, careful environmental management of the developing chemicals is a duty. While the developing could be postponed until photographers return home, we contend that developing one’s negatives in the field and experiencing the joy of this connective process is an integral part of the slow photography practice (see Austin, 2012).

Nevertheless, due to the added weight of the pinhole camera, film, film holders and processing equipment, participants were limited to less than one photograph each per day. In keeping with the philosophical basis of slow photography, it may be desirable to limit the images taken, regardless of weight. While saving time, ease, and convenience are all highly valued characteristics of a stressed western society, they often run counter to learning, meaning making, and richness of experience. We suggest that using slow photography also requires a possible shift in ontological perspective from participants capturing

meaningful experiences to one where participants, through pinhole photography, construct meaningful moments.

We suggest researchers and educators carefully weigh the advantages and disadvantages of slow versus fast photography when designing photo elicitation research methodologies or educational experiences. Within its aforementioned challenges and limitations, we found pinhole photography to nurture a greater depth of experience, to substantially increase participants' embodied presence and sense of place, to assist participants to recall and deepen personal feelings attached to experience, and to foster positive feelings of self through successfully learning the techniques involved.

Conclusion

Examples of the application of photo elicitation as a method of research examining outdoor experiences are few. This study builds on Bob Jickling's work (2009); while he was more methodologically interested in Jan Zwicky's lyric philosophy (1992, 2003), photo elicitation was implicit in aspects of his work. This paper has sought to make Jickling's implicit use of photo elicitation explicit, and to develop this work further through the photo elicitation work of the other authors, and by contextualizing this work within the photo elicitation literature. Pinhole photography proved to be an effective medium/method to deepen participants' embodied presence and sense of place, and helped to anchor their experiences in wild nature for ensuing reflection and focused discussion. Although somewhat burdensome and time consuming, pinhole photography nurtured a slowed thoughtfulness and "sensuous" relationship with the wild landscape. And, in comparison to digital cameras, pinhole photography also fostered anticipation and delayed gratification of the results — a dwindling emotion in today's "instant" society.

A compelling "slow" pedagogical tool, pinhole photography engages participants in a corporeal way providing an embodied experience where "seer and seen" become one (Austin, 2012). This heightened awareness and consciousness, and "slowing" of time, cultivates a sense of place, an essential component within pedagogies of place (Gruenewald, 2003; Payne & Wattchow, 2008) or wild pedagogy (Jickling, 2015). Thus, we conclude that pinhole photography as a method of slow photography warrants further application in the field of education, particularly in outdoor settings, and in research, to establish its viability with larger groups and varied outdoor contexts.

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