International Journal of Communication 9(2015), 3327–3346 1932–8036/20150005

Visualizing Participatory Development Communication in Social Change Processes: Challenging the Notion that Visual Research Methods are Inherently Participatory

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Participatory development communication approaches increasingly use visual research methods with little critical reflection. This article challenges the implicit assumption across the community and international development sector that visual research methods are inherently participatory. I analyze a workshop held in Papua New Guinea that explored a visual multimethod approach in a participatory development context. In particular, I review the methods used in respect to the key participatory development communication principles of horizontal dialogue and local ownership. The findings show that visual research methods are not inherently participatory, but require reflection and conscious decision making by the facilitator(s) to ensure high levels of participation.

Keywords: visual research methods, community development, international development, Papua New Guinea, participatory development communication

Introduction

Recent years have seen a broad, interdisciplinary move toward participatory and collaborative research methods, particularly those involving visual materials (Buckingham, 2009; Knowles & Sweetman, 2004; Mitchell, 2011; Pauwels, 2012; Pink, 2003; Rose, 2007). Alongside this trend, visual research methods have become increasingly popular within the international and community development sectors, and advocates for participatory approaches particularly favor methods that incorporate visual materials (see, e.g., Chatty, Baas, & Fleig, 2003; Cooper & Goldsmith, 2010; Rambaldi, 2013). These visual methods frequently have been used across the sector with little theorizing or critical reflection (see, e.g., Low, Brushwood Rose, Salvio, & Palacios, 2012). Several scholars argue that this has led to cases where participatory development communication approaches have been implemented based on what appears to be the assumption that *visual* automatically equals *participatory* (Singhal & Devi, 2003; see, e.g., Bennett, Bloom, Kummer, Kwaterski, & Rivero, 2004; Richards, 2011).

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Date submitted: 2014–05–27

[1] I would like to thank Lauren Leigh Hinthorne and the three anonymous reviewers for their valuable feedback on previous drafts of this article. I would also like to thank Lilly Sar and the Bargam community for giving their time to participate in this research. The case study for this research was funded by the Centre for Communication and Social Change at the University of Queensland.

This article challenges this conflation between visual research methods and participatory development communication. It argues that key participatory development communication principles—particularly horizontal dialogue and local ownership—can inform visual research methods practice. Doing so, however, requires reflection and critical awareness by the facilitator(s).

Principles of Participatory Development Communication

Participatory development communication (PDC) broadly aims to transform the economic, political, and cultural structures that contribute to the continuation of poverty and inequality by actively involving the community in the development process (Bessette, 2004; Dutta, 2011; Figueroa, Kincaid, Rani, & Lewis, 2002; Jacobson & Servaes, 1999; Quarry & Ramirez, 2009; Tufte & Mefalopulos, 2009). Approaches developed under a participatory communication paradigm should therefore encourage a process-based framework for creating shared spaces of meaning (Dutta, 2011) and aim to give people "the tools to design, discuss and implement their own development" (Quarry & Ramirez, 2009, p. 53). In other words, PDC refers to the use of communication processes to create safe spaces where communities can jointly identify issues and formulate solutions (Bessette, 2004; Boeren, 1992; Tufte & Mefalopulos, 2009).

To achieve this aim, much of the literature argues that all PDC approaches should adhere to the key principles of horizontal dialogue and local ownership (see, e.g., Tufte & Mefalopulos, 2009). Although some of the literature refers to other principles (such as action-orientated planning), I have identified these two principles as consistently underlying most PDC approaches. It should be noted that the assumption that both of these principles are precursors for participation has been challenged elsewhere (see, e.g., Smismans, 2008); however, the focus of this article is the conflation between participation and visual methods, and thus does not engage heavily with this debate. This article works from the assumption that horizontal dialogue and local ownership are requirements for PDC, and thus examines the challenges facing users of visual research methods when aiming to achieve these principles.

The first key principle consistently identified across the PDC literature is horizontal dialogue. Horizontal dialogue can be broken down into two different but complementary components: *dialogue* (two-way exchange of meaning) and *horizontal* (level or equal communication). Dialogue refers to two-way communication, meaning that it should contain an active listening component as well as a speaking component (Dutta, 2011; Kincaid & Figueroa, 2009; Quarry & Ramirez, 2009). This also means that dialogue should be largely interpersonal, or at least mediated in a manner that allows for sufficient feedback to and from all key stakeholders (Beltran, 1979). By taking this approach, those most affected by issues can seek joint solutions (Tufte & Mefalopulos, 2009). This is supported by Bohm's (2004) argument that dialogue should be viewed as a stream or flow of shared meaning, out of which develops a new understanding. Dialogue therefore lies at the core of PDC approaches.

PDC approaches also should encourage egalitarian dialogue among participants, or horizontal communication (Beltran, 1979; Kincaid & Figueroa, 2009). This means that, under a PDC approach, all participants are given the opportunity to communicate on an equal level, regardless of their respective status or role (Beltran, 1979; Heimann, 2006). By encouraging a space where discussion can occur and all

participants have the opportunity to voice their own opinions or experiences, existing power structures can be disrupted (Beltran, 1979; Freire, 1970/1996). This disruption of existing power structures has been consistently identified in the literature as key to creating social change, and therefore should be a priority for any PDC approach (Bessette, 2004; Dutta, 2011; Freire, 1970/1996; Kincaid & Figueroa, 2009; Rambaldi, 2013; Tufte & Mefalopulos, 2009).

Of course, the literature also recognizes that it is much simpler to promote horizontal dialogue than it is to actually implement such a process. Creating a safe space for meaningful dialogue without the potentially negative influence of existing power structures does not happen automatically, and can easily revert (as will be demonstrated later in this article). In addition to existing power hierarchies within the community, the power balance between local participants and the external practitioner(s) or researcher(s) must also be recognized, and thus requires critical reflection (Hinthorne & Schneider, 2012). Horizontal dialogue also requires sufficient access for all participants, which Beltran (1979) argues is a "precondition for horizontal communication since, without comparable opportunities for all persons to receive messages, there can in the first place be no democratic social interaction" (p. 17). Although these factors may never be completely neutralized, they should be recognized as potential barriers to successful dialogue.

The literature argues that the second key principle underlying PDC approaches is local ownership. This refers to the idea that the development or social change process should be driven by the participants, or those directly affected by the initiative, rather than solely by external bodies (Donais, 2009; Tufte & Mefalopulos, 2009). Ownership occurs when there is a shared sense of responsibility for finding a solution to a collectively agreed-upon issue (Kincaid & Figueroa, 2009; Thompson & Kinne, 1999). In particular, the decision-making power should lie with local communities; this allows people to have "control over their lives and environment" (Yoon, 1996, p. 40). The concept of local ownership therefore embodies community-driven processes and decision making.

As with horizontal dialogue, ensuring local ownership of the development process can prove difficult to implement. Tapia, for example, provides a clear example of how the absence of local ownership was a key factor in the failure of a hygiene project in Nicaragua. In particular, "uneven community involvement" led to "fragmented and unclear information about the project's goals and implementation process, undermining members' interest" (cited in Kincaid & Figueroa, 2009, p. 516). Properly implemented local ownership is therefore vital to successful PDC.

The Link Between Visual Research Methods and PDC

It is widely agreed that visual research methods can help participants to more clearly externalize their perceptions and experiences and thus create a space for reflective dialogue (Banks, 1995; Buckingham, 2009; Gauntlett & Holzwarth, 2006; Harper, 2002; Hinthorne & Simpson Reeves, 2015; Knowles & Sweetman, 2004; Liebenberg, 2009; Pauwels, 2010, 2011; Pink, 2006; Wagner, 2011).[2]

[2] What counts as a visual research method has been highly contested; however, this debate largely falls outside the scope of this article. For the purposes of this research, *visual research methods* refers to research methods that use or produce visually orientated materials, including both two-dimensional

Samuels (2007), for example, used photo elicitation to investigate the perspectives of child Buddhist novices (for other examples, see Clark, 2011; Gauntlett, 2007; Hinthorne, 2012). It is this potential to help make the intangible tangible, and thus encourage horizontal dialogue, that has attracted both researchers and practitioners from within the development and social change sector and has led to the incorporation of visual research methods in many of their approaches.

It has also been claimed frequently in the literature that visual research methods can disrupt traditional power structures, both among participants and between researchers and participants, by empowering participants to take ownership of the process (Cunsolo Willox, Harper, & Edge, 2013; Walker, 1993). In particular, visual research methods can disrupt traditional or hierarchical power dynamics by removing linguistic or cultural barriers to communication. For example, Mitchell and Allnutt (2008) used photo albums in South Africa to capture the perspective of youth on social and historical themes (for other examples, see Clark, 2011; Hurdley, 2007; Kalibo & Medley, 2007). Consequently, in addition to being able to make abstract concepts more easily "shareable," the potential to disrupt existing power structures also has attracted PDC practitioners to visual research methods.

This incorporation of visual research methods in PDC approaches is currently being realized in two ways. The first involves using visual research methods as part of a mediated process. In these instances, visual media is the primary focus of the process. For example, digital storytelling (Cunsolo Willox et al., 2013), photovoice (Wang & Burris, 1997), and participatory video (Mitchell & de Lange, 2011) all involve the use of visual media and tools, such as still or video cameras, as part of a PDC approach. Much of the literature implies, however, that using these tools is inherently participatory, with little reflection on exactly how they are implemented (Low et al., 2012).

The second way that visual research methods are being integrated into PDC approaches is through including visual materials as part of the development process. For example, the past few decades have seen development practitioners increasingly using visually based nonmediated tools such as participatory mapping (Benson, Twigg, & Rossetto, 2007; Maceda, Gaillard, Stasiak, Le Masson, & Le Berre, 2009; Maman, Lane, Ntogwisangu, & Modiba, 2009), matrix or preference ranking (Adebo, 2000; Cornwall & Jewkes, 1995; Tufte & Mefalopulos, 2009), and problem or solution trees (Ammani, Auta, & Aliyu, 2010; Jiangnan, Ping'an, Wu, & Yanzhang, 2009; Snowden, Schultz, & Swinburn, 2008) to encourage dialogue and active participation. Again, the benefits of using such tools have been widely written about (see, e.g., Chatty et al., 2003; Singhal & Devi, 2003), but there has been little reflection about how researchers and practitioners can ensure that these methods are implemented in a participatory way.

This article primarily investigates this second type of visual PDC methods—that is, methods or approaches that include visual elements (referred to throughout this article as *visual research methods*). These findings, however, also may apply to the visually mediated PDC approaches described above. In particular, this research attempts to answer the question:

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images and three-dimensional objects. For further discussion on this topic, see Hinthorne and Simpson Reeves (2015).

RQ: In what ways can visual research methods demonstrate evidence of participatory development communication principles?

Many publications describe only the benefits of visual research methods and, subsequently, are celebratory rather critical (Low et al., 2012). As such, many of these methods are being implemented across the development sector with little reflection on whether they are actually informed by the key PDC principles outlined above. To ensure that the use of visual research methods in PDC is grounded in these key principles, we must first identify the ways in which visual research methods can demonstrate PDC. In particular, this research analyzes a case study from Papua New Guinea to determine whether visual research methods can create opportunities for the expression of PDC principles and, if so, what these opportunities might look like.

Details of the Case Study

This case study focuses on a workshop held in April 2013, in the Bargam community, Papua New Guinea, led by Lauren Leigh Hinthorne, who was at the time a postdoctoral research fellow at the Centre for Communication and Social Change at the University of Queensland, and Lilly Sar from the Papua New Guinea University of Technology. Sar has been working with the Bargam community for almost 10 years, and this case forms part of her ongoing community development work. Neither Hinthorne nor I speak Tok Pisin, the formal language of the region, and so we relied on Sar for translation when required.

The Bargam community is one of six administrative districts across Madang Province in rural Papua New Guinea. Bargam is made up of several small villages both along the coast and in the highlands, primarily linked through traditional kinship and other social networks. Agriculture plays an important role in the community, as food crops are used for not only personal consumption but maintaining status or providing income. Primary cash crops include cocoa, coffee, and betel nut, and crops for personal consumption include taro, yams, and bananas. Along the coastline, there is also a growing fishing trade.

The four-day workshop used a visual multimethod approach with members of the local community to help develop a community development plan. The facilitators and I had been invited by a community leader to facilitate the process. Twelve members of the Bargam community participated in the workshop, and they were divided into two groups of six.[3] All participants were men ranging in age from about 20 to 65 years old, from both the coastal and highlands regions. Participants were invited by a community leader and identified as members of the community who had both the desire and the power to enact social change. Pseudonyms have been used throughout the article to ensure participant anonymity. For some of the exercises, the participants were divided into two groups; both groups were a mix of farmers and local leaders from both the coastal and highlands regions (see Table 1). The groupings were based partly on participant availability and partly on the decisions of the community leaders

[3] This article analyzes whether the visual research methods employed inherently encouraged participation. It does not examine who was selected for participation in the project and how that might affect agency; however, this is an exciting and important area for future research.

Table 1. Workshop Participants.

Group	Name	Role in Bargam Community	Village	Area
Group A	Kisima	Community leader	Aronis	Highlands
	Anati	Businessman	Waimas	Highlands
	Wartovo	Farmer	Hub	Highlands
	Adur	Magistrate	Megiar	Coast
	Marisi	Farmer	Megiar	Coast
	Tamot	Farmer	Mulon	Highlands
	Marai	Fisherman	Megiar	Coast
Group B	Kila	Farmer / Religious leader	Waliak	Highlands
	Kabu	Farmer	Beren	Highlands
	Auga	Farmer	Waken	Highlands
	Kawora	Community leader	Danai	Highlands
	Yauwii	Farmer	Beren	Highlands

The visual multimethod approach used in the workshop included participatory mapping, three-dimensional (3D) model building, participatory photography, and album making. The facilitators aimed to incorporate PDC principles—particularly horizontal dialogue and local ownership—into the workshop and explored how visual research methods may achieve these. The methods were planned and implemented as part of an interdependent sequence, based on what appeared to be a natural progression of activities—the album-making session could not have happened, for example, without the participatory photographs taken during the workshop. Each of these methods is explained in more detail below.

Participatory mapping encourages critical thinking about one's environment and provides a visual representation of how participants view their physical, and potentially social or cultural, space (International Fund for Agricultural Development, 2009). Traditional participatory mapping exercises encourage literal replication of the immediate environment, such as the location of infrastructure, landmarks, or boundaries; as such, it is commonly used in development initiatives, particularly those involving agriculture or disaster risk reduction (see, e.g., Benson et al., 2007; Kalibo & Medley, 2007; Maceda et al., 2009; Maman et al., 2009).

During this workshop, we taped three large sheets of paper together to form one long strip about 90 centimeters (35 inches) wide by 150 centimeters (60 inches) long. The participants then drew their own villages on the map. Once the main infrastructure, such as roads, had been drawn, the participants used LEGO® bricks to place certain resources on the map, such as cash crops.[4] This step was conducted through a process of consultation and negotiation among the participants of each group. Once a consensus had been reached about the location of resources, the participants replaced the LEGO bricks with icons drawn with marker pens. There were enough pens and space around the table for each

[4] The author is not in any way affiliated with the Lego Group. All references to the Lego Group and LEGO SERIOUS PLAY are in accordance with established trademark guidelines.

participant to draw the legend or the icons simultaneously rather than the process being dominated by one drawer. This has particular significance for horizontal dialogue and is discussed in more detail below.

The inclusion of *3D model building* in both PDC approaches and visual research has increased in recent years, particularly with the rise of geospacial technologies (Rambaldi, 2013). For the 3D model-building aspect of the workshop, the facilitators employed the LEGO® SERIOUS PLAY® method.[5] One of the facilitators has been trained in this method and asked a series of challenges, followed by time for building and discussion.

The challenges included:

1. *Identity*—build a model of yourself as a member of the community.
2. *Community development*—build a model of something that you want to achieve in community development.
3. *Other development projects*—build any additional models of the important community development things that are not yet on the map.
4. *How to achieve aspirations*—build a model or models of what you need to do to make these community development plans happen.

After the second challenge, the models were placed on the map developed in the previous session—that is, the participatory mapping session. Both groups developed different models, demonstrating the different priorities that emerged within each of the groups. For example, the first group built models that were described as banking and sawmill initiatives, whereas the second group built models related to permanent housing and rice production.

Participatory photography frequently has been cited as a visual research method that can help overcome cultural boundaries and provide new insights by encouraging respondents to photograph particular items or places of significance to them, and then discuss their significance (see, e.g., Kolb, 2008). This technique has been used in various ways, with different researchers and practitioners relying on different definitions of the term. Photovoice (see Wang & Burris, 1997) and digital storytelling (see Cunsolo et al., 2013) are particularly popular variations; however, there continue to be challenges that must be acknowledged before employing these methods, some of which are discussed later in this article.

We employed a participatory photography method throughout the first three days, using both mobile phones and an instant-film camera. During the 3D model-building sessions, participants were encouraged to take photographs of their own models using the facilitator's mobile phone. On the third day of the four-day workshop, we visited many of the sites mentioned in the previous sessions (similar to a

[5] LEGO SERIOUS PLAY is a strategic management tool first developed by the Lego Group in the late 1990s (Roos, Victor, & Statler, 2004). It is based on the premise that building models, or doing things with your hands, leads to creative and new thinking; in particular, that "by constructing and externalizing concepts—making them tangible and shareable—we can not only reflect on them ourselves but invite others to reflect with us" (Lego Group, 2010, p. 8).

technique called *transect mapping*; for more information, see International Fund for Agricultural Development, 2009), and participants took photographs with an instant-film camera.

Album making was the final visual research method employed. It was inspired by a similar activity conducted by Mitchell and Allnutt (2008), where South African and Canadian students developed their own "photo-album documentaries" on a range of personal, social, and historical themes. Each group was given one A4-sized, self-adhesive album with five double-sided pages and access to a range of photographs taken over the previous three days. Each group also received blank cards in a mix of colors and some pens, which they could use to write captions if they wished.

The selection of photographs included the instant-film images from the site visits, some of those taken by the participants during the model-building session, and some photographs taken by me to fill in potential gaps. Due to time and photo paper resource constraints, it was not possible to print all the photographs taken during the participatory mapping and 3D model-building sessions. Consequently, Hinthorne and I decided which photographs from the first two days should be printed. These decisions were based on both clarity of the image and ensuring that there was at least one photograph of each model or idea and of each participant.

The photographs taken by me were mixed in with the participant photographs so that it was not obvious which photographs had been taken by whom, in an attempt to encourage local ownership of the images. However, participants were advised that the supplied photographs contained images taken during the previous sessions by both them and by me. Once the participants completed the activity, a self-chosen representative of each group then explained his group's album to the other group.

All the sessions were documented using unobtrusive video recording, some audio recording, and still images in addition to my handwritten field notes. Given the language barrier between the participants and me, the discussion below is based on primarily on nonverbal indicators of horizontal dialogue and local ownership at various intervals throughout the workshop, interspersed with translation of sections of discussion.

Linking Visual Research Methods and Horizontal Dialogue

First, the incorporation of visual research methods throughout the workshop encouraged horizontal dialogue by helping the participants to clarify their own and others' perceptions by creating opportunities and space for participants to discuss abstract concepts, such as what development meant to them and how they saw the future of their community. This was particularly evident during the 3D model-building and album-making sessions, where participants negotiated the placement of models or photographs by pointing or moving the physical representations of their ideas while discussing them. By externalizing these otherwise abstract concepts, the participants were able to move from discussing the *what* in their development plan to the *how*. This confirmed the findings from previous research, which argue that visual research methods can help participants to externalize and explain abstract concepts in ways that are not possible through purely linguistic methods (see, e.g., Clark, 2011; Hurdley, 2007; Mitchell, 2011). In this way, horizontal dialogue was achieved through the use of visual research methods

by helping participants to express themselves more clearly. This demonstrates the *potential* of a strong and supportive link between visual research methods and PDC. Yet it does not prove the link exclusively.

It was also clear that, although the use of visual research methods—particularly 3D model-building—may have helped the participants to stimulate new ways of thinking, the incorporation of visual materials was not necessarily the only impetus for horizontal dialogue. For example, during the 3D model-building session, participants came up with a new idea for expanding rice production to increase income to build a permanent house. Below is a segment of the conversation taking place during Group B (April 23, 2013, transcript translated by L. Sar).

Kila: We start with the current situation now. We're currently growing rice, taro, cacao, and sweet potato and poultry as well. My future dream is to have a house, a more permanent house.

Sar: How do you get there?

Kila: I think me alone I can't I really can't do it in a short time. I can't achieve the plan in a short time. That's why I need to go back to the village and sit down with other community leaders to come up with a plan because I as an individual can't do it.

Sar: Your plans I have heard for some time, and we have talked about it many times, and you have talked about it again when you came up with your model. Now we have to stop talking about it. Now we have to see how we get to that house. What do you do to get to that house? What road do you take to get to that house?

Kila: Okay, one way to do it is selling rice.

Sar: Okay, what did you do this morning? You're putting the food/resources in the community [on the resource map].

Kila: Yes, we can plant more rice. Increase the farmer numbers or increase the size of the land used for planting rice.

Kabu: Yes, we can grow more rice. We can plant a lot more. It's that mechanical mill [that doesn't work]. Without a working mill there isn't much point to grow more. Rice can't be peeled like other vegetables; it needs to be cleaned for people to use it.

Kila: We'll go back and plant rice. Whoever in our group hasn't planted rice will have to grow rice. For now we have to go back and plant rice to sell to other members of the community. If there is a shortage of rice, then we will sell the other garden food.

Sar: Is that all? What else have you been doing as rice farmers? What have you used to clean your rice?

Kila: That's it. We'll start selling *tomtom* [wooden rice mill] now. Then people can clean the rice themselves.

Sar: How else, apart from selling the *tomtom* mill, are you going to do this? If you do have a central milling place with a working mill and people come to sell the rice at your place, how will that work?

Kila: If we're milling rice for the community, it won't be the *tomtom* because it doesn't mill enough kilos. And if we get the mechanical mill and we mill a lot more rice with that, then we can charge for the milling. And at the same time, if people don't have money to pay for the milling, they can leave some of their rice for the rice group to sell as well.

To the best of my knowledge, the idea to sell the *tomtom* mill or to charge for rice milling had not been previously raised within the community. The challenge emerges when trying to claim that the use of the visual research method prompted horizontal dialogue and local ownership, and thus was participatory. How can we measure this, if at all?

It is, of course, not possible to say with certainty whether this idea was sparked by incorporating visual research methods (particularly the participatory mapping and 3D model-building sessions) or by the discussion with Sar, because both of these were informed by each other. That is, the discussion between Kila, Kabu, and Sar stemmed from the models that the participants had built, and the building of the models was in response to questions posed by the facilitators. This example does demonstrate, however, that visual research methods alone do not necessarily inspire participation; nor does the desire to encourage a PDC approach automatically lead to participation.

However, the above examples demonstrate that visual research methods may inspire horizontal dialogue by providing stimulus for discussion among the participants. As another example, also during the 3D model-building session, one of the participants, Kawora, built a model of a bridge and placed it on a specific location on the resource map completed in the previous session. He described the bridge as a development issue because it was needed for certain villages in the community to access to the main road to the nearest major center; however, it regularly collapses due to poor construction and lack of maintenance. When discussing the priorities for the development plan, Kawora made the following comment about the bridge:

> We need to move the bridge and have a better design for the location. Wheelbarrows represent that to make the bridge we need manpower, men and women in the village who come and help. People will also have to talk to the logging company that goes in every year to log, but they make bridges that will not stay after they leave. So people will need to talk to their leaders about the logging company. (April 23, 2013)

This comment spawned suggestions from other participants about engaging local engineering students to help design and build the bridge. Again, I cannot say with absolute certainty that the same discussion would have occurred without the use of visual aids, but the active interaction between the participants and the models and resource map does indicate that the use of visual materials helped move this discussion of the bridge from a problem to a potential solution. This was reinforced by a comment from Tamot toward the end of the day:

> [The participatory mapping and 3D model-building sessions] opened up my mind to see from every angle how things can be done. (April 22, 2013)

In addition to being able to share one's own perspectives, experiences, and ideas, horizontal dialogue requires active listening, both from other participants and the facilitators (if appropriate) (Quarry & Ramirez, 2009). During the 3D model-building sessions, participants often described their models directly to the facilitator rather than to the other participants. The other participants, on the other hand, were often either looking at the speaker or the speaker's model or altering their own model in relation to

the discussion. For example, when one participant was describing the fishing cooperative as an indicator of development, a second participant revealed that he had built a similar model and moved his model so that the two models were placed close to each other.

While recognizing that nonverbal signs such as gestures and facial expressions may be culturally specific (Liu, Volcic, & Gallois, 2015), three particular nonverbal indicators were identified as representative of active listening and therefore were used for this analysis: gaze and eye contact, physical distance, and verbal response or feedback to the speaker. Participants demonstrated clear nonverbal indicators of active and nonactive listening, especially during the 3D model-building and album-making sessions. As mentioned above, throughout the discussion and reflection portions of the 3D model-building session, all the participants maintained their gaze or eye contact toward the speaker. During the album-making session, however, the same participants frequently moved away from the group to speak with nonparticipants or to assist with other tasks, such as food preparation. During group discussions, it is customary for community leaders to speak for short periods of time and then leave (L. Sar, debriefing meeting, April 25, 2013). It is therefore likely that the discussions during the album-making exercise, which were held in the community, were subject to tradition and customary rules. This reiterates the premise that visual research methods do not automatically equate to key PDC principles, because dialogue was not always horizontal, nor had power structures been eroded.

Visual research methods often claim to circumvent preexisting power structures by encouraging horizontal communication (Pauwels, 2010), and this is often cited as one of the key attractions for PDC practitioners (see, e.g., Bessette, 2004; Tufte & Mefalopulos, 2009). As such, it seems imperative to determine whether the discussions throughout the workshop were dominated by particular individuals or groups or whether all the participants were given the opportunity to equally contribute to the discussion.

Traditionally, religious and community leaders have high standing within the community, and consequently there was a risk that the sessions would be dominated by these leaders (L. Sar, personal correspondence, April 25, 2013). The video footage of the initial sessions suggests, however, that all participants were given the opportunity to contribute to the discussion generated by the visual research methods. All 12 participants spoke during the participatory mapping and 3D model-building sessions, although individuals spoke for different lengths of time. It is difficult to ascertain the quality of the spoken contributions, because many of the discussions were conducted in Tok Pisin or local languages, which I am not familiar with. It is possible that the amount of time spent speaking to the group may have been due to personality traits rather than representative of preexisting power dynamics.

It is worth noting that the method employed during the 3D model-building session, LEGO SERIOUS PLAY, requires all participants to "report back" or discuss their model with the group (Lego Group, 2010). The decision to employ a method that requires all participants to contribute was a specific and intentional choice. It was also a deliberate choice to ensure that there were enough pens and space around the table for all participants during the participatory mapping session. All participants were involved in creating the resource map, and all participants drew at least one resource on the map, as mentioned above. Preexisting power dynamics were therefore not obvious throughout these sessions. So it is not clear from the data whether the facilitation of the visual research methods used helped to

overcome preexisting power dynamics or whether the use of such methods simply masked them. Further ethnographic and longitudinal study within the community is needed to make a more definitive claim.

Because the traditional power structures and dynamics appeared to be eroded during the previous sessions, I had expected the album-making session to generate similar findings; however, this was not the case. The album-making session in particular demonstrated a very different power dynamic from the previous sessions, and therefore revealed key insights into the social structures that can affect conversational dynamics (Mansuri & Rao, 2013). In the second group, for example, only two participants were present when the session began, Auga and Yauwii. Both participants discussed the options for where to place the photographs, and this was demonstrated by animated discussion and tactile contact with the different photographs and the album. After about 14 minutes, the participants were joined by two more participants, Kila and Kabu, but the dynamic did not visibly change. In fact, one of the participants, Auga, who had appeared reluctant or less engaged throughout the previous sessions, seemed to take charge and was very active and decisive about where to place different photographs in the album.

When Kawora, a well-known and respected leader within the Bargam community, arrived almost two hours, there was a visible shift in the group dynamic. Auga no longer appeared as confident or as assertive as he had been throughout the session to this point; for example, his posture changed, his gestures became smaller, and he spoke less. He also became less involved in the process, moving away to speak to other members of the community. Two of the other participants, Kila and Kabu, also moved away to speak with other members of the community who had not participated in the workshop. The partially completed album was immediately handed to Kawora, the community leader, who reviewed and commented on the already-included photographs before continuing with the process. All decisions about photograph choice and placement from this point onward were confirmed with Kawora before being finalized and added to the album. This indicated a return to existing power dynamics, where community leaders maintain high levels of respect and power. This observation was reinforced when each album was explained to the other participants by a community leader from that group rather than by one of the other participants. This example clearly establishes that the use of visual research methods does not automatically erode or overcome preexisting power dynamics.

Linking Visual Research Methods and Local Ownership

Participation and engagement with the process is often cited as an indication of local ownership (see, e.g., Vermaak, 2012). While accepting that not all participation is necessarily meaningful (Stoecker, 2013), there were several signs throughout the workshop that indicated high levels of local ownership, particularly with regard to participant-initiated discussion or actions. During the 3D model-building sessions, for instance, participants moved to retrieve new LEGO bricks and began purposefully building new models or adapting their existing models even when not prompted by the facilitators. The participants also worked in pairs or small groups during the second half of the 3D model-building session; these pairs and groups were self-selected by the participants, who then worked together on shared goals. For example, two participants worked together to build models representing the fishing co-operative, another two worked together to build models representing the banking and sawmill initiatives, and four others worked together to build or adapt models representing electricity and water pipes connecting the coast

and the highlands. When we visited various sites on the third day, the participants determined the agenda and which site to visit when, demonstrating action without prompting from the facilitators. The ongoing use of the albums and related discussion after the workshop also indicate high levels of local ownership. These examples highlight several ways that the use of visual research methods can encourage local ownership.

Although the choice of which visual research methods to include was determined by the facilitators, the participants still demonstrated control over the discussion topics and their framing throughout the workshop. For example, the participants controlled the itinerary for which sites to visit. The areas to be visited and photographed were determined by the participants, and the participants photographed sites or objects that they thought were significant or relevant to community development. Although the instant-film camera was carried by one of the facilitators, the participants decided what to photograph, the angle at which the photograph was taken, and how it was framed. An example of this is when Marisi photographed the market (which appeared as part of several models built during the 3D model-building sessions). I had anticipated that Marisi would photograph the busy market as a whole. Instead, he focused on taking still images of small aspects of the market, such as bags of betel nuts. Although the amount of photo paper brought to the field limited the number of photographs that could be taken, the participants indicated that they had taken photographs of all the sites that they felt were important for their community development plan (with the exception of sites we were unable to visit due to poor weather conditions and time constraints).

The use of participatory photography was central to the album-making session; photographs were needed to discuss and place in the albums. Yet one must question how participatory this method was in practice. During the participatory mapping and 3D model-building sessions, the facilitator placed the mobile phone with the camera on the table and encouraged participants to use it. However, participants only took photos when directly suggested by the facilitators, and only of items suggested by the faciliators. This differed from the third day, when we visited different sites with the instant-film camera. During this session, participants asked for the camera to take photographs of items or places they were interested in, demonstrating a higher level of local ownership over the photography process than on previous days. Is there a way to encourage local ownership over the tools regardless of the setting, or does the setting always play a vital role?

The use of visual research methods, particularly the development of lasting visual materials such as the photo albums, nonetheless encouraged a sense of local ownership over the process. This was demonstrated through the participant-driven idea to continue the discussion started at the workshop; this idea was originally suggested by one of the farmers with no input or interference from the facilitators (Kisima, personal correspondence, April 26, 2013). In addition to the participants who attended the workshop, monthly meetings have included others from the community who are interested in contributing to the development plan and to discuss the progress of the different development initiatives. This demonstrates the participants' ability to externalize the concepts discussed during the workshop and clearly explain them to others who were not present at the sessions. For example, the albums have been referred to as "picture proposals" for the community's development plan, and they have been described as a way for the participants to share their ideas with others both within and outside the community:

> Thoughts can be changed, paper can be lost, but with the Legos and going into a photo and then setting them up in albums is something of historic, which you can never ever forget your plan. 'Cause once when you come to losing your memory, you will always flip back to the albums, and you will still keep up to the plan which you have designed. (Kisima, personal correspondence, April 26, 2013)

> Kisima and the group continue to use the albums, especially when discussing community development. The albums have also been used to seek funds [for development projects]. They are also meeting for the planned meals. So far they have had two meetings, and this has involved other people who were interested. (L. Sar, personal correspondence, July 23, 2013)

> The albums were shown a second time as well to a new officer who was just employed in the Member of Parliament office. Apparently this person used to work with cocoa growers in Bargam before leaving to work in the mines in another province. Now he is back in Madang [the major center in the province]. The albums were shown to him while discussing the community development plan, particularly in relation to agriculture. Kisima used the albums to show their plans and their intentions to attend the NARI (National Agricultural Research Institute) Innovation show in Lae, Morobe Province. (L. Sar, personal correspondence, September 16, 2013)

The physical presence of the visual materials developed during the workshop—that is, the albums—has allowed participants to share the ideas and discussion from the workshop with those who were not present, in a way that would not be possible without the visual materials. But is this enough to claim that visual research methods are inherently participatory? Or is it the way they are employed that may lend itself to participatory principles? I would argue, particularly from the case study explored above, that it is the latter.

Conclusion

There is an implicit assumption throughout the literature that *visual* automatically equals participatory. Through this case study, I have demonstrated that visual research methods, when facilitated or implemented in a deliberate and reflexive way, can demonstrate evidence of horizontal dialogue and local ownership. In particular, the incorporation of visual research methods in PDC approaches can create spaces for reflective dialogue, help participants to externalize abstract concepts and ideas, and promote shared responsibility. Yet, despite the best intentions of the facilitators, the visual research methods employed often fell short of fully realizing the key PDC principles of horizontal dialogue and local ownership, at least in a clear and observable way.

Although in some ways this case study raises more questions than it answers, it confirms that practitioners and researchers need to use visual research methods in a reflective and critical way rather than accepting the implicit assumption that visual means participatory. This article does not argue that all visual research methods should aim to achieve these key principles, nor does it suggest that all PDC

approaches must include visual research methods. It merely suggests that if researchers or practitioners wish to incorporate visual research methods into a PDC approach, it is important to critically and actively reflect on whether the implementation of these methods realizes these principles.

Visual research methods do not become participatory in and of themselves; the role of the facilitator and the intention behind the use and implementation of visual research methods is of key importance. In particular, researchers and practitioners should critically review their own roles in the process, thus increasing self-awareness of their own influence on the research or practice. This may be especially pragmatic if there are language barriers. Further research and reflection is needed to identify practical guidelines and frameworks that can be applied by researchers and practitioners alike.

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