Using photography in research

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October 2019

This document should be cited as:

Fitzpatrick, Ian (2019) Using Photography in research. Statistics for Sustainable Development, Reading, UK

Stats4SD

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Introduction

Photography (both still and video) can play an important role in fieldwork and data gathering, as well as data management and analysis. These days, most researchers carry a smartphone with them, and a camera is therefore always available. But although many researchers do take photographs, these photos are not always put to good use as part of the research process.

One very basic use of a photograph is that it provides a record of a participant/interviewee which can help the researcher locate a participant, house, field, or location at a future date. Most smartphones and many digital cameras provide geotagging - some older models of Android smartphones may not have geotagging. If your camera doesn't, the only way to get geotagged photos is to download a camera app that supports geotagging. Photographs of participants can also help a researcher put a face to a name, or a house or location to a face. Many researchers already use geotagging of this kind. But there are also many other ways that photographs (and video)[1] can be used to provide valuable research data which can complement other methods.

1. Photography can be used to record many kinds of information (data)

- Biophysical elements:
  - Land-use patterns, landscape
  - Plant species, planting arrangements
  - Crop conditions (quality, size, condition, type) including pests and diseases
  - Soil types (wetness, dryness, colour)
  - Condition of livestock and pets
- Material objects:
  - Items in a room or space (farming equipment, bags of seeds)
  - Documents (official records, newspapers, posters)
  - Houses, their materials, size and condition
  - Conspicuous consumption (luxury/expensive items on display)
- Social interactions:

[1] In this guide, the term 'photography' means still images and video, and 'photos' refers only to still images.

    - How people use/interact with biophysical elements or material objects mentioned above
    - How a meeting is arranged (number of people, position/layout)
    - Participants at an event/meeting: how many men/women/children, diversity, ethnicity, types and levels of participation
    - Body language (sitting closely and paying attention or not, how they interact with different types of people)
    - Distance between people (*proxemics*), who sits with who
    - Gender relations and power dynamics (from how meetings are arranged to body language and distance between people)
- Values/perceptions (in the case of participatory photography):
    - Answers to more abstract questions like: what do you value most about your community? What has changed in recent years; how are you most experiencing the impacts of climate change?
    - Questions related to perceptions/thoughts triggered by photos from elsewhere
    - Questions related to memory/history triggered by old photos
- Sequences/time:
    - The different steps of a process
    - How something changes over time (before and after photographs), could be biophysical, material or social

2. Photo-elicitation: when photography can also be used as a probe

> *Photo-elicitation has proved to be a valuable tool for those involved in iterative participatory research, often with vulnerable populations like children or the disadvantaged, but also with farmers. 2*

During interviews, photographs or video material can be used as the object of discussion, to help stimulate a conversation (individual or group) or provide deeper/longer answers to questions. The use of images can help to make the respondent/interviewee feel more like a commentator and less like the subject of a data collection project! Photography can also be useful as a memory aid.

[2] Sherren, K. & Verstraten, C. (2013) What Can Photo-Elicitation Tell Us About How Maritime Farmers Perceive Wetlands as Climate Changes?, Wetlands, 33(1), pp. 65–81.

What is photo-elicitation?

Photo-elicitation is a method based on the idea of using photographs or videos during the interview process to stimulate conversations. It can be used to reveal attitudes, beliefs, opinions, thoughts, and memories that might not normally emerge in a traditional survey or semi-structured interview process.

One of the first anthropologists to use this method as an interview technique, John Collier, commented that: "*The pictures elicited longer and more comprehensive interviews but at the same time helped subjects overcome the fatigue and repetition of conventional interviews*". They also have the "*ability to prod latent memory, to stimulate and release emotional statements about the informant's life*".[3] Using photos also has the advantage of stimulating group discussions as people gather around an image to discuss its meaning and figure something out together (similar to community mapping exercises). According to the sociologist and photographer Douglas Harper, photographs can help to 'break the frame' of participants, and "*create a bridge between different cultural backgrounds of the researcher and participant*".[4]

Sometimes, the type of photograph you use for photo-elicitation really matters. Harper gives the example of portrait photographs he took of farmers he was interviewing hoping to use them to guide conversations. But the photos were too similar to illustrations in farming magazines and did not lead to reflection. He found, instead, that using aerial photographs, and historical photographs really stimulated conversations:

> *"The aerial photos led farmers to reflect upon farm strategies, structural differences between farms and the patterns of change. The historical photos evoked aspects of the past that have a great deal of significance in the context of farming's continuing evolution. Suddenly previously taciturn farmers had a great deal to say."*

Benefits of photo-elicitation:

- Building rapport with participants/interviewees
- Facilitating and deepening conversations
- Making it easier to talk about difficult or abstract subjects
- Stimulating thought (particularly memories)

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[3] Collier, J. (1957) Photography in Anthropology: A Report on Two Experiments, American Anthropologist, 59(5), pp. 843–859.

[4] Harper, D. (2002) Talking about Pictures: A Case for Photo Elicitation, Visual Studies, 17(1), pp. 13–26.

- Facilitating reflective thinking

Photo-elicitation can also be used as part of a set of methods. For example, in a study of farmers' knowledge of pesticides, researchers carried out person-to-person questionnaires which used a combination of free-listing, photo-elicitation and specimen description as a way of measuring people's knowledge.[5] The success of photo elicitation will depend on selecting the topic properly, and both carefully selecting photos and asking the right questions to stimulate discussion.

Example 1: Photo-elicitation and the agricultural landscape

In this study,[6] the researcher worked with farmers in a degraded landscape in Australia, to help explain how the farmers understand and value their complex landscape: "*The photo-elicitation process empowers them to articulate closely held values and understandings about their lives and work in this difficult terrain.*"

Research process:

Fieldwork took place in four phases.

1. The field base was established and included participant observation at weekly meetings with farmers.
2. In-depth interviews with 18 farm families. At the end of each interview, families were given a disposable camera and they were asked to take 12 photographs of 'significant landscapes'. They were allowed to take more than one photo to complete a panorama.
3. A second in-depth interview based on photo-elicitation as well as a day-long tour of the sites in the photographs. A 'category and laddering approach' was used at the start of this interview where photographers were asked to sort their photographic prints into themes or categories. Respondents were asked to decide the categories for each grouping and assign a title. If a whole family was involved in the interview, the photographer had the first opportunity to categorize the photo, and then discussion with the whole family would follow. Photos were then ranked by significance and numbers assigned to them. The sites themselves were then visited for further conversations.

[5] Wyckhuys, K. A. G. et al. (2019) Ecological Illiteracy Can Deepen Farmers' Pesticide Dependency, Environmental Research Letters, 14(9), p. 93004.

[6] Beilin, R. (2005) Photo-elicitation and the Agricultural Landscape: 'seeing' and 'telling' about Farming, Community and Place, Visual Studies, 20(1), pp. 56–68.

4. Final stage was to transcribe the interview and send a copy to the participating families, asking them to make corrections if necessary. All changes were recorded in the final copy of the transcript.

As an example, the article includes a photograph and a transcription of the conversation the researcher had with the participant/photographer:

Transcription:

> *"**Marvin**: The creek changes over the years we have been here. That part of the creek at one time was level. We had one big flood 5 years ago and it seemed to fill in what was steep and cut out new bed for itself as it went down. Now the ground along the new part is unstable because it is all silt that has filled in over the years and it is widening out each year as we get the rains. There is very little you can do in land management terms that is good farming practice there. You could let the blackberries grow all along it and they would hold the land together but that is not good farming practice.*
>
> ***Stan**: It is a problem. And it is going to be a big problem one day. Because the Grand Canyon started from something! That is what I worry about."*

Background and analysis:

> *Marvin (aged 57) is the father of Stan (35) on this inter-generational farm. Marvin's grandparents claimed the original selection of land and Marvin had to wait until he was 55 to inherit the farm from his father. Marvin has carefully sprayed out the blackberries as weeds on the hillside. The counter proposition is that their tenacious scrambling branches and extensive root system stabilized the hillside and minimized erosion. What is not being*

> *said in this discussion is that Marvin and Stan allow their stock to come to the creek for water. The photograph shows extensive evidence of cow trampling and the pressure from the animals is accelerating the slope crumbling and slipping. Stan can only allude to the fact that there is increasing deterioration through his reference to the Grand Canyon.*

It is important to note that the researcher/ethnographer is adding insights and analysis obtained from participant observation (without the camera). This illustrates the point that cameras and photographs are just one of several tools to be used in combination with other research methods.

The author concludes that:

> *The farmers construct a landscape view out of their cultural understanding of what it means to be managers in this place and farmers in this society. Participatory photo-elicitation gives them a tool to demonstrate their prowess, their concerns and to explore deeply held thoughts. It gives social and biophysical researchers insight into the usefulness of the landscape metaphor in connecting activity and outcomes, history and daily experience.*

3. Participatory photography: when participants take photos themselves

All photography is either researcher-created (made by the researcher or sourced from elsewhere), or respondent/participant created. In most cases, researchers take photos themselves, or find photos from other sources (historical, satellite, etc.), and either use these photos as data or as a probe to stimulate discussion with participants. These visual materials can help the research to obtain an *etic* point of view. In some cases, interviewees, participants, or community members can participate in the research process by taking photos themselves in answer to specific questions or more generally about things that are important to them as in Example 1. These visual materials can help the researcher get to an *emic* point of view.

Emic and etic

Emic and etic are useful concepts, derived from the linguistic distinction between phonemic and phonetic descriptions of sounds (phonemes). Clifford Geertz called "emic" the native's point of view. You could also call it the local, farmers', insider, or 'subjective' point of view. Etic, on the other hand, is the researcher's, outsider, or 'objective' point of view.

Emic point of view: farmers might say "when we spray pesticides, the insect pests become used to the poisons."

Etic perspective: the insect pests evolve resistance to the pesticides, while the natural enemies may be eliminated.

Sometimes emic perspectives are quite detailed and unlike etic ones (e.g. local names for soil types). Sometimes the two perspectives are fairly similar (e.g. similar understanding of weeds) and sometimes the etic perspective is much more complex (e.g. molecular or chemical understandings of plant diseases).

In some ways there are parallels with the way farmers evaluate trials compared to how researchers evaluate them. Farmers will use different criteria and terminology to researchers, sometimes using concepts that are only understood locally (emic) and have not easy or exact translation into 'researcher language' (etic).

Anthropologists are usually good at getting at the emic perspective because they spend more time talking and listening to locals and participating in activities with them. Agronomists are more likely to go straight to the etic and use their own framework to analyse everything they see. Even when they encounter an emic point of view, they may fail to appreciate it.

Knowing about emic vs etic helps the researcher to understand the farmers' point of view, without necessarily agreeing with it. Such understanding helps frame more sensitive (and effective) programs and interventions, and to understand demand for research.

This method of asking participants to take photographs themselves is useful as a way of getting people to participate who are uncomfortable with the formality of an interview situation, or having learning difficulties or are too young. But one of the problems with giving people cameras to help researchers 'see' local people's point of view is how to interpret the images. This is mainly done through photo-elicitation (outlined in Section 2).

4. Explaining anomalies or errors: when photographs help explain data anomalies

Photographs can be a quick and useful record of other field data collection which can help clarify questions or anomalies discovered at a later stage.

For example, quantitative data may show that all farms in a research project area, except one (farm *x*), had suffered from crop failure due to pest problems. A quick look at a photograph taken of farm *x* at the time of harvest may show that the crops on farm *x* were in fact also badly damaged. This would therefore mean an error in data collection or entry at some stage had occurred.

Example 2: Using photos in a project to validate data

A study of below ground biodiversity in Tanzania took samples at several hundred points. At each point researchers measured soil fauna (earthworms, beetles, termites etc) and soil characteristics (texture, N content, pH, etc). They also took a photo of every sampling point. When looking at the resulting quantitative data there was clearly huge variation (e.g. some plots had no earthworms while others had hundreds) but, contrary to expectations, this was not associated with the soil characteristics measured. This led to the research team brainstorming on some possible explanatory factors. They suggested soil moisture, cultivation and presence of trees might be associated with different levels of soil fauna. All these could be assessed from the photos. Hence, they looked at the photo of each sample point and scored it for: a. Whether it was a wet or moist plot; b. Whether it was under a tree or not; or c. Whether the plot was cultivated. They then added this data set to the quantitative data ready for statistical analysis.

This is an extreme example of using photographs in that a nearly complete data set could be generated from photos and the data proved useful: those new indicators did indeed help explain some patterns.

Example 3: Using photos in a Farmer Research Network

A Farmer Research Network – Non-Governmental Organisation (FRN-NGO) project in western Kenya took photos of every plot in a large farmer trial that had about 500 farmers trying three or four striga (a parasitic plant) management approaches. The photos were attached to plot records in the database but the researchers weren't sure what to do with them.

As with the example above, these photographs could be used as follows:

1. Look at the quantitative field collected data and identify surprising values. For example places where a striga treatment gives a response different to usual.

2. Look at the photos for those plots and try to spot something unusual.
3. If there is something, then follow up either by looking for more examples of it in other photos, or by talking to farmers or technicians about it.

5. Ethical considerations

ILRI has published a useful 13-page guide to this here. It is worth reading it in full as it provides a detailed overview of many of the ethical issues associated with using photography in the field. The main considerations relate to obtaining informed consent, the appropriate use of photographs, and copyright.

Consent

ILRI's guide covers:

1. Informed consent - emphasising the importance of planning ahead to inform and obtain consent where possible.
2. Written consent - particularly when photographing individuals 'in the context of culturally sensitive, politically sensitive, taboo or high-stigma issues'.
3. Verbal consent – to be obtained when photographing individuals, but not in groups of people in large public gatherings.
4. Children and consent – important to obtain consent from parent or guardian but also explain to children themselves 'in a manner appropriate to their age' and ask them for permission too.

The guide identifies three situations in which consent is not needed:

1. Individuals whose identity is not recognizable in a public space.
2. Public figures in public spaces (although consent is actually required in some countries).
3. Large groups of people (crowds) in public spaces.

There is also an important list related to the 'Ethical use of photography', and some examples of template consent forms.

Always remember that "*Consenting to be photographed is not the same thing as consenting to have that photograph published in an annual report or plastered on the side of a bus. We need to make sure that our consent processes account for these distinctions and are structured in a way that enables multi-layered consent.*"[7]

[7] PhotoEthics (2019). Website available at https://www.photoethics.org/content/2019/6/11/informed-consent

Copyright

It is worth considering what sort of copyright license photographs will have. Creative Commons licenses are a great way of allowing photos to be used by others while ensuring that credit is still given to the original creators. This will be easier to do if researchers themselves have taken the photos, but harder if photos are taken by a wide range of participants.

6. Tips to remember

- This isn't about researchers trying to use photographs for something because they enjoy taking pictures!
- Photographs and videos should only be used as part of a wider 'package' of methods and carefully integrated / designed into the research process.
- Photographs can be used for qualitative analysis (focusing on narratives or stories or prompting longer discussions or disclosures) or more quantitative analysis or semi-quantitative analysis (counting frequencies, ranking photos by category).
- As with all data collection tools, the use of photography methods should be pilot-tested to ensure it captures the appropriate data.
- Using photographs or videos can make the research process take longer (e.g. longer interviews; longer group discussion). Plan this from the outset.
- Research can sometimes be accused of being overly extractive. Involving participants in the research process by using participatory photography is one way of reducing the one-sided nature of a conventional research process. Printed copies of photographs can also be left with participants or the community involved with research as an additional way of sharing the outputs of the research process.
- Label your photographs. Be efficient and discard bad photos, then label the good ones and store them in folders. The labels help you to find your photos later (as well as geotagging, and date of photo) and remember important information (the name of a person in the photo).
- Photos can be a powerful memory aid. They can help us remember who was at a meeting, how people dress, what tools farmers were using, and the names of organisations (e.g. taking photos of office signs).

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Main journals:

- Visual Anthropology (Taylor and Francis): located within sociocultural anthropology, publishes many articles based on fieldwork and archival research.
- Visual Anthropology Review (University of California Press): also located within sociocultural anthropology, but crossing over into cultural studies.
- Visual Communication (Sage Publications): no single disciplinary base but strong emphasis on semiotic analysis.
- Visual Studies (formerly Visual Sociology) (Taylor and Francis): grounded in sociology but including empirical fieldwork-based studies from a wide variety of disciplines.