

# TO CAPTURE A MOMENT: PHOTO ELICITATION IN PARTICIPATORY DESIGN

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## ABSTRACT

Photo elicitation is a method used to obtain valuable information from users in participatory design. The users are asked to take pictures of things such as places, situations and objects they like, dislike, are familiar with, or experience as important. When the picture(s) are discussed later, the intention of the photography from that specific moment is recapitulated, and the associated memory is invoked. Words are used to recall the photographed situation, transforming the occasion into a narration that will be understood as an event. A photograph can also be regarded as a preserved moment that we can relive repeatedly. A photograph is brought to life by observers as they look at it and discuss its content (Belting, 2014). Whether the picture is interpreted directly or used to invoke associations, words are used, so there is a change of modality from images to words.

## INTRODUCTION

*The thrill found in a photograph comes from the onrush of memory. This is obvious when it's a picture of something we once knew. That house we lived in. Mother when young. /.../*

*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 color photography. It stimulates a faster onrush of memories because less has been given, more has been left out (Berger, 1992, pp 192-193.)*

Photo elicitation is a method for obtaining valuable information from users in participatory design. It involves asking users to take pictures of places, situations, or objects that they like, dislike, are familiar with, or experience as important. They are then asked to answer questions or complete exercises relating to these images. The nature of these questions and exercises depends on the project at hand, and their results constitute the expected outcome of the photo-elicitation process. While several kinds of photo-elicitation are possible, this article deals with the general expectations of the method and understanding how photography can be used to catch a moment. What does it mean to capture a moment? How is it possible? And how can it be used afterwards?

## THE ROLE OF PHOTOGRAPHY IN PARTICIPATORY DESIGN

Design is the conscious decision-making process by which information (an idea) is transformed into something tangible (such as a product) or intangible (such as a service). Design is about doing things consciously and comparing alternatives to select the best possible solution. It is also about exploration and experimentation, both of which are considered central to innovation. Research on design often focuses on outcomes, but also on various aspects of the design process including problem framing, exploration and experimentation, prototypes, and final products. It also includes the interactions within the design team (Eckert et al, 20015), and between the designers and users (Beresford, 2013).

When photo elicitation is used in participatory design, the participants use the camera to either elucidate various parts of a space (such as a building, workplace, or living area) or situations with a specified purpose, which is frequently defined by the researcher. The moment when a participant takes a photograph could be defined as an event: the participant searches for something that fits their ideas, and takes a photograph upon finding something suitable. In addition, the motif itself could depict an event. So, in some situations we

are dealing with two levels of events: the situation when the photograph is taken, and the motif showing an event. When the picture(s) are discussed later, the participant's intention at the moment of taking the photograph is recapitulated, and by that the memory is involved. Words are used to recall the situation, and the occasion is transformed into a narration that will be understood as an event. This narration will affect what we perceive in the photograph and how we perceive it. That in turn will influence the memory of the moment when the picture was taken, and the user's aim when taking it. The photography also provides an opportunity to reflect on a specific episode after the fact. Since, photography has nearly two hundred years of history, that has created a tradition and convention for portraying people, objects and events. This also influences the interpretation of the photographs and how they mediate events when they are used in design.

#### TO CAPTURE A MOMENT OR AN OBJECT IN A PHOTOGRAPH

According to Susan Sontag (1973) anything that is photographed becomes part of an information system that is incorporated into schemata for classification and storage. As noted by Nicolas Mirzoeff, "visual culture does not depend on pictures themselves but the modern tendency to picture or visualize existence" (Mirzoeff, 2006, p.5). The time required to take a photograph is around 1/125 second, depending on the lighting and other factors. In the moment when the button is pressed, we normally focus on something specific such as an object, person, or environment. The digital camera allows us to immediately check the quality of the picture. If the picture's target looks good, we continue with our original activity. However, when the quality of the picture is valued, it is mainly done by looking at the photograph through a grid of previous experience. We understand and interpret the picture through pre-existing visual culture, and specifically that of photography (Eriksson, 2017). Additionally, in that moment we rarely recognize details that are outside our immediate area of interest. Later when we look at the picture in more detail, we might recognize parts outside the main focus. Although the aim is to capture a moment, a photograph may contain additional important information that we did not register in real life but is obvious when we analyze the picture. Pictures can elucidate relations, situations, and details that are not apparent in a specific situation or moment; we are often blinded by our mission.

I was focusing on the motorcycles when I took the above photograph from Taipei in Taiwan because so many of them had pulled up at the same time. In the moment when the photograph was taken, I did not register all the motorbikes parked on the other side of the street, that there were 8 seconds left until the red light would turn green, or the man loading goods onto a truck fleet in the lower right corner of the photograph.

#### A MOMENT OF DEATH AND THE ABILITY TO MAKE PICTURES COME TO LIFE

Barthes wrote in 1980, "What the Photograph reproduces to infinity has occurred only once: the Photograph mechanically repeats what could never be repeated existentially." However, a photograph can also be seen as a preserved moment that we can relive repeatedly. By looking at and discussing the photograph's content, it is brought to life by the observer (Belting, 2014). Edwards (2014) has argued that in many cases photographs are not "evidence" in any dynamic sense of information provision, but rather tools of reassurance, while Sontag (1973) claims that photography provides us with proof but that we may discredit a photograph upon seeing it, thereby accusing the camera of false or selective testimony. However, a photograph is not merely a frozen moment, it is an object unto itself, something that we keep and take care of, a souvenir of life. The picture may show a person or an event, and could be interpreted as a process. A perceptual and cognitive process can be segmented into a meaningful event (Kurby and Zacks, 2008). In accordance with the semantic meaning of words, the grammar of a narrative must be coherent so that the audience can fully understand the story's significance. Images support a story, but they also require some explanation so the audience can use them to understand the overall message, so a narration can also support a picture. We must grasp the content of a picture before we can interpret what we see and perceive. It is often necessary to consider the reading situation when assessing someone's interpretation of a photograph taken in a photo elicitation project. The photograph from Taipei could support many different conversations about visual culture, traffic, building standards, and signs. Therefore, to simulate a specific conversation, the picture must be described. We must put words to the image in front of us, examine it carefully to identify relevant details, decode its individual parts, and then interpret them to create a meaningful whole.



Figure 1: A photograph from Taipei.

## ISOMORPHIC PERSPECTIVE AND ARBITRARY REPRESENTATION

Photography is often considered to be isomorphic because it is possible to map the depicted object, person or environment to the actual object, person or location. It can also be arbitrary if the motif is abstract and not readily mapped to a specific object, person or environment. However, an isomorphic photograph could also symbolize a feeling or condition that is not obvious to the observer. It is therefore interesting to problematize what a picture shows and its intention in relation to what can be intuitively understood and what needs additional information. Postmodern theories suggest that there is nothing outside the picture itself (Barthes, 1981; Derrida, 1967), but if we approach the issue from a semiotic perspective, we will seek to understand what is communicated (Mitchell, 2005; Rose, 2011; Tversky, 2001).

Communication is a process involving sender(s) and recipient(s), both of whom can affect the message (Eriksson & Göthlund, 2012). However, pictures are inherently arbitrary since they do not express a statement, provide any guidance as to how their individual elements should be interpreted, or explain how to understand the relationships between those elements to obtain a holistic understanding of the content. The photograph from Taipei could be interpreted in many ways. For instance, one could focus on the motorbikes; a viewer with expert knowledge of motorbikes could discuss the brands used by the riders. Conversely, people interested in visual cultures would probably pay attention to the environment and how it is expressed in terms of the built environment, signs and language, and other symbols. All of these elements are present in this one photograph, and how we talk about the photograph will affect the outcome of the photo elicitation process (Eriksson, 2016).

## THE ACT OF INTERPRETATION

Photographs of objects and events that we are looking at and discussing give the portrayed objects and events a new meaning. In 2003, the photographer Pedro Meyer argued that "It is time to conclude, that a photograph cannot be a witness to itself. We require additional cross references to confirm if what we are being told by way of captions, is in fact correct. Photography is a wonderful tool for expressing our ideas /.../ In addition, the reader gives his own interpretation according to his own reasons and these do not necessarily have to do the facts".

Even if a photograph is taken in photo elicitation context for a specific purpose, it must be regarded as an artefact associated with visual culture and the tradition of amateur photography, especially snapshot photography. In an interview situation discussing a photograph taken by a participant in a photo elicitation project, it is necessary to acknowledge both the cognitive aspects of how we perceive and process visual information and the cultural aspects of visual

communication. Interpretation of photography involves multiple modalities (Arnheim, 1969), with spatial being understanding just as important as the ability to interpret various details in the picture (Ware 2012; Arnheim, 1969). In addition, the user must possess visual literacy to fully grasp the content (Elkins, 2008). Literacy includes not only the ability to identify different details, but also the ability to decode and interpret the data as a meaningful whole. Some of this ability can be explained as a cognitive process, but experience and cultural context also play crucial roles. Therefore, aspects such as context and situation must be considered when discussing the interpretation of photographs taken during photo elicitation exercises.

Drawing on the assistance of Julian Hochberg and John M Kennedy, Colin Ware argues (Ware, 2012), that images can be interpreted intuitively, and that this is a gift we are born with. However, this argument overlooks the difference between recognizing or identifying an object in an image and grasping the image's meaning. Interpretation of photographs taken by participants in a participatory design process are often analyzed using a protocol prepared beforehand. When the researcher and participant look at a picture and discuss its motive and aim, the process is in many ways similar to that used when looking at a photograph taken by anyone else. This is because any photograph will almost always include additional details that the photographer did not aim to capture and did not recognize at the moment of pushing the button. When looking at the picture after the fact, one must describe it, and it is important that the participant clearly state what they were trying to focus on and what parts of the image are irrelevant to the task at hand.

However, our perceptions of objects and/or images, as well as the details of an image, depend on what surrounds the object or area (Arnheim, 1969). Some scholars argue that we cannot speak (Wittgenstein, 1921) if we cannot think, and that this requires a language (words), while others contend that there is a way of thinking that does not rely on spoken language. Gärdenfors (2001) theorized that our thoughts consist of spatially organized forms/figures. According to this theory, the spatial organization of thoughts is a way of remembering things. However, visual thinking does not occur in isolation: it includes the interactions between impressions we gain from our thoughts and the surrounding environment. What we see and perceive is consistent with our expectations, which in turn affect our thinking. Visual thinking is a part of visual culture.

## DESCRIPTION AND THE MEANING OF WORDS

When photography is used in conversations between an involved user and a researcher, we observe a shift in modality from visuals to words. Language is *componential*: it can be broken down into parts that can be manipulated separately, whereas photographs are holistic and impossible to break down (Zacks, in print). But when we talk about a photograph, we deconstruct

the motif and construct a new meaning for its content. A photograph of a specific moment is isomorphic, and we can recognize details and the picture as whole.

Consequently, we can spatially reorganize the moment captured in the picture, not in the picture itself but in the narration of the event. However, when we start to talk about the content, it becomes componential. The choice of words and the way we construct the sentences creates a story of an event captured in the photograph that will profoundly affect our understanding of the content. A follow up question from a researcher in a participatory design process using photo elicitation may therefore focus on the narration rather than the photograph per se. That could lead the discussion to places that are very distant from what is captured in the picture, but are kept in the memory and thereby brought into life by the picture. It is not merely that the beholder puts life into the picture; the picture itself awakens memories.

Throughout history, people have related ambivalently to vision, and this is reflected in our relationships with visual representations. Many theorists have devoted themselves to theories of vision based on different perspectives (Jay, 1992). There is a complex relationship between theories of vision and cultural taboos that affect the production of images, how they are designed, and how to interpret visual representations, both literally and in a transmitted sense. This relates to the validity of images such as photographs and their evidentiary value, that is, the value the picture is assigned as evidence. Other doubts relating to these concerns relate to the perception of photographs as evidence in the form of represented "eyewitness" accounts. At the same time, there is a discussion about the scope for manipulating photographs. This perception of photography, and images in general, as unreliable goes back to Plato. He argued that pictures are unreliable and claimed that instead of using images, we should rely on our "inner eyes", that is, our insight (Eriksson, 1998).

When we experience something new or face new phenomena, we usually perceive the new aspects in terms of what we know about similar objects or processes. This is because we tend to categorize things in our surroundings as a way to orient ourselves. For instance, we may describe objects as being reddish or blueish, or shapes as being roundish or angular. Similarly, we may describe previously unknown objects as being "engine-like" or "chair-like", and so on. These analogies are based on things we have encountered in real life, read about, or seen in some form of visual representation. They are thus based on both mediated information and direct experience. Our memories interact constantly with new impressions, which in turn generate new images and knowledge. As humans, everything we do is connected to our nature as physical beings. We understand our world based on our bodies, but we can also share abstract phenomena through non-physical intermediaries (Merleau-Ponty, 1949). These include stories that can provide strong experiences.

#### THE RELATIONSHIP BETWEEN RECALLING A SITUATION AND THE ACTUAL SITUATION

When we recall a situation or event, memory plays a crucial role, and when we formulate a memory, we use words. Memories are often influenced by visuals or visual scenes, but these cannot be communicated directly and are therefore described verbally. The words used when discussing a picture in a photo-elicitation project will affect the understanding of the moment captured by the participant, including both the actual moment captured in the picture and the researcher's understanding and analysis of the picture in relation to the interview.

When working with a group of students on a design task, I as a teacher can follow their process by listening to their conversation and taking photographs that illustrate the process (Figure 2). Every moment in the process can be understood as an event, but the whole exercise could also be defined as an event that lasts for multiple hours. This event can be segmented into situations/moments that are crucial for the process as such. If the students themselves or an outsider (a teacher or researcher) captures the processes by taking pictures, every moment that is captured will never occur again. But, as Sontag (1973) argued, photography gives us proof – in this case, proof that the process occurred. Consequently, we can regard the photographs as souvenirs of specific moments.

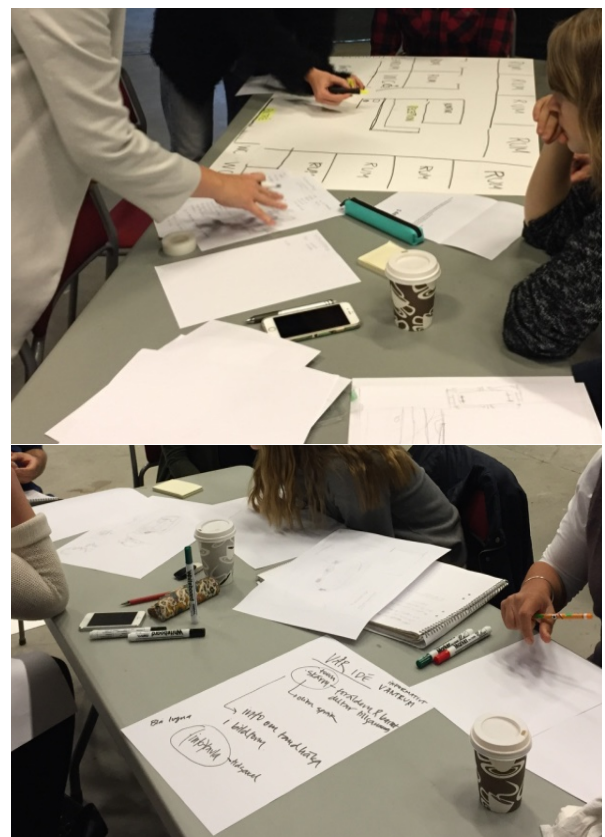


Figure 2: Photograph showing a design exercise

A situation can be divided into moments but can also be understood as an event. During an event, several activities take place. The perception and experience of a situation and its various activities while the situation is ongoing often differ from those in the memory: we experience situations, but upon reflection, we may regard them as elements of an event. In design exercises, we solve problems step by step using the working memory (Baddeley, 2003). When we later reflect on the problem-solving situation, it is often transformed into an event based on a narration drawn from our experience of the situation. This is stored in the episodic memory, and is related to the semantic memory where the episodes are given a specific meaning depending on how we name the moment that is included in the situation and how it is transformed into an event.

If we discuss the actual moment captured in a photograph of a design exercise, we make it come to life based on our memories of what happened. The pictures show some sketches; the purpose of those sketches and the discussions about them are not present in the picture. Science and art have long acknowledged that experience depends on the involvement of the experiencer (Daston & Galison, 2007). In art history, this concept is apparent in Ernest Gombrich's "beholder's share", while in science it can be related to Herman von Helmholtz's concept of perception as inference. The shared idea is that our perceptual experience (of the world, of ourselves, or of a visual representation such as a photograph) depends on the active interpretation of sensory input. Consequently, the viewer must be actively involved to experience and interpret a photograph.

#### THE MENTAL IMAGE AND THE EXTERNAL PHOTOGRAPHY

Mental images can be based on stories and an individual's own conclusions about how things look. We can often recognize an object, place or building from a description, and sometimes we are disappointed because our imagination differs from the reality. Although the processes involved when we look at an image are the same as those involved in taking part in a real life visual image, the view is different from the representation. The vision is not a frozen moment: while seeing something in real life, one generally has access to sound, smell and motion. The representation consists of a view of reality, from a fixed position, without other sensory input. The imagination is therefore drawn on when we look at pictures; we may talk about the woman, the fruit, the landscape or the sea shown in the picture rather than the images of these objects. This is because we have the ability to "look into" the image and consider the subject as something self-existent while accepting that it is a representation. The complex

relationship between accepting images as representations while considering them as independent artifacts means that we do not always pay attention to the fact that visual representations form part of a long image history, in which historical imagery permeates the performances of artists, photographers, illustrators, and also viewers. When a participant in a photo elicitation takes pictures, the photographs partly reflect her/his experiences or interests that are presented, but they also belong to a tradition within photography. Such reasoning often ends in discussions regarding the credibility of photography. Ambivalent relationships with photographs are not uncommon, especially in terms of their reliability. What is meant by reliability is inherently complicated, to the extent that the concept has different meanings in different contexts.

Photography may well function as a record of actions in a design process, documentation of desired situations or the state-of-the art, in a similar fashion to a written document. This depends on the usage of the pictures, i.e. their interpretation.

#### ATTENDED EXPERIENCE AND RECAPTURE OF EXPERIENCE

Achieving full mental attendance in a given situation is challenging, and when we succeed, we do not reflect on the situation as such but on the task that is performed. Once we step back and reflect on the whole situation, we are no longer *in* the situation, and our state of attendance changes. We start to define the moments involved in the situation using words, and the narration create an event. To understand and interpret a process, we often go backwards and divide the event into situations and moments using various analytical methods. This paper has focused on methods for interpreting visuals because its aim was to regard photo elicitation as a visual practice, and the necessity to treat photographs taken in this context as pictures that belong to a visual tradition.

The original aim of photography was to document. Even in the early days, when pioneers tried to formulate the art of photography, they used it to experiment and to grasp the environment in a specific moment or to document objects or phenomena such as motion (Daston & Galison, 2007).

These documentations belonged to a tradition of mapping and categorizing objects and species. From a workshop that took place some years ago I have kept a photograph showing pieces of fabrics pinned on several scales. The picture's low quality and the ad hoc presentation notwithstanding, it is clear that the photograph belongs to the tradition of mapping and categorizing qualities that is also seen in archives and museums, even though the scales were not created for this purpose (Figure 3).





Figure 3: Sensory quality of various fabrics.

The photograph was taken during a workshop in which a group of design researchers explored various materials and their effects on our perception to better understand how tactile experience affects design processes. Each participant randomly selected some items from a box containing pieces of fabric, and arranged them in scales running from rough to light, soft to rigid, ecological to synthetic, and soft to rough. The photograph shows these scales but says nothing about what was actually happening in the situation. However, from memory, I can state which part of the process is depicted. The names of the categories (such as ecological and synthetic) indicate that the fabric samples are mapped to the materials from which they are made, and the categorization is based on tactile experience. Our approach to mapping and displaying the materials, and to documenting the process photographically, were all unconsciously influenced by history, both scientific and visual. We adopted an approach similar to that we are accustomed to seeing in displays in natural history museums, with individual objects mapped into categories. However, it was the result rather than the process that was captured in the photograph. This was partly because I was participating in the workshop and was thus engaged in the activity, and partly a consequence of my interest in categorizing fabrics based on their sensory qualities. Seen after the fact, the photograph is something of a “dead moment” because nothing happens in the picture. While the photograph externalizes and materializes my memories of the workshop, it is the narration of the event that brings the silent picture to life.

## CONCLUSION

I initially asked what it means to capture a moment and if it is possible to do so. The paper discusses various interpretations of photographs, how images are translated into words, and the effects of the choice of words used for this purpose. A captured moment is easily transformed into an event when recalled based on a photograph. The processes by which moments and activities are parsed as events can vary depending on

what parts are captured and how they are described. How we remember and talk about the pictures afterwards affect our understanding of the situation. When using photo elicitation, it is difficult to recall processes when moments and activities are parsed as events because we capture individual parts of an event and then evoke its effect on the whole.

When one presses the button of a camera, a photograph is taken. In that split second, a moment is cached. This moment is frequently understood as a situation, or event, part of which is captured in the picture. The picture may also include details that were not intentionally captured but are there nevertheless, even if not originally observed by the photographer. When the picture is interpreted afterwards, in a photo elicitation project, the focus is typically on the photographer’s aim and the reason for selecting the image’s motif. The researcher asks questions, and the participant responds and explains. This is a verbal process, and a critical question is whether the participant and researcher focus on the photograph’s content or use it as a tool to evoke memory. Regardless of the approach chosen, words are used, so there is a change of modality, from photography to words. Photography is inherently isomorphic and holistic, whereas words are componential. Therefore, when we talk about a photograph, we can focus on details and create a narration from them. This narration could be retold in various ways, temporally and sequentially. The constructed narration of a situation or moment can then be transformed into an event that can be divided into segments. Therefore, the way in which a photograph comes to life during a photo elicitation exercise does not depend only on what is in the photo or the intentions of the participant; it is also a question of how it is subsequently interpreted.

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