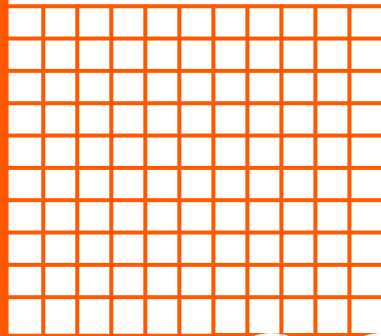
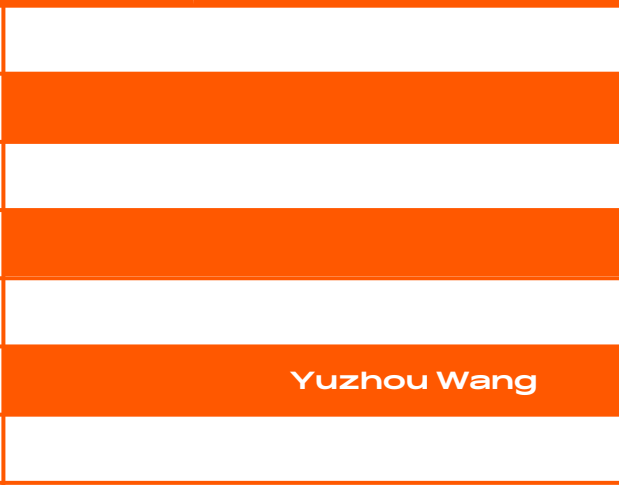
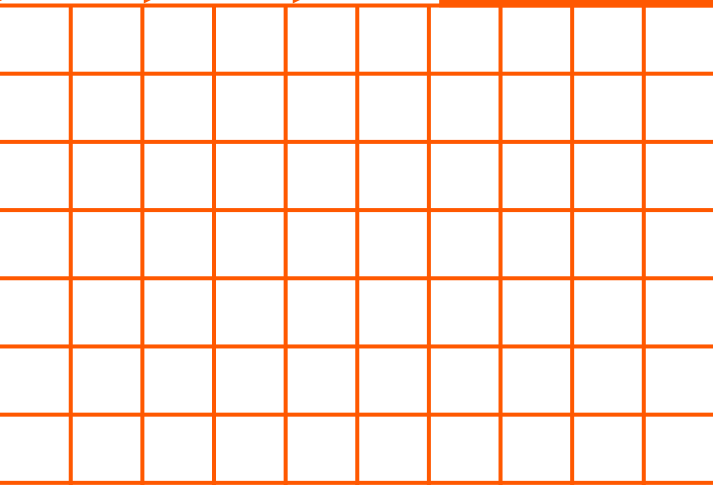
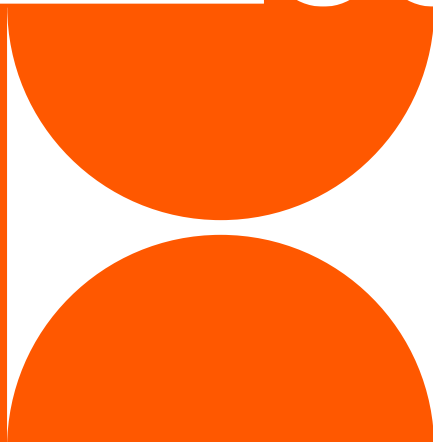
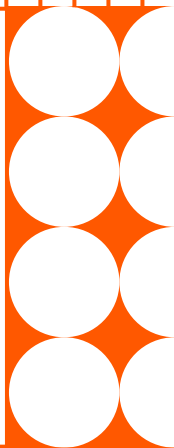


FROM EYES TO NOTES



**Designing and
Facilitating
Qualitative Field
Interviews with
Creative Visual
Tools**



Yuzhou Wang

FROM EYES TO NOTES

Designing and Facilitating
Qualitative Field Interviews with
Creative Visual Tools

Table of contents

Acknowledgements	7		
Abstract	9		
Chapter 1: Introduction			
1.1 Background	11		
1.2 Thesis statement and research question	12		
1.3 Contents and Objectives	14		
Chapter 2: Theoretical Background			
2.1 A brief history of using visual methods in qualitative research	17		
2.2 Representing and analysing data with visual methods	18		
2.3 Visual methods and data collection in field research	20		
2.4 Visual tools and Human-Centred Design	22		
What is Human-Centred Design?	23		
Enabling visual tools in the HCD process	25		
2.5 Limitations and opportunities of current practice	26		
Chapter 3: Framework			
3.1 A typology of visual tools used in qualitative research	30		
3.2 An adapted framework	32		
Before field research	34		
During field research	36		
		After field research	38
		Chapter 4: Case study	
		4.1 Creative visual tools	43
		4.2 Creation of the visual tools	45
		Define the visual tools	45
		Choose an appropriate visual style	48
		Build prototypes	53
		Test and iterate	55
		4.3 Deployment of the visual tools in field research	60
		The use of the visual tools in different interviews	60
		The usage scenario in focus group discussions	62
		4.4 Evaluation of the creative visual tools	66
		Chapter 5: Conclusion	
		5.1 Contributions	69
		5.2 Limitations	70
		5.3 Further research	71
		References	72

Acknowledgements

This work would not have been possible without the support of all the mentors I have had at Aalto University. I would like to express my deepest gratitude to my thesis supervisor **Professor Masood Masoodian** for his guidance and kind help throughout the process. I would also like to thank **Zach Dodson, Saku Heinänen, Rupesh Vyas** and **Arja Karhumaa** for sharing their expertise in the Visual Communication Design programme. In addition, I would like to thank **Matthew Billington** for his guidance on academic writing.

Furthermore, I am so grateful to have had the opportunity to implement my ideas with the help of my colleagues from Scope Impact. I would like to thank **Priyam Sharda** for being my thesis advisor and offering useful advices. My appreciation also goes to **Mick Scheinin** for all the inspiring discussions I have had with him. In addition, a special thanks goes to **Dr. Jennifer Martin** and **Petra Sillanpää** for developing the creative visual tools together with me and using the visual tools in their field research. Thanks to all my Scope team members who contributed to this project.

And the last but not least, I would like to thank my parents **王定望, 周凌** and all the friends who have supported me throughout the years I spent in Finland. I am grateful to have had their encouraging words during my time abroad.

Abstract

Author: Yuzhou Wang

Title of thesis: From Eyes to Notes: *Designing and facilitating qualitative field interviews with creative visual tools*

Thesis supervisor: Masood Masoodian

Thesis advisor: Priyam Sharda

Department: Department of Media

Degree programme: Master's Programme in Visual Communication Design

Year: 2019

Number of pages: 78

Language: English

A number of visual tools have been developed for qualitative field research. Researchers aim to use these tools for various purposes in three stages of field research: data collection, data analysis, and data representation. However, field researchers often find it difficult to determine which existing visual tools to use, or how to create new tools for their own specific projects. Previously, many visual tools have been produced by researchers on their own, but these days more and more researchers work with visual communication designers to co-create visual tools for their projects. This thesis examines the use of creative visual tools in qualitative field research by outlining a theoretical framework and reviewing an in-depth case study of one field research project in Bihar, India. Furthermore, this thesis provides a thorough interdisciplinary design approach which can guide visual communication designers in the creation of visual tools for field research projects.

Keywords: visual communication, visual tools, qualitative research, field research, visual methods, human-centred design

Chapter 1

INTRODUCTION

1.1 Background

The discipline of visual communication design has not been regarded as a significant player in the field of design research. Indeed, the notion of “*visual communication design*” (or graphic design¹) is generally linked excessively to the consumerism culture. As visual communication design became widely recognised in the thriving economy after the Second World War, this practice played a distinct role in promoting products and services, and shaping ways of consumption in modern society (Ambrose & Harris, 2008). However, visual communication design was not born to serve business growth, Meggs (2011) claims that the earliest history of visual communication can be traced back to the origins of human existence when early Africans and Europeans left paintings in caves, including the Lascaux caves in France and Altamira in Spain. In spite of being in the middle of capitalism and consumerism, at its most basic level, visual communication design is a process of using visual presentations to communicate ideas. Moreover, Walker (2017) points out that it is a planning and problem-solving discipline like all design practices.

The progress of visual communication design is always linked to the development of our society, and as Ambrose and Harris (2008) state it “reflects the attitudes of society at large”. Over the past 30 years, awareness of “*ethics*” and “*social responsibility*” has become a topic of discussion, with a general feeling that instead of serving business corporations, designers should apply their knowledge in bringing public good (Roberts, 2006). Following the idea that visual designers should be more responsible to our society, there has been an increasing number of visual communication designers who work in public sectors within interdisciplinary teams that develop projects to improve the lives of the underserved people. Their role is not limited to creating report layouts and data visualizations, in addition, they apply their expertise in qualitative

¹ A note on vocabulary: In this thesis, the term “visual communication design” is interchangeable with “graphic design”, correspondingly, visual communication designers may also refer to graphic designers, or visual designers. I prefer to use the phrase “visual communication design” because it is more inclusive of various mediums, including printed media, digital media, and all sorts of new media.

research to support data generation and data analysis, particularly in field research, where they create different visual tools to help design researchers and anthropologist facilitating field interviews.

1.2 Thesis statement & research question

The use of visual methods is gaining interest in the field of qualitative social research (Davison, McLean, & Warren, 2015). These approaches, including the use of illustrations, film, photography, video, and sculpture, can be applied for both collecting and representing data. Their use includes evoking comments from informants in interviews, producing visual records, observing ways of seeing and understanding, analysing visual and material culture and representing research findings (Jupp, 2006, p. 321).

The use of these methods appears in three domains during the research process: **data collection**, **data analysis**, and **data representation**. A range of visual methods has been developed and employed in field research, such as photo-elicitation, visual diary, self-documentation with cameras and other techniques incorporating multimedia. These visual material normally fall into two categories: images found and produced by researchers and images found and produced by research

participants. Due to time and resourcing restrictions, researchers usually use images found online, sometimes making collages out of these images to construct meanings. However, although we are now living in an “information age” (Manuel, 1996), where images are easily accessible on the internet, researchers often struggle to find ideal images for their specific research purposes. Therefore, it is beneficial for researchers to collaborate with visual communication designers to create specific visual tools for qualitative research, especially when using visuals in elicitation interviews.

In order to differentiate tools produced by researchers from tools co-created by visual communication designers and design researchers, this thesis refers to the latter as “creative visual tools”. Design researchers generally have a clear view of the research purpose and data intended to be collected from the field. By contrast, visual communication designers are trained to understand design briefs and to create original, imaginative and inspirational visual materials. By combining these two sets of knowledge, creative visual tool has the potential to facilitate interviews and improve the data collection process. This thesis examines the utilization of visual tools in design-related field research in order to gain insights into and knowledge of what constitutes the constructive use of creative visual tools. In so doing, the thesis aims to strengthen the currently weak connection between researchers and visual designers. For these reasons, the thesis attempts to answer the following research question: *Could the use of creative visual tools facilitate the data collection process in qualitative field interviews?*

1.3 Contents & Objectives

This thesis is divided into four further chapters. Each chapter offers a different perspective for exploring creative visual tools. Chapter 2 provides a brief history of how visual tools have been developed in qualitative field research, as well as an overview of studies on the current use of various visual methods in the qualitative research process. This chapter also introduces the human-centered design process and the place of visual tools within that process in order to focus specifically on the practice of visual tools in design-related field research. The latter part of this chapter explores the limitations of current use and the kind of roles visual communication designers could play in the process.

Chapter 3 introduces a typology on facilitating interviews in qualitative research with visual tools, as proposed by Glegg (2019). This preliminary typology categorises the utilisation of visual methods in qualitative interviews into five purposes. The typology is analysed in this chapter critically, and an adaptation of the typology is formed. The adapted typology is applied in later chapters to guide and evaluate the creation of visual tools.

In order to gain an in-depth understanding of creative visual tools, the author of this thesis and two other researchers produced creative tools for a design research project. Chapter 4, which introduces this set of creative visual tools, is divided into three sections. The first section examines the role of visual communication designers and design researchers in the process of creating visual tools. This section also reviews how visual communication designers make choices during the creation process. The second section documents the application of the creative visual tools in a field research project in India. The third section evaluates the tools is made based on the adapted typology and feedback gathered from research participants and researchers.

Finally, Chapter 5 summarises the findings and reviews what has been discovered. The limitations of the research and recommendations for future research are also discussed in this chapter.

This thesis offers a fresh perspective by a visual communication designer on creating visual tools for qualitative field research. In addition, it also discusses how the field of visual communication design can build bridges and share practices to establish an interdisciplinary collaboration with the design research world.

Chapter 2

THEORETICAL
BACKGROUND2.1 A brief history
of using visual
methods in
qualitative
research

The connection between visual methods and qualitative research is particularly interesting, owing to the characteristics of this type of research. Denzin and Lincoln (2011) remark that qualitative research is “a set of interpretive, material practices that make the world visible” (p. 3). In addition, qualitative research attempts to offer an in-depth and non-statistical understanding of the world by learning the histories and experiences of research subjects (Ritchie, Lewis, Nicholls, & Ormston, 2013). Thus, visual representations are ideally suited for qualitative inquiry because they can evoke memories, thereby enriching the data with these “emotional and aesthetic intangible [assets]” (Davison, McLean, & Warren, 2015).

Visual methods can be used in the three stages of qualitative research: data collection, data analysis, and data representation. For example, visual displays may be used to represent primary, basic, or initial data (Verdinelli & Scagnoli, 2013). Furthermore, they can manage and organise data as well as demonstrate relations between different pieces of relevant information. Visual representations can be used to reorder data to uncover its typical constituents and structure (Dey, 2003). Moreover, there is a general distinction between visualizations that help to analyse data and visualizations that help to present results to the audience. However, both applications are associated with data representation. Visual methods are also applied in data collection process during field research, when researchers conduct in-depth interviews and observe behaviours (Patton, 2005).

2.2 Representing & analysing data with visual methods

Early uses of photomechanical and photoelectric images in social research, such as photographs, video, and film, can be observed in various areas of study. For example, within the field of anthropology, anthropometric photography emerged in the 19th century (Gavan, Washburn & Lewis, 1952). At approximately the same time, experiments to capture states of mind were conducted in the field of psychology. Photography was not widely used until the middle of the 20th century in sociology, but the employment of photography to study and record social welfare traces back to the 1930s (Banks, 2018). Although today interest in visual methods seems to be growing in the field of anthropology, with visual anthropology regarded as an important sub-discipline in this field, many visual researchers still claim that their work is neither understood nor appreciated by their colleagues (Banks & Zeitlyn, 2015). They have to overcome a general textual bias and the assertion that social science is a “discipline of words” (Mead, 1995) in which there is no room for pictures, except as supporting illustrations (Mannay, 2015).

Apart from still photographs, film, and video, visual researchers also use other forms of visual representation in their projects, including illustrations, diagrams and maps. According to Banks (2018), while these forms of visual representation normally lose their details and delicate texture when the data they contain is aggregated, this nevertheless allows the researcher to identify significant trends or patterns. One excellent example of this visual method is presented by Edward Tufte (1997) in his book *Visual Explanations*. In the book, he reproduced a dot map of Dr John Snow (1855). On this map **Figure 1**, Snow plotted cholera deaths around cen-

tral London in September 1854. Small dots representing the numbers of deaths are positioned against streets; in addition, water pumps are marked by X marks. It is obvious from the map that most deaths caused by cholera occurred among people who lived near and drank from the water pump in Broad Street. Combined with Snow’s hypothesis that cholera might be a waterborne disease, this map seemed to indicate the wa-



Figure 1

ter pump in Broad Street was the source of infection. Tufte (2001) also argues that even though there are other ways of revealing this linkage by computation and analysis without this visual method, this graphical analysis is more efficient and descriptive than calculation.

A reproduction of Snow's map of the cholera outbreak in London in 1854 by Tufte (1997)

In addition, visual representations are utilised to present research findings and results, they can provide an overview of complex data sets by summarising data, and they can leverage perceptual capabilities (Grinstein & Wierse, 2002).

2.3 Visual methods and data collection in field research

The previous section reviewed the employment of visual methods to represent and analyse data. In this section, I will discuss how they can be used to collect data in qualitative field research. Many social anthropologists and design researchers have the need to conduct field research, or fieldwork. Field research is the process in which researchers leave their laboratories, offices, and libraries to collect data from living cultures, preferably in another culture or a different country (Burgess, 2002). The approaches and methods applied in field research vary across disciplines, and visual methods are usually used to understand complex interactions in a broader context. In many research disciplines, “ethnography” is the most common fieldwork methodological practice. It is a social research method, in which researchers immerse themselves in people’s daily lives for an extended period of time, observing their natural behaviours and asking questions to collect all available data from the field (Hammersley & Atkinson, 2007). Ethnographic field research tends to take a holistic approach and understand different aspect of peoples’ lives. It also attempts to understand

what people actually perform, instead of what they say they perform, or what others say they may perform (Banks, 2018). Long-term ethnographic fieldwork provides an opportunity for researchers to employ various methods for investigation, and sometimes visual methods can evoke more knowledge and experiences, which cannot be achieved by written or verbal interviews. Therefore, visual methods are generally more exploratory, which is in accordance with the inquiring nature of ethnographic research.

A variety of visual methods have been developed for field research, including visual documentation, photo-elicitation, and auto-photography. Before the invention of photography, social researchers produced abstract representations of society rather than exact renderings of particular social processes (Harper, 1988). Thereafter, with the support of photography and cinematography, researchers have been able to record social events with still photographs and moving pictures. The use of visual documentation can provide researchers with detailed and descriptive data.

Photo-elicitation was first mentioned by J. Collier and M. Collier (1986) where they used a “photo-interviewing” approach to study how immigrant families that moved to English industrial town adapted to living with an ethnically different community. This approach used photographs or other found images to build bridges between researchers and informants that can across cultural boundaries and make familiar subjects and environments unfamiliar. New comments and experiences can be elicited through interviewing with photographs, so it is likely to enlarge the potential range of data. Film- and video-elicitation are also used in some cases, but the usage is less than photo-elicitation because of the user controllability of the two media. Banks (2018) notes that when research subjects are viewing a set of photographs, they can control how much time they spend on watching the images, and when they are asked to watch a sequence of moving images, they are often passive and unable to intervene in the viewing process.

In the process of both visual documentation and photo-elicitation, images are typically produced by researchers. However, auto-photography gives the informants an opportunity to produce their own images. It usually involves a process, in which a researcher distributes cameras to research subjects

and asks them to take pictures that are relevant to the research topic, or even create visual diaries with photographs, drawings, and other found images. This method allows the researchers to change their ways of seeing and observe the world through their informants' eyes (Pink, 2004). This method also gained popularity due to the development of affordable disposable cameras, which allowed researchers to gather visual data easily with limited funds. Furthermore, today, the disseminated use of cameras on mobile phones enables researchers to apply this method with no additional expenses.

Diverse practices of visual methods have been acknowledged in present social research, and many researchers appreciate the value of visual methods (Mannay, 2015). Visual methods allow researchers to discover knowledge, ideas, and experiences that are not possible to be described in verbal or written forms. As Spencer (2011) argues, visual is “an immediate and authentic form, which verbal accounts are unable to fully encompass” (p. 32).

2.4 Visual tools and Human-Centred Design

Over the past decade, many innovative design firms and organisations (for example, IDEO.org² and Scope Impact³) started to engage in projects that aim at designing products and services for people living in vulnerable environments and underserved

² <https://www.ideo.org/>

³ <https://scopeimpact.fi/>

communities. These companies typically have a group of people from different fields: design, social science, creative, public policy, and communication. They bring this interdisciplinary team together and collaborate with outside experts; their in-house researchers also conduct field research together with local research partners. A variety of visual tools have been developed for each particular field research project, and the usage of these visual tools may involve different visual methods mentioned in previous paragraphs or mix with other participatory methods. Field researchers usually place these tools in a human-centred design process.

What is Human-Centred Design?

According to the International Organization for Standardization (ISO, 2019), **Human-Centred Design** (HCD) is an approach to developing interactive systems that “aims to make systems usable and useful by focusing on the users, their needs and requirements, and by applying human factors/ergonomics, and usability knowledge and techniques” (ISO 9241-210:2019). This approach puts people at the core of the problem-solving process, and it is about building empathy with the people who use the product or service. HCD process often consists of several phases, and it is a nonlinear process with lots of iterations. IDEO (2015) proposed a three-stage process: Inspiration, Ideation and Implementation. In the Inspiration Phase, designers and researchers conduct field research to learn and understand people they are designing for. In the Ideation Phase, designers and researchers provide ideas based on learnings from the field. They also identify design opportunities and build prototypes in this phase. The Implementation Phase is the final stage to apply design solutions to the real world.

Human-centred design approach is also adopted by Scope's project Core. Core (Scope, 2018a) offers a HCD process consisting of four stages **Figure 2**. This process provides a design framework for the project.

In the **Discover** phase, design researchers carry out a series of desk research and field research with the purpose of gaining new knowledge and different perspectives on the problems that exist in the community. After the fieldwork, the

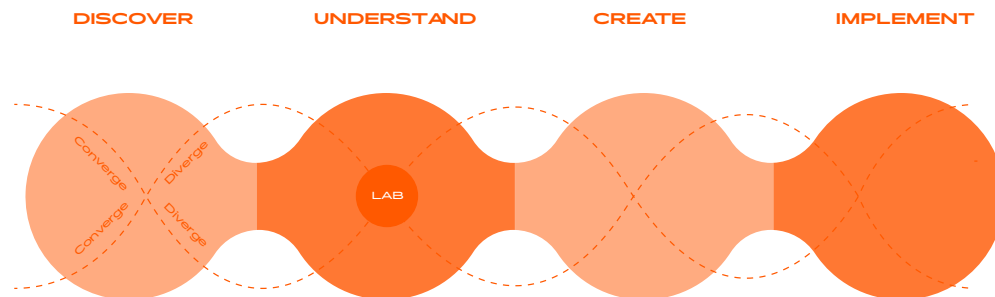


Figure 2

Core's Human-Centred Design process (Scope, 2018b)

research team obtains credible learnings and insights from the field.

In the **Understand** phase, the team makes sense of the research and validates discoveries from the first stage. They start to seek opportunities for improvements and generate early solution ideas.

When moving to the **Create** phase, designers, researchers, and creative strategists start to test ideas and concepts. This often requires iteration of several prototypes.

Finally, in the **Implement** phase, problem-solvers develop and test solutions with the users and partners and take these solutions to a larger scale. The whole process is not linear, and problem-solvers who practice this approach frequently shift gears through the stages, as they proceed from tangible observations to abstract thinking, and then back to feasible prototypes. The converging and diverging on ideas and solutions throughout the whole process characterizes the uniqueness of the HCD method.

Enabling visual tools in the HCD process

Visual tools can support groups of designers and researchers during different stages of the HCD process. For instance, visualisations of existing data and numbers help researchers to spot trends and patterns related to the issue. Large amounts of data and figures may be complex and hard to understand, but turning them into charts, tables, graphs, and diagrams, could assist researchers to find evidence of current problems. In addition, different sets of visual toolkits, such as business model canvas, storyboards, and journey maps have been developed for design workshops when the team gathers together to synthesis research findings and prototype concepts. Above all, researchers use visual tools in fieldwork to gather valid data from the people they are designing for.

There is, however, no adequate investigation of the creation and usage of these creative visual tools even though different forms of tools appear in various projects. An example by IDEO (2011) demonstrates the utilization of visual tools in the process of self-documentation **Figure 3**. As discussed in the previous section, an effective way to gather authentic and accurate data from the research participants is to give them

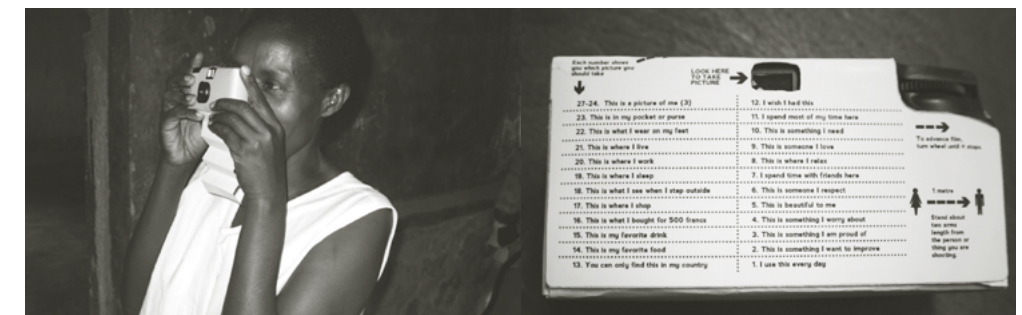


Figure 3

cameras for self-documentation. However, people from low-resourced communities usually have limited access to photographic equipment, and they are not familiar with how to use a camera in many cases. Thus, it is crucial to provide them with detailed instructions not only on how to use a camera but also how to complete the documentation exercise. The image (IDEO, 2011, p. 51) shows a woman using a disposable

A research participants using a camera with the designed visual instruction for self-documentation (IDEO, 2011)

the backside of the camera is covered by a paper with a cut-out of the viewfinder. This piece of paper serves as a visual tool to guide the participants to finish self-documentation; it provides visual cues of where to look at, and how to take a picture. There is also a list of objects that needs to be documented for the research purpose, and participants can follow the order easily while shooting. This designed visual manual hides unnecessary buttons on the camera, and focuses only on guiding the participants to record their activities for the research project. By employing this method, participants are more likely to accomplish the self-documentation activity that will produce valid information for the research (IDEO, 2011).

2.5 Limitations & opportunities of current practice

As mentioned in previous sections, researchers have already applied different visual methods in their fieldwork. Although a number of firms such as IDEO and Scope have kept creating their own visual tools for individual projects, most of the visual tools are not visible and accessible enough to researchers from other fields such as social sciences. As a consequence, many social science researchers still produce visual materials by themselves often seeking images from existing

visual sources, including the internet, printed media, advertisements, film, and daily artefacts. Mannay (2015) claims that the use of those found material make researchers “image and narrative collectors”, who then make use of these material with their conceptual interpretations. However, found images generally have “active” meanings that are textured and accustomed over and over again by disciplines of art and history. Therefore, researchers are in a passive position when applying found images to their research projects.

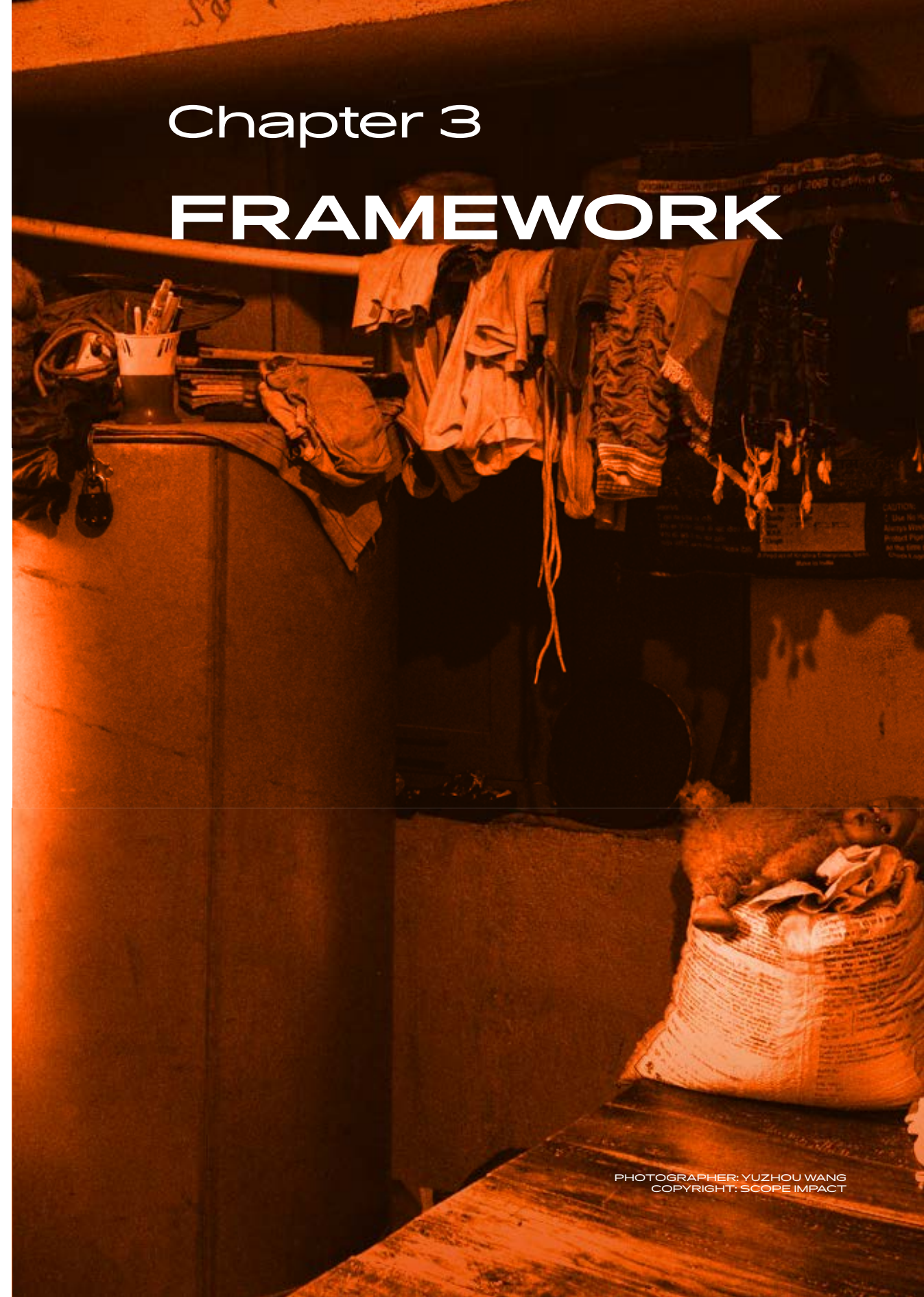
Another challenge researchers face is the permission to use found materials and associated copyright issues. While some open-sourced online material banks may equip researchers with some images for research purpose, it remains problematic for researchers to find certain images for different research projects. This dilemma also occurs when researchers try to find visuals for sensitive and complicated topics. For instance, showing photographs of parturition and breastfeeding to the research participants may be considered inappropriate. Similarly, for example, in some cultural context, displaying visuals of condoms and other contraceptive methods is regarded disrespectful, and therefore it is prohibited. In some cases, researchers struggle to find images for complex and unfamiliar issues. A study in childbearing traditions of India is given here as an illustration. For example, in some rural areas in India, umbilical cord and placenta are considered polluted, and only the traditional birth attendant, grandmother and mother-in-law can make body contact with the mother and baby. In this case, when the umbilical cord falls off, “a purifying social and religious ceremony [is] performed” (Wells & Dietsch, 2014). It is obvious that in this example there is no chance of researchers to finding suitable visual representations from the internet or printed material.

New visual approaches to conduct field research arise, and there are certainly opportunities for both researchers and visual communications designers to work together. As Pink (2011) notes, since visual images play a ubiquitous role in our daily life, it is beneficial to use visual tools as new ways of doing research. Currently, visual communication designers are rarely involved in qualitative social research projects. The reasons may come from both sides: the majority of visual communication designers dedicate their time and strengths working in commercial companies such as advertising agen-

cies and publishing houses; while social science researchers usually find it hard to make connections with visual designers due to time and resource limitations. Yet, there are opportunities to overcome these barriers and build new routes to social science research with the help of visual communication designers.

Chapter 3

FRAMEWORK



PHOTOGRAPHER: YUZHOU WANG
COPYRIGHT: SCOPE IMPACT

3.1 A typology of visual tools used in qualitative research

A plethora of visual tools have been developed and employed in qualitative research. Consequently, it is challenging for researchers to determine which visual tools to use in their projects. Moreover, recognising all existing visual tools and methods can be overwhelming. Therefore, typologies can help researchers navigate through the whole process. Glegg (2019, p. 302) proposes a typology that arranges visual tools into five categories according to their purpose: to “(a) **enable communication**, (b) **represent the data**, (c) **facilitate the relationship**, (d) **enhance data quality and validity**, and (e) **effect change**”. Detailed explanations of the various intentions when applying visual tools are displayed in **Figure 5**. Glegg’s typology illustrates the wide range of visual methods employed both in the past and at present. Glegg also suggests that by applying this typology, researchers can reflect on their motives for using visual tools and assess what tools to utilise in their projects. To make use of this typology, researchers should determine the main purpose or purposes of using these visual tools according to the five categories. This can be supplemented by referring to methods mentioned in literature reviews and any other sources available. Before making final decisions, researchers should consider the feasibility of the visual tools, which means that the implementation should be technically feasible and economically viable. Moreover, researchers should make ethical choices to minimise potential risks of the tools for research participants.

Glegg’s typology presents extensive examples of how visual tools function in each proposed category, and it is undoubtedly valuable to study how these categories complement each

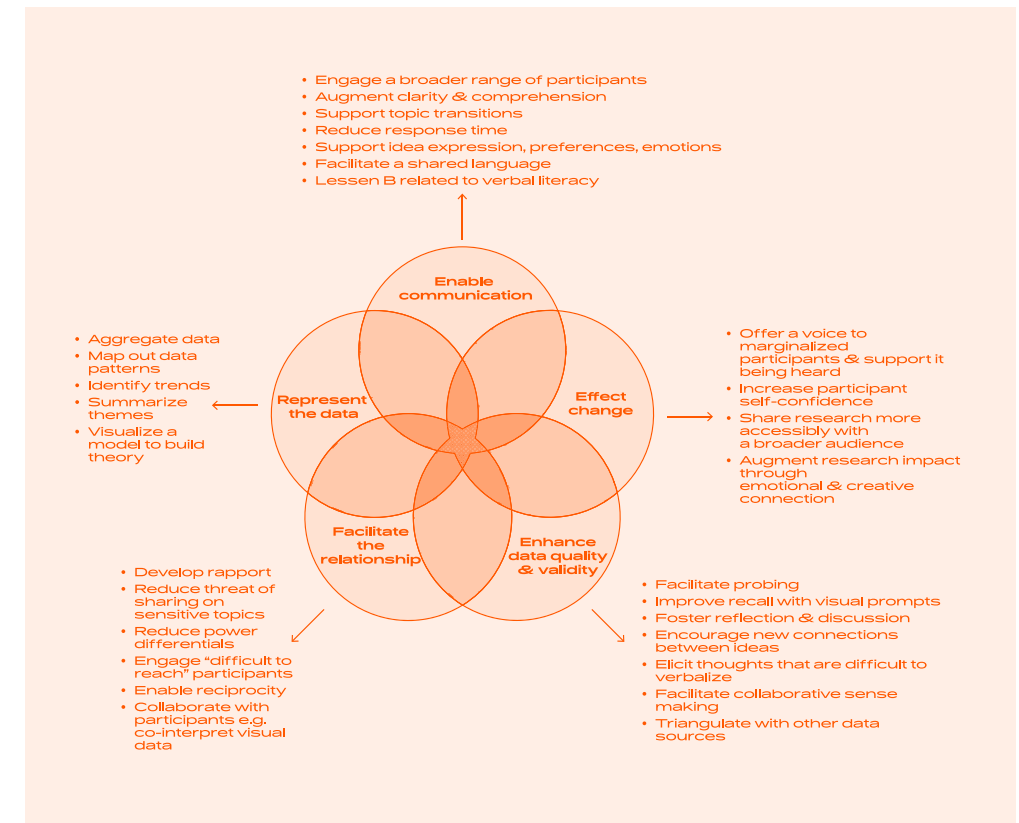


Figure 5

other. However, this typology emphasises the aims of implementing visual tools in qualitative research in a broad view rather than examining them within the possible timeframe of a field research project. In addition, some overlapping functions exist, especially between the categories of “Facilitate the relationship” and “Enable communication”. For instance, while the function “develop rapport” is included within the former category, researchers may also use it to enhance their communication with participants. Furthermore, in the category “Effect change”, when presenting research results to a broader audience, visualisations may also be required to “represent the data”. Moreover, Glegg’s suggestion for applying the typology relies solely on the researcher’s perspective, while ignoring the fact that researchers may also work with visual designers or even work within an interdisciplinary team.

In response to these issues the Human-Centred Design process discussed in the previous chapter, this thesis utilises an adapted framework based on Glegg’s typology.

Glegg’s proposed typology of the purposes of visualization, redrawn with permission from the visual representation by Glegg (2019).

3.2 An adapted framework

A typical field research trip in the Discover phase of a project consists of three stages. Before the field research, researchers collect data from literature and databases and build a foundation of knowledge upon existing data and evidence. At this stage, they also seek for information gaps that require further investigation. Once they have developed all the tools needed for the field trip, they head to communities with a prepared research plan. During field research, researchers conduct a series of interviews and other research activities in order to gather the as much data from the communities as possible. This type of first-hand information can augment existing knowledge and help researchers to understand the research problem from different perspectives. After field research, the research team synthesises and analyses data in order to construct a new body of knowledge and create design solutions. In addition, they may publish and present the research findings in a creative way.

Thus, the aims of applying visual tools can be classified under three groups according to different stages of field research. **Figure 6** shows the adapted framework of the new classification. By employing various visual tools in the three stages of field research, researchers aspire to (1) **support secondary research**, (2) **formulate research outline** (3) **facilitate communication**, (4) **engage participants**, (5) **elicit comments and foster ideas**, and (6) **construct knowledge and build impact**.



An adapted framework of different aims of using visual tools in field research

Figure 6

Before field research

At this stage, researchers may employ visual tools for the purpose of supporting secondary research and formulating research outline. This usage may involve data representation and data analysis. As discussed in the previous chapter, visualizations such as charts, tables, and diagrams allow researchers to identify trends and recognise patterns (Banks, 2018). These data visualisations provide researchers with chances to analyse data graphically. Furthermore, visual tools may be used to formulate research outlines, for instance, using the Gantt chart to plan and coordinate projects. The Gantt chart is first introduced by Henry Gantt (1903, p.1322), where he used bar charts to plan tasks on a timeframe graphically. **Figure 7** displays a fictional Gantt chart in the current usage of pro-

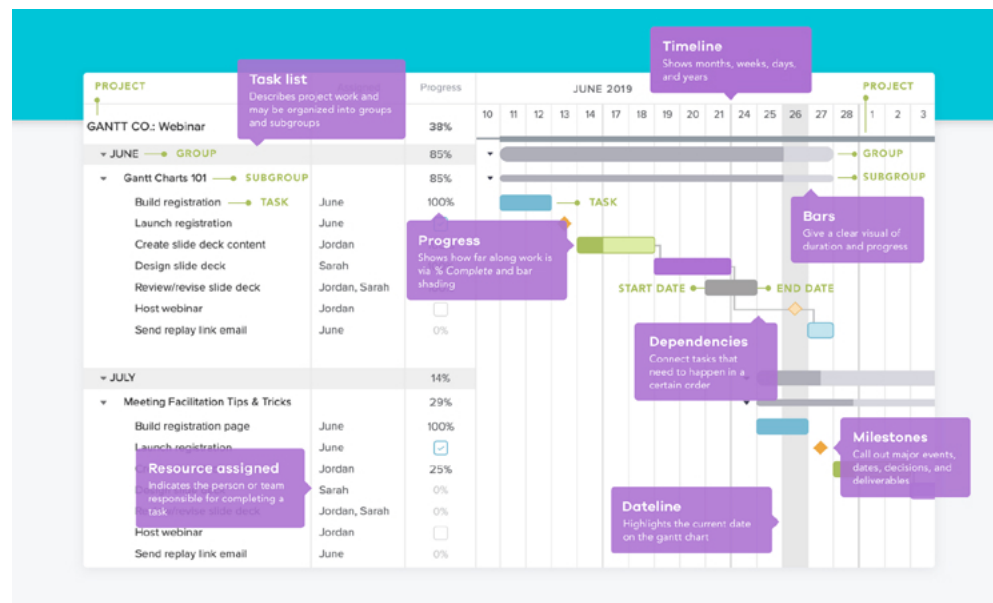


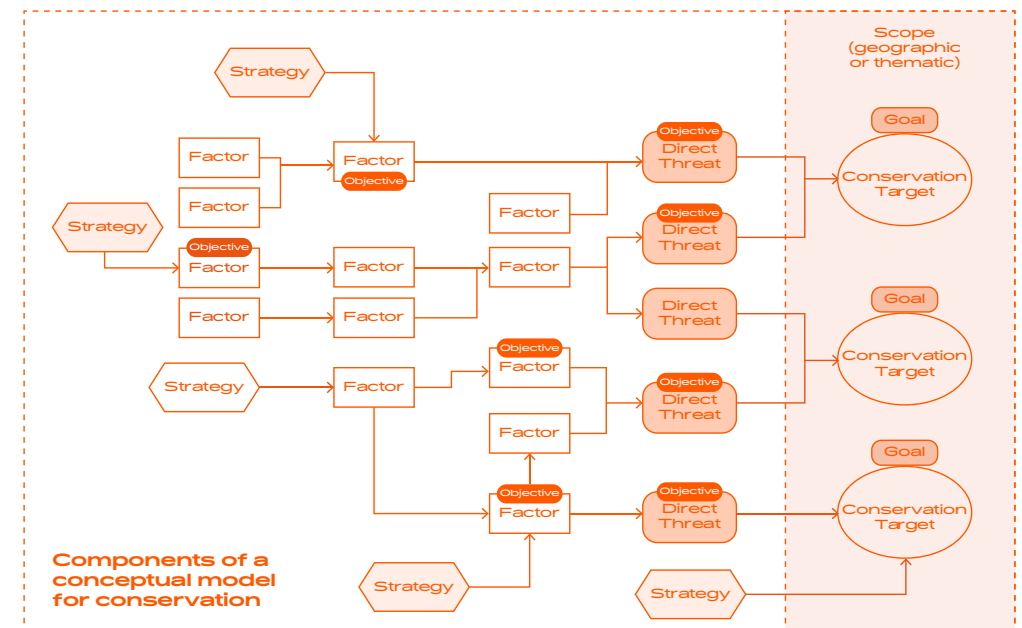
Figure 7

Example of a Gantt chart in current project management software TeamGantt

ject management software. It typically shows the **list of tasks** on the left side view, along with horizontal bars on the right side under a **timeline** (O’cull, Sourov, Motwani, Magdalin, & Power, 2011). A more advanced Gantt chart may include five more components: **dateline**, **milestones**, **dependencies**, **progress**, and **resource assigned** (“What is a Gantt chart?”, 2019). **Dateline** marks the present date on the chart; **milestones** are

set to highlight significant events, dates, and deliverables; **dependencies** are lines that connect tasks that must occur in a specific order; **progress** indicates the level of completeness; **resource assigned** notes the person or team assigned to the particular task. Gantt charts can organise activities and maintain work orders flow seamlessly (Wilson, 2003). The utilisations of other similar visual tools for planning and managing projects allow researchers to define research goals, plan research activities, and manage resources.

Another important use of visual tools is the employment of conceptual models. A conceptual model provides a high-level overview of how a system is organised and operates (Johnson & Henderson, 2002). It visually depicts significant concepts within the system and maps out their relationships. A concept model typically contains a series of shapes and arrows to present relationships among different factors **Figure 8**. Conceptual models can assist researchers in planning and evaluating projects. They can help researchers



Components of a conceptual model for conservation

Figure 8

determine who they should be talking to within this system, what actions are influential to the projects, and measure what changes should be implemented to achieve the goal (Mar-

Example of a generic conceptual model (Margoluis, Stem, Salafsky, & Brown, 2009)

goluis, Stem, Salafsky, & Brown, 2009). A conceptual model is usually developed at the beginning of the project, and it can also evolve according to the progress of the project in order to provide a better evaluation.

During field research

Many field research projects often include ethnographic interviews. Interviews are the most commonly used method for learning to learn people's desires, opinions, and behaviours. Muratovski (2015) suggests five types of interviews: structured interviews, semi-structured interviews, in-depth interviews, focus groups, and oral history (p. 61). Different types of interviews may serve different research purposes, and they can generate valuable data for researchers. Visual tools may be used during interviews to facilitate communication, engage participants, and elicit comments and thoughts.

For example, the design team from IDEO.org (2015) employed a visual tool called “Conversation Starters” in their project in Uganda. The research goal was to discover how low-income Ugandans perceive banks. The Conversation Starters are illustrated cards with different scenarios related to finance and commerce (Figure 9). By showing the cards to the research participants, researchers can introduce basic concepts about banks. They can then solicit responses from the participants. The essential role of this tool is to “get people talking” (IDEO, 2015). Since people may not always respond well to a certain card, by shifting to different cards and asking open-ended questions, the Conversation Starters can help researchers to carry the flow of the conversation. In this case, visual tools are used to introduce topics, guide topic transitions, develop rapport, and elicit comments from the participants.

Researchers may also apply visual tools to overcome verbal communication barriers. A study conducted by O'Brien (2013) shows that photo-elicitation interviews can support research with d/Deaf⁴ young people. The use of visual tools can avoid problems because of linguistic competence, as they pro-



Figure 9

vide communication support and offer visual prompts during research interactions.

Furthermore, the use of visual tools may resolve difficulties of discussing sensitive topics, and engage participants with visual representations. For example, in the Core project (Scope, 2018c), researchers from Scope applied a tool called “Coupling” to position Kenyan men and women at ease to discuss family planning (Figure 10). This tool contains a set of photographic persona cards, some question and situation cards, a dice, and a road map play mat. In the process of playing games, different stories were narrated, and participants responded to sensitive topics based on the experience of the personas they selected. This game brought researchers

Conversation Starter cards used by IDEO.org team in Uganda to help researchers understand local financial habits. (IDEO, 2015)

⁴ **deaf:** A medical/audiological term referring to those people who have little or no functional hearing.

Deaf: A sociological term referring to those individuals who are medically deaf or hard of hearing who identify with and participate in the culture, society, and language of Deaf people, which is based on Sign language.

d/Deaf refers to both Deaf people and deaf people.

Terminology - Canadian Association of the Deaf - Association des Sourds du Canada (2015)

2013). Dey (1993) argues that graphical displays are not only a way of embellishing research conclusions but also a way of making the research accessible. Visual tools allow people to observe different pieces of textual data and the connection between them at first glance. They ease the aim of presenting information in an evident manner, while also helping to engage and attract the audience.

Various examples of presenting qualitative data visually can be found in the news media, especially in newspapers and journals that have separate infographic departments, such as the *New York Times*, the *Washington Post*, and the *South China Morning Post*. Figure 12 shows an infographic of the applications of rare earth by Robles (2019). In this infographic, rather than explaining this complex topic in textual format, the graphics provide an appealing way of displaying information. Different applications of rare earth in homes, cars, and military equipment are marked with orange colour. Readers can understand how essential rare earth elements are by viewing this deprecative infographics. The use of visual representation brings a more robust and creative approach to disseminating research findings than purely text-based reports. Therefore, the use of visual tools can allow researchers to achieve and accelerate a greater social impact.

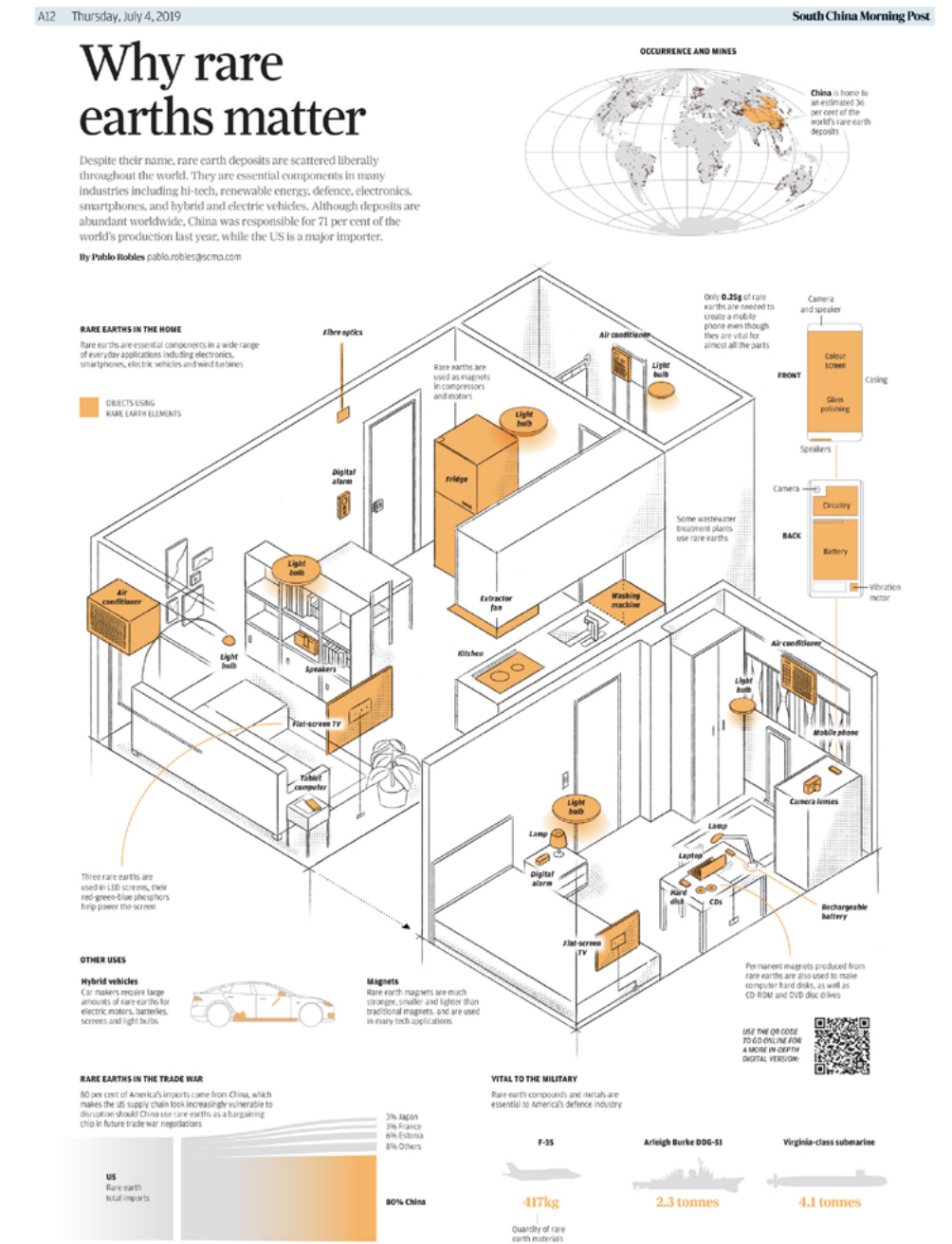


Figure 12

An example of visualisation called Why rare earth matter (Robles, 2019)

Chapter 4

CASE STUDY

4.1 Creative visual tools

In order to understand and examine the use of visual tools in field research, a design work was deployed and analysed thoroughly in this thesis. The documentation and examination of this design production component serve as an extensive case study. The first part of this case study reviews the creation process of this set of visual tools, and the second part investigates how the visual tools were used in the field research.

The term “**creative visual tools**” is proposed in this thesis, to emphasize that the visual tools are not produced by researchers alone, but they are co-created by researchers and visual communication designers. Co-creation is a process widely applied in business model design, service design, and product design. A co-creation project brings people from different fields together to develop a jointly beneficial outcome (Prahalad & Ramaswamy, 2004). Also, as Sanders and Stappers (2008) suggests, the term may be used to refer to “any act of collective creativity”.

This thesis probes the whole co-creation process from my perspective as a visual communication designer. In this case, researchers are the users of the creative visual tools, and as such, they are engaged in the design process collaboratively with visual designers. The outcome is to develop creative visual tools that can meet the needs of the researchers in field research to achieve their research objectives.

Figure 13 depicts how researchers and visual designers work collectively in the co-creation process. Throughout the process of developing creative visual tools, both parties may work together on brainstorming ideas, building prototypes for testing, and iterating prototypes to get a refined product (i.e., the creative visual tools). Moreover, visual designers and

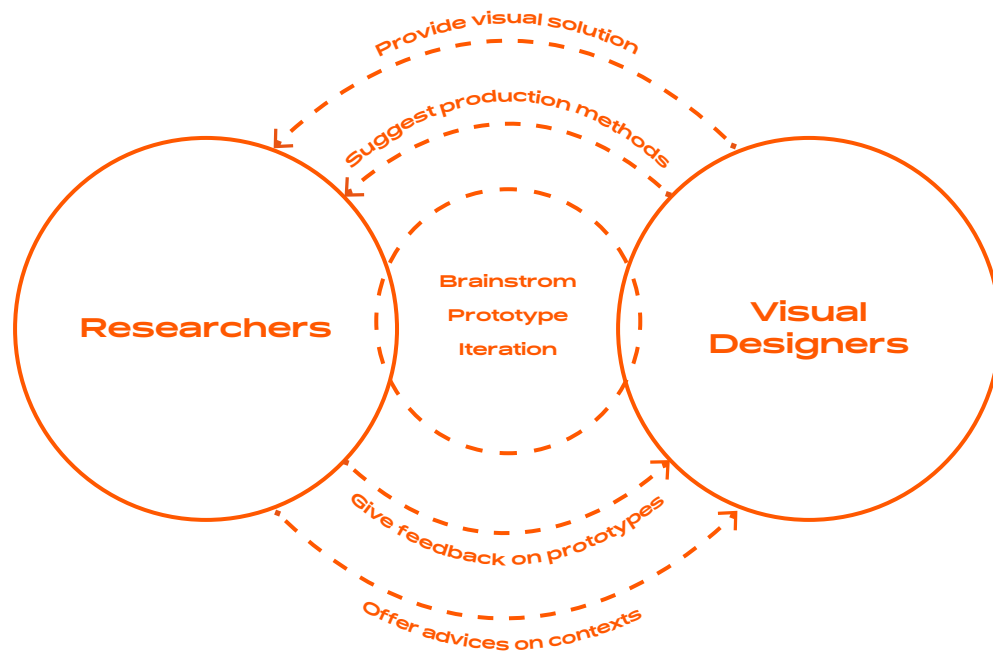


Figure 13

A model depicting the co-creation process between researchers and visual designers to create visual tools

researchers can advise each other based on their own expertise. Since researchers generally have deeper insights about the cultural and sociopolitical context of the site where the fieldwork is conducted, they can provide advice to visual designers on the environment that research participants live in and the customs they have, so that visual designers can produce ethical and culturally appropriate creative visual tools. It is also crucial for visual designers to receive feedback from researchers in order to ensure that the tools meet the field research requirements. On the other hand, visual designers can recommend particular visual styles that are suitable for the research, ensuring that the production is feasible within the time and resource limitations. Furthermore, visual designers can make the tools tangible by suggesting materials and methods used in production based on their previous experiences with digital and printed media.

The following section reviews the process of creating visual tools from my standpoint as a visual designer. My design process of the visual tools can be divided into four stages: 1) **define the visual tools**, 2) **choose an appropriate visual style**, 3) **build prototypes**, and 4) **test and iterate**.

4.2 Creation of the visual tools

Define the visual tools

The field research project for which I designed the visual tools is a part of a three-year project, called Core, implemented by Scope (2018e). The aim of the Core project is to gain a better understanding of women's sexual and reproductive health in order to empower women to improve their health and well-being. The project focuses on four different countries: India, Kenya, Nigeria, and Tanzania (Scope, 2018e). Core also applies a Human-Centered Design (HCD) approach, as discussed in an earlier chapter. Core's HCD process has four stages: **Discover**, **Understand**, **Create**, and **Implement** (Scope, 2018b).

The design task started from a kickoff meeting of the field research project. This fieldwork belongs to the second research trip of Core's Discover phase in India. During the kickoff meeting, the research team presented learnings and findings from the first field research⁵ and outlined objectives for the second field research trip. The objective of this fieldwork was to explore the lives of young girls who are in a transition from girlhood to womanhood and post-marital life in Bihar, India.

There were two vital factors that influenced our decisions when identifying the visual methods and tools we could use in the field. Firstly, the research participants are not exposed to widespread internet usage, and they are not familiar with some digital devices, including smartphones, tablets, and smartwatches. So the visual tools needed to be physical

⁵ As part of the Discover I phase, the Core team went to communities in Dalsinghsarai and Bithan villages in Samastipur district in Bihar, India.

and tangible. Secondly, the interviews may include questions about sensitive topics such as puberty and sexual initiation. The use of visual tools is obligated to minimise possible harm or any negative influence that may occur to the research participants. The briefing I received from the research team was that a set of customised visual tools is needed for facilitating field interviews among young girls from 10 years old to around 22 years old.

The research team and I had a brainstorming session to find ideas for creative visual tools. The goal of the visual tools was to prompt dialogue with research participants who are



Figure 14

Life Course tool used in Tanzania. Copyright: Scope Impact

at different stages of their lives. In addition, the visual tools needed to incorporate with an existing tool which was used in the first field work. The existing tool, which is called the **Life Course tool** [Figure 14](#), is a timeline that maps out critical transitions in a woman's life, such as puberty, marriage, pregnancy, motherhood, menopause, and grandmotherhood ([Scope, 2018d](#)). This tool was produced with local textiles

from the four countries involved in the Core project. The long fabric works as a timeline with numbers to indicate age. Researchers can use this tool in their field research to map out certain stages of life and explore experiences together with participants.

For the new tool for India, we reviewed current practices of visual methods and sought inspirations from other fields of study. Several proposals arose from the brainstorming session, such as somehow employing the game of hopscotch as a design research tool, or including visual diary as a method, and that of using paper dolls as a tool. We then evaluated the opportunities and obstacles of possibly applying those tools in the field.

A visual diary is ideal for gaining authentic data directly from participants. However, it requires detailed instruction on what to document and usually functions better for a longer research period. The intended field research for this trip was only one week.

Hopscotch is a popular children's playground game played across the world, different counties and regions have different rules of play, and variations of how to draw the court can be witnessed around the world. It is simple to produce on the ground, and girls from rural areas in Bihar are familiar with the game. However, it is difficult to combine this method with the Life Course tool, and it may only work with the younger girls.

A paper doll is a two-dimensional human figure cut out from a piece of paper or cardboard, and it usually has separate changeable clothes, which are also made of paper. Furthermore, a paper doll may also have accompanying animal figures or objects ([Johnson, 2005](#)). Paper dolls are flexible and playful, and they can be personalised for the research purpose. At the same time, researchers may use paper dolls to integrate with the Life Course tool.

After the evaluation of different concepts, we decided to create the visual tools based on the concept of the paper doll. This set of creative visual tools initially contains a doll representing a young girl, several modes of outfit, various objects, and a large board of different settings.

Choose an appropriate visual style

Visual styles and drawing techniques should be taken into account before starting the production of the creative visual tools. Since the project Core already has its own brand colours, we needed to use these colours, and as such the selection of colours is not discussed extensively in this thesis. The primary focus was to determine the most effective form of visual representation.

Mccloud (1993, p. 52) proposes a triangular diagram, which explains how to place various types of representation on a visual map. On his personal website⁶, he also presents this diagram as “**The Big Triangle**” (Mccloud, 1999). **Figure 15** shows an adapted version of this diagram. The diagram starts from the point of “**Reality**” and stretches out along two directions, one leads to “**The Picture Plane**”, and the other one directs to “**Meaning**”. As Mccloud states, “**Reality**” means how realist the representation is when we observe a picture. For instance, a photo of a tree resembles the closest approximation of what our retina would receive if we were viewing the actual tree. “**The Picture Plane**” refers to the domain of absolute shape, colour, and line. Therefore, “**Meaning**” merely indicates what is meant by words, texts, symbols, or icons. The triangle shows two ways of abstraction: iconic abstraction and pure abstraction. As demonstrated in Figure 15, as we move from “**Reality**” to “**Meaning**”, the realistic photography of a tree changes gradually to an icon of a tree. This iconic abstraction removes details of resemblance, and exaggerates characteristics, yet it retains the basic meaning of the tree. The ultimate iconic abstraction of visual form is written language. By contrast, pure abstraction extends from “**Reality**” to “**The Picture Plane**”, in which both resemblance of the reality and the meaning of the representation are transformed. In this case, the photo of a tree transforms to abstract art progressively and eventually arrives in “**The Picture Plane**”, a place where shape, line, and colour have no other meanings.

It was obvious that the visual representation of the paper dolls needs to follow the axis of iconic abstraction as the visual tools must be understood both by facilitators and research participants. However, it was crucial to decide whether the paper dolls should be drawn in a more realistic or a more

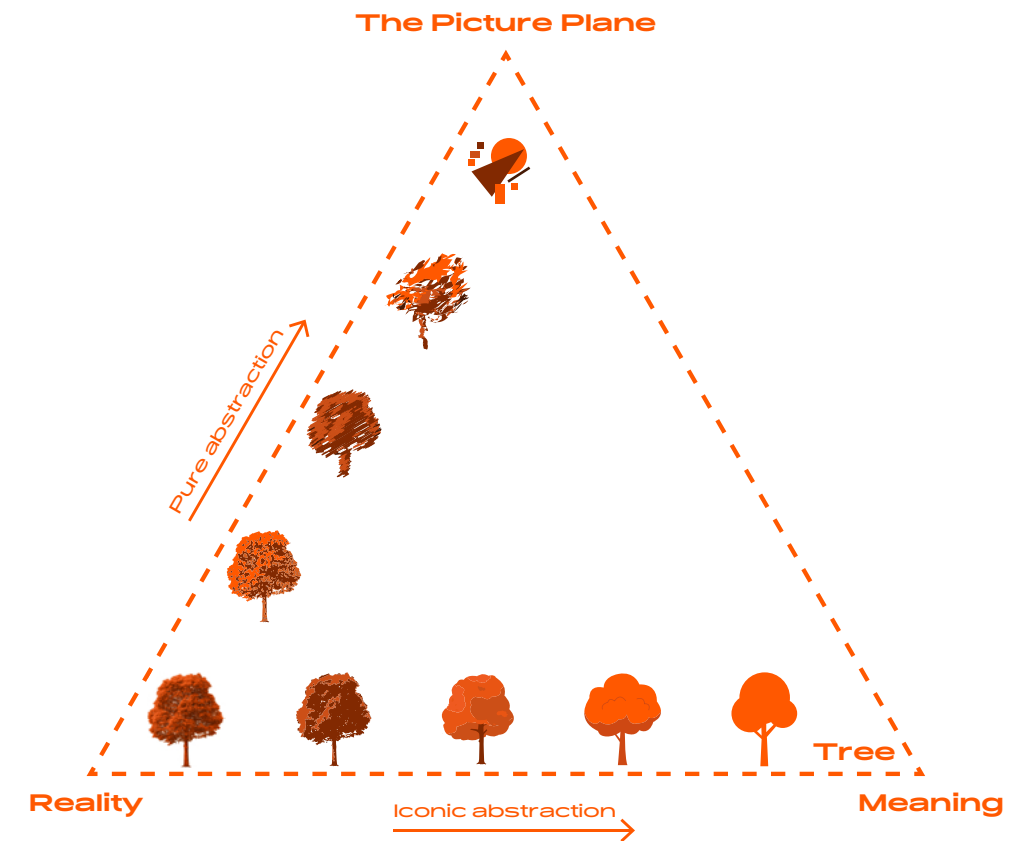


Figure 15

The triangular diagram of visual representation adapted from McCloud's (1993, 1999) concept

abstract manner. Initially, photographs were used to test the concept of using representational images. These photos, either found online under public domain or taken by our own research team from previous field trips, were printed and cut to separate pieces. Different parts were put together to depict objects and settings. However, the downside of using realistic images is that those images are typically highly specific and contain a great deal of irrelevant information. It is also challenging to edit and remove all the unnecessary details from realistic pictures. In addition, extremely realistic drawings lack the sense of substitution, which make it harder for research participants to identify with their own life experiences. Mccloud (1993) explains this matter by comparing photos and cartoons, as he puts it:

...when you look at a photo or realistic drawing of a face, you see it as the face of another. But when you enter the world of the cartoon, you see yourself... the cartoon is a vacuum into which our identity and awareness are pulled, an empty shell that we inhabit which enables us to travel in another realm. We don't just observe the cartoon, we become it. (p. 36)

As we depart from realistic photographs and drawings to iconic graphics, we move from objective to subjective, and from specific to universal. The ideal visual style for the tools should resemble the reality of the settings, both culturally and contextually. At the same time, it needs to be pulled away from reality, so that it creates a universal language that every participant can empathise and relate to. **Figure 16** indicates the level of iconic abstraction that we decided the visual style should follow. Instead of representing the exact reality, it

symbolises the meaning of the subject. With the intention of producing images that reflect the environments in Bihar appropriately, photographs from previous field trips and online public domains were used as reference pictures for the creative visual tools.

A typical example of the abstraction process is demonstrated in **Figure 17**. An image of a Hindu temple in Patna, Bihar, was selected as a reference picture for the production of one of the illustration in the visual tools. The goal was to depict a generalised place of

worship for the research participants that follow Hinduism in Bihar. The process consists of three steps. The first step is to summarise shape or configuration. In this case, the temple can be seen as a structure of two towers and a chamber with two doors. After that, small or irrelevant details such as the decorative embossments can be removed from the illustration. This helps to expand the representation that the illus-

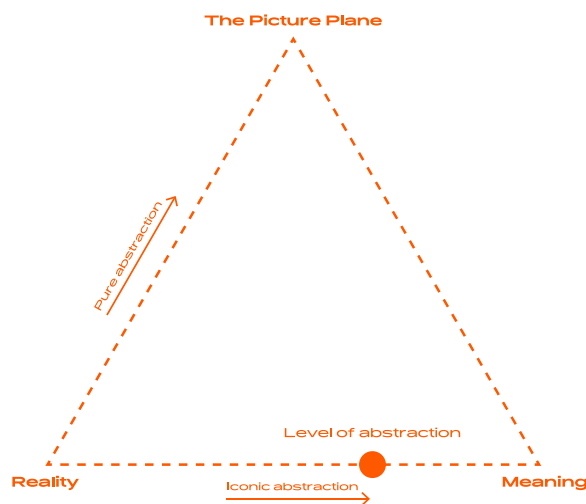


Figure 16

The visual style of the creative visual tools was set at a certain level of abstraction

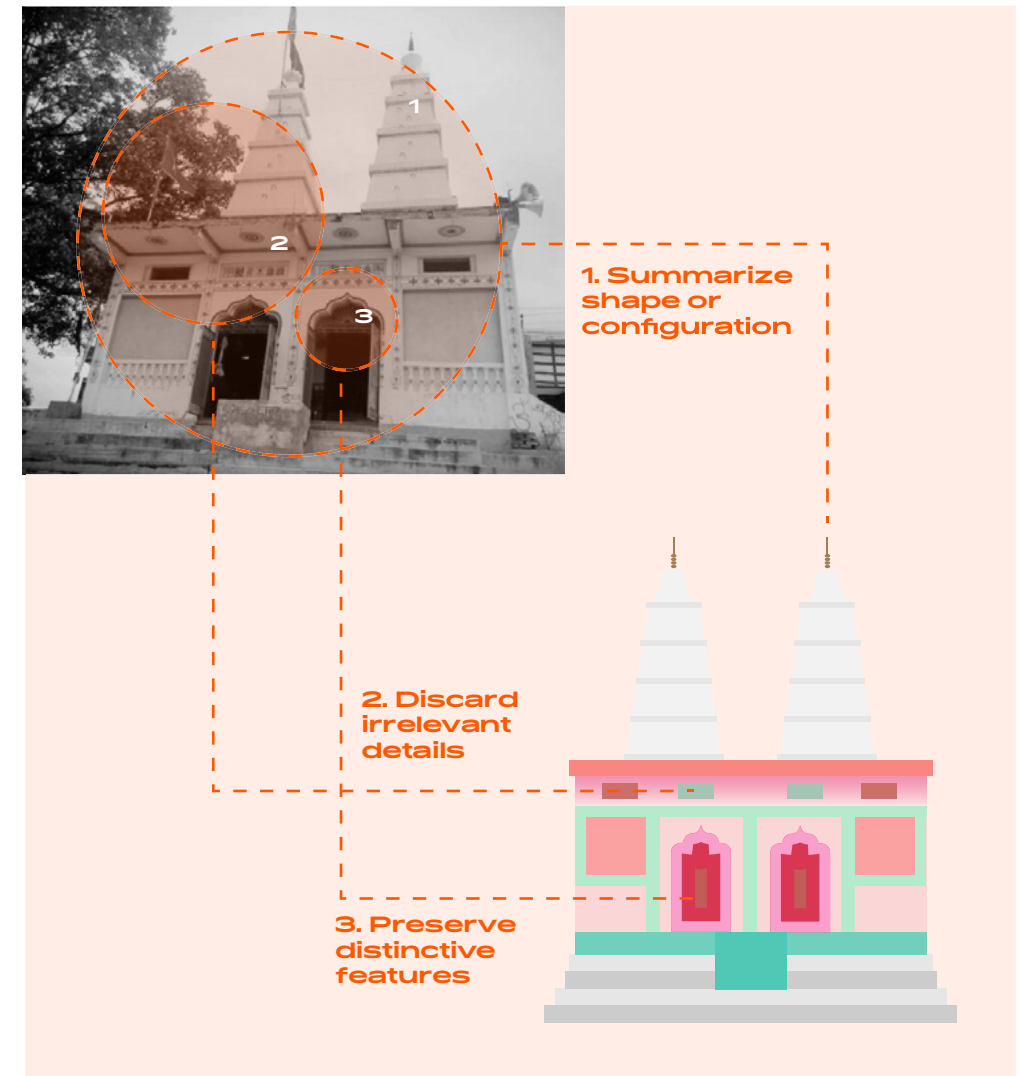


Figure 17

The triangular diagram of visual representation adapted from McCloud's (1993, 1999) concept

tration is not directly signifying the specific temple. Finally, the distinctive features of the temple are retained in the illustration, for instance, the unique shape of the door and the towers. The drawing also retains the five layers of the tower, since this may imply the beliefs of Hinduism.

Overall, the visual style of the tools followed a certain method of iconic abstraction, and the visuals were drawn in a flat minimal style. This visual style is understandable and consistent. It also contributes to standardization and replication, which allowed me to finish the required images for the visual tools within the time and resource constraints.

Build prototypes

In order to test the concept of using paper dolls as creative visual tools in the field research among adolescent girls in Bihar, our team built several prototypes before the final production of the tools. These prototypes, ranging from low-fidelity prototypes such as the collage of photographs mentioned in the previous section to high-fidelity prototypes produced after the completion of early illustrations, helped the whole team to identify problems and make alterations. The prototyping processes are collective activities between the research team and the visual designer. Thus, researchers who are actual users of the creative visual tools had an opportunity to provide feedback to the visual designer, while at the same time the visual designer could suggest feasible production methods. During the prototyping, we agreed on some key elements of the paper dolls and the possible usage scenario of them. Many criteria were taken into account when prototyping the tools, and these criteria are linked to the framework proposed in Chapter 3. A detailed explanation of how researchers attempted to achieve these goals with the visual tools will be discussed later in the section about the application of the visual tools in the field.

Figure 18 shows the different parts of the visual tools. The set of visual tools, includes a paper doll, different outfits, and multiple environment cards. The paper doll is the main component of the visual tools. It can represent a persona based on real-life settings of the research participants, and by building narratives around the doll, participants can associate their experiences with the persona and share their own stories. Different sets of clothes, including saree, kurta, school uniform, and western clothes, are used to represent different transition points in accordance with the life course of the doll's persona. The outfits also have paper handles to attach the outfit with the doll.

The paper doll, along with the outfit, can be placed on different backdrops, such as schools, mela (local fair), local market, health facility, place of worship, the field, and home. These environment cards allow researchers to construct more specific narratives and ask focused questions. During the prototyping, it was unclear whether the environment cards



Some examples of reference photos used for the creative visual tool.

These photos are either from Google image search labeled for non-commercial reuse or from Scope Impact's own image bank. (Image 2, 3, 6, 7, 9, 10 copyright: Scope Impact)

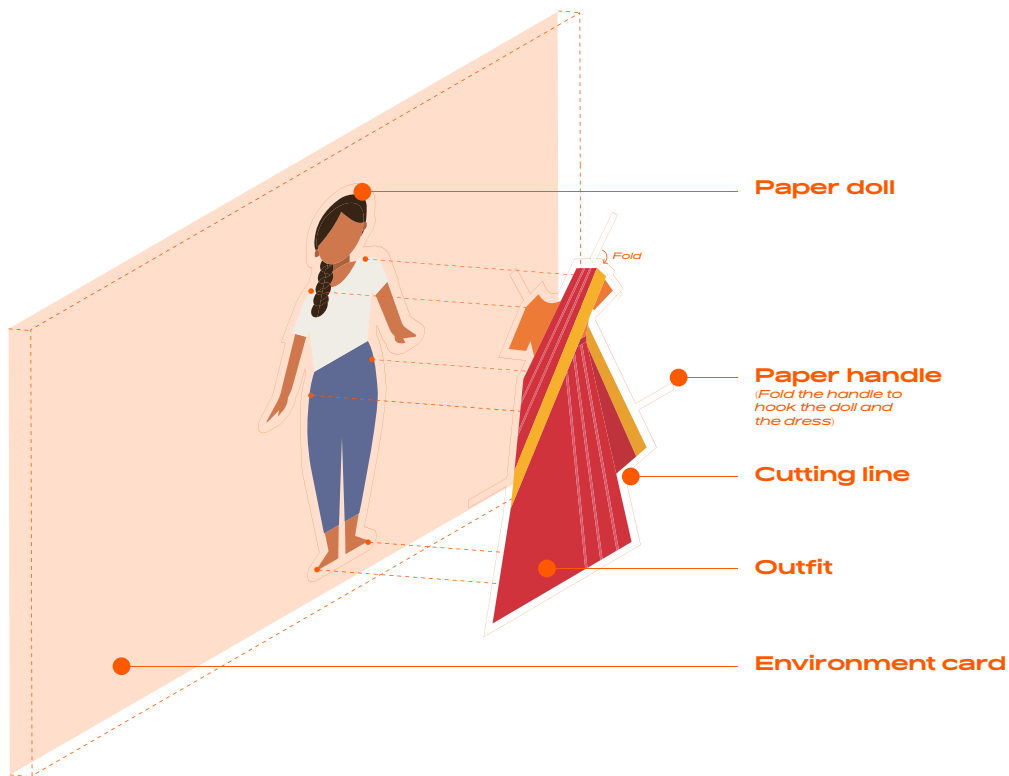


Figure 18

Diagram indicating the key elements of the paper doll visual tools

should be separated into specific scenes, or they should be illustrated together as a whole scene.

Another issue to consider was about the way of incorporating the existing life course tool (showed in Figure 14 in previous section). I will discuss this issue and how we resolved it in the following section. We continued building and testing these prototypes, which led to the final step of the creation process.

Test and iterate

In order to achieve the goal that the visual tools are functional and right in every detail, we adopted an iterative design approach. By building prototypes, testing, and iterating the mechanism of the tool, we were able to refine the creative visual tools and discover successful solutions.

One example of the importance of the iteration process is related to deciding how to organise and integrate the visual tools with the Life Course tool. As shown in Figure 19, three different proposals were suggested. The first proposal was to discard the original textile Life Course tool entirely and embody it on a large play mat. The play mat could also include three boxes that would contain different environment cards. The paper dolls could then be placed upon the Life

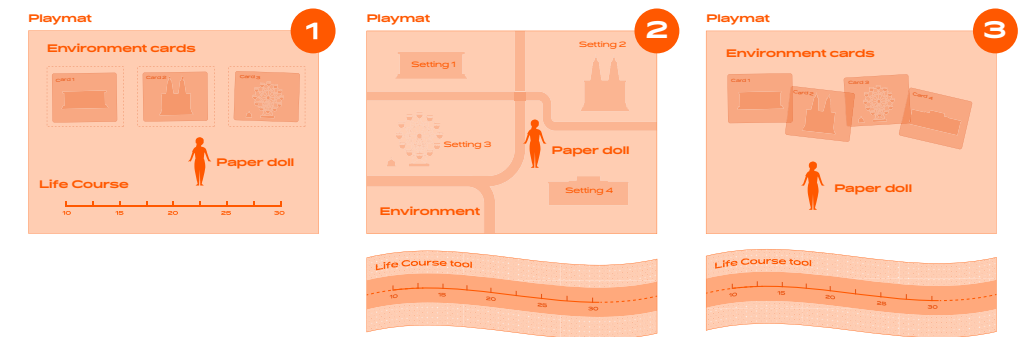


Figure 19

Three different proposals of organising and integrating the Life Course tool

Course to indicate age and transition points, and they could be placed on top of the environment cards to build scenarios in a certain context. The second proposal was to keep the Life Course tool as its original format, but instead of dividing settings on separate cards, it could include all the environments on the play mat, each setting positioned on a fixed spot. Thus, the play mat could act as a map, and the paper dolls could be placed beside the Life Course tool or on top of the map. However, the map-like play mat may end up being over-complicated and the participants may not be able to focus on a certain context. The third proposal was to also retain the previous Life Course tool, and to simply use a play mat with a set of en-

vironment cards, so that every component was flexible and could be arranged for different cases. After testing and iterating, our team decided to use this third proposal.

Furthermore, through this iterative process, we discovered that one single doll could not represent all age groups and various stages of life. Since Indian girls have distinct hairstyles in different stages of life or different occasions, we modified the initial paper doll and created three dolls with different hairstyles: low bun, two braids, and a single pleat

Figure 20.

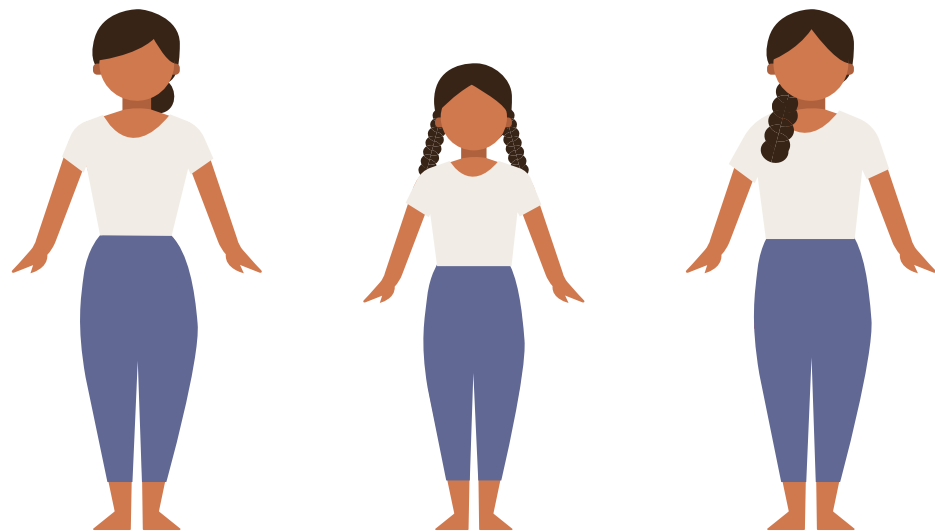


Figure 20

Three dolls to represent different stages of life

We also introduced various supplementary characters, including a teacher, an accredited social health activist (ASHA⁷), a health personnel, an Anganwadi⁸ worker, mother, father, sister, grandmother, and husband. Excepting characters with specific professions, many of these characters were kept unspecified, to allow the participants to attach different meanings to them. For instance, a senior female character may be seen as “mother” or “mother-in-law”. Figures 21 and 22 show the various characters and settings of the visual tools. In total, the final creative visual tools consisted of 3 paper dolls, 6 sets of clothing, 17 supplementary dolls, 12 environments cards, and 6 objects.

The set of visual tools can be used as a whole or individually according to different groups being targeted in field re-

search. They are printed on synthetic material to ensure that they are reusable and can withstand use in the hot and high humidity weather in Bihar.

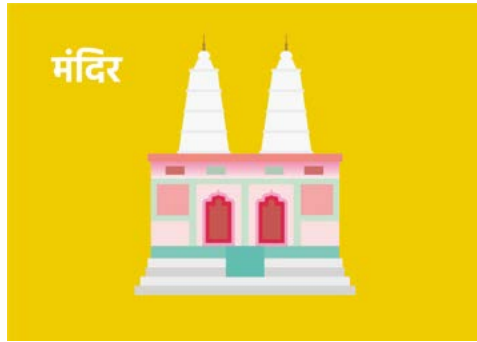


Various supplementary characters included in the visual tools

Figure 21

⁷ ASHA is a community health worker instituted by the government of India's Ministry of Health and Family Welfare as a part of the National Rural Health Mission (NRHM, 2007).

⁸ Anganwadi is a type of rural child care centre in India. Anganwadi means "courtyard shelter" in Indian languages(Humairah, 2011).



Temple



Pharmacy



Home(Outside)



Mosque



Field



Mela(Lcoal fair)



Local market



Home(Indsie)



Cinemama



Bank



Health Centre



School

Figure 22

Different settings included in the visual tools

4.3 Deployment of the visual tools in field research

The use of the visual tools in different interviews

The data collection process in this field research project included several types of interviews: focus group discussions, key informant interviews, in-depth interviews, and intergenerational interviews. Furthermore, a diverse group of participants were engaged in the interviews, including unmarried girls of different ages, recently married men, mothers of unmarried girls, and grandmothers.

The various types of interviews were arranged through 19 sessions, which allowed researchers to gain a comprehensive understanding of the research subject and gather an extensive amount of data from the field. The creative visual tools were applied in different sessions. In addition, they were used either as a whole set of visual tools or as separate individual tools. **Table 1** indicates how different parts of the visual tools were employed in diverse sessions. Since the paper dolls, environment cards and Life Course are detached from each other, researchers were able to use them according to the size of the group and the topic they needed to include. A detailed example of the usage scenario is examined in the following section. The example is adopted from one focus group discussion, in which all visual tools were.

Usage of different visual tools in 19 sessions of the field research project. "X" mark indicates the tool was used in the session, by contrast, "-" means the tool was not used.

Table 1

	Type of discussion	Participants	Code	Paper dolls	Environment cards	Life Course
1	Focus Group Discussion	Unmarried girls aged between 15-17	FGD 1a	X	X	X
2	Focus Group Discussion	Unmarried girls aged between 15-17	FGD 1b	X	X	X
3	Focus Group Discussion	Unmarried girls aged between 18-20	FGD 2	X	X	X
4	Focus Group Discussion	Recently married girls (<2 years married)	FGD 3	X	X	X
5	Focus Group Discussion	Mothers in law to new brides (<2 years married)	FGD 4	X	X	X
6	Focus Group Discussion	Mother of daughters aged between 12-14	FGD 5	X	-	X
7	Focus Group Discussion	Mother of daughters aged between 15-17	FGD 6	X	X	X
8	Focus Group Discussion	Recently married boys (<2 years married)	FGD 7	X	X	X
9	Focus Group Discussion	Unmarried girls aged between 18-20 (Muslims)	FGD 8	X	X	X
10	Key Informant Interview	Teacher	KII 1	-	-	-
11	Key Informant Interview	Anganwadi woker	KII 2	-	-	-
12	Key Informant Interview	ASHA	KII 3	-	-	-
13	Key Informant Interview	Doctor	KII 4	-	-	-
14	In-Depth Interview	Young girls aged 12-14 with a friend	ID 1	X	X	X
15	In-Depth Interview	Unmarried girls aged 15-16 with a friend/sister	ID 2	X	X	X
16	In-Depth Interview	Recently married girl (<2 years) and unmarried sister in law	ID 3	X	X	X
17	In-Depth Interview	Recently married men (<2 years) with a friend	ID 4	-	-	-
18	Intergenerational Interview	Married women (30-35), with her daughter (10-14) and her mother-in-law	IGI 1	X	-	X
19	Intergenerational Interview	Unmarried girl (15-17 years), with mother and grandmother	IGI 2	X	-	X

The usage scenario in focus group discussions

As introduced in Chapter 3, the goals of applying visual tools during field research are to facilitate communication, engage participants, evoke thoughts and foster ideas. A usage scenario can be built and discussed within the framework based on the documentation from the field. These documentations, including field transcripts, audio and video recordings, photographs, and discussion guides⁹, have allowed me to gain in-depth insights about the deployment of the creative visual tools in the field.

The visual tools were used in sessions with different focus groups. The duration of each session was 1.5 to 2 hours, depending on the group. During these sessions, the Life Course tool and the paper dolls visual tools were employed in a series of activities in order to collect first-hand data from the participants. Each session was a persona building process involving both researchers and research participants. As mentioned earlier, a persona is an imaginary character constructed to represent the needs of real users (Garrett, 2010). Through the process of building personas, researchers can better understand the real lives of the participants.

In each session, the creative visual tools were used after an introductory icebreaker where researchers and participants introduced themselves to each other. After that, researchers placed the play mat and the Life Course tool on a flat surface, with the paper dolls, all the supplementary characters, and the environment cards placed on top of the play mat. Then the researchers began to build personas together with the participants. Firstly, researchers introduced the paper doll as a friend “Rani”, who lives in the same village as the participants. At the same time, researchers explained to the participants that Rani could have her clothes changed and can be placed in different contexts. In addition, the paper doll could be moved to the Life Course tool, and the numbers on the life course indicated Rani’s age. Then, participants were asked to dress Rani according to her stage of life. There were three stages discussed in the field research: young girl, young woman before marriage, and married woman. Participants were also requested to pick a doll and dress the doll in an ap-

propriate outfit and an appropriate hairstyle; and then place her on the life course tool to represent her age. **Table 2** shows the three stages of life and their corresponding dolls.

Through this exercise, researchers were able to establish rapport with the participants and introduce the topic in an appealing way. Once the proper doll was dressed with an

Three stages of life and their corresponding dolls

Table 2

Stage of life	Age	Hairstyle	Outfit
Young girl	10	Double braid	School uniform / casual clothes
Young woman before marriage	16	Low bun	Kurti / casual clothes
Married woman	18	Single pleat	Saree

appropriate outfit, participants were asked to select family members from the supplementary characters. After that, a simple narrative was constructed around Rani. This narrative may start with Rani’s age and family members. The persona of Rani could be enriched when participants were requested to position the doll in different environment cards. The environments cards represented various contexts Rani may encounter at that stage of life. Participants were also asked to select people from supplementary characters that Rani may interact with in different contexts. For instance, Rani may meet the teacher at school, and she may interact with an ASHA or a doctor at the health facility.

Furthermore, participants were asked to rank the cards according to their relevance to Rani. During this activity, researchers also probed why certain environment cards ranked lower than others and why certain dolls were not chosen in that context. The participants were also asked a number of questions related to each of the three specific life stages of Rani. **Figure 23** shows the process of enriching Rani’s persona with narratives constructed around her. Throughout these progressive activities, researchers were able to engage

⁹ Two researchers from Scope have taken part in the field research project. The discussion guides were drafted by J. Martin and P. Sillanpää in May, 2019.



Figure 23

Construct narratives around the persona step by step

the participants in the co-interpretation process, and elicit comments from them by asking subject-led questions. Since most questions were asked through discussions around the life of the fictional persona Rani, it was assumed that the participants would be more likely to speak about sensitive topics.



COPYRIGHT:
SCOPE IMPACT

COPYRIGHT:
SCOPE IMPACT



4.4 Evaluation of the creative visual tools

“Visual aid inspires participants to elaborate more, and it’s an effective tool in terms of researching and co-designing.”
(Quotes from researchers)

This section evaluates the creative visual tools based on the feedback I received both from the researchers and the participants. An interview questionnaire was sent to 8 researchers who were engaged in the field research project. In addition, feedback from the participants was gathered from transcripts of responses to questions researchers asked the participants about their comments regarding the creative visual tools at the end of the field interviews.

In general, researchers agreed that the visual representation of the tools are culturally and contextually appropriate, and they represent well the people and settings in Bihar, India. Moreover, the visual tools in particular balance appropriate imagery, context, cultural sensitivity, and inclusion. One researcher also mentioned that the use of familiar patterns and images created the feeling of calmness in the participants, as they were able to recognise the settings they are used to.

The researchers were asked to rank how successful the different aims of applying visual tools were as presented in the framework proposed in Chapter 3. **Figure 24** shows a comparative ranking of various purposes under three main categories.

When researchers employed the creative visual tools in the field, they discovered that the participants were pleased with the tools. Furthermore, the tools helped them to lower communication barriers, to evoke more detailed data by building and sharing narratives together with the participants.

“Participants were all amazed/amused when we took out the visual tools. it’s a great way to transit the session, especially when participants are getting tired from the session, it’s refreshing to them.”
(Quotes from researchers)

“It would be awkward if you asked me directly about myself.”
(Quotes from participants)

“It was so fun to talk the story through those images!”
(Quotes from participants)

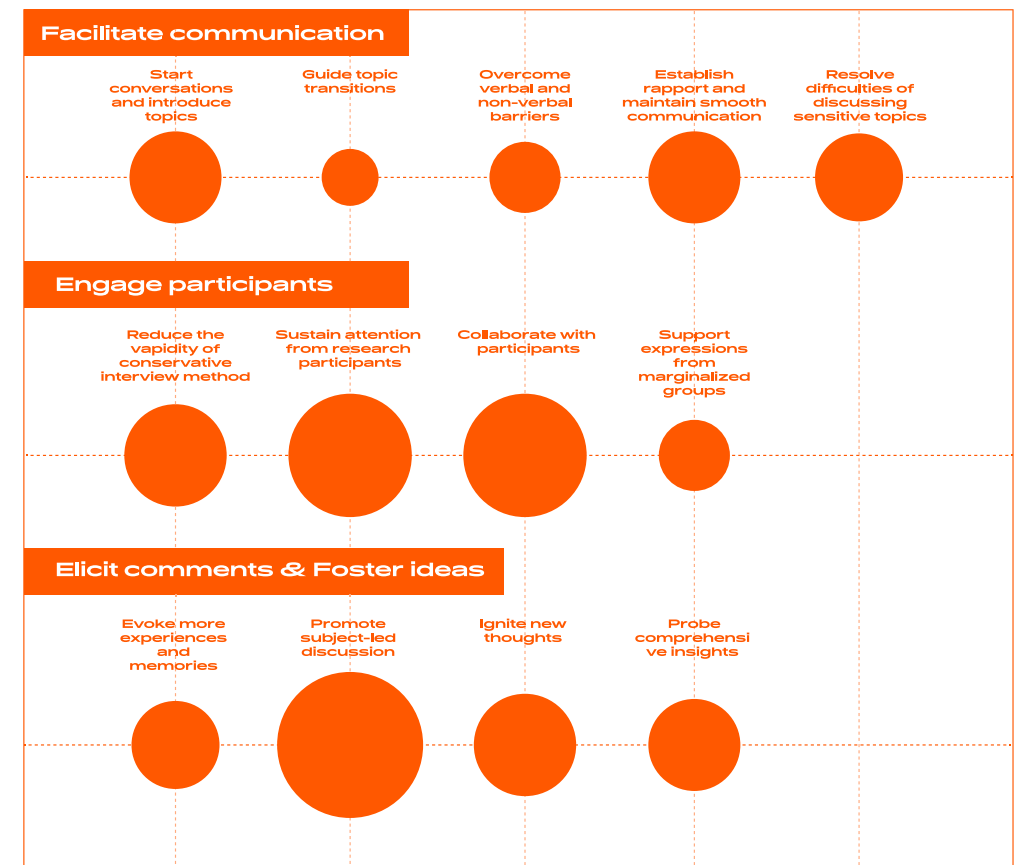


Figure 24

The persona building activities of Rani and the narratives around her also supported subject-led discussions, which made it easier for the participants to share sensitive topics. One participants said that it was easier to share their stories through the life of Rani. In addition, when researchers brought the narratives multiple times back and forth between the different life stages of Rani, they observed that some inconsistencies existed in the stories shared by the participants, which helped to reveal a more real picture of the participants' personal lives and gathered more reliable data from them.

However, the researchers also responded that the creative visual tools are quite complex, which made them difficult to carry and assemble them together. Moreover, in order to utilise the visual tools effectively, a strategy of how to use the tool should be developed. This type of strategy would define the method of use for the visual tools in interviews in field research.

A visual summary of the achievement level of various aims of applying visual tools in the field research project. The bigger circles means these aims were achieved more successfully in the field.

“Developing both the visual tool and the strategy to use and manipulate that tool is critical.”
(Quotes from researchers)

Chapter 5

CONCLUSION

5.1 Contributions

In order to gain deep insights into the use of creative visual tools in qualitative field research, and particularly to understand what constitute their effective use in constructive employment in **data collection** process during ethnographic interviews, I first reviewed the history of using visual methods in qualitative research by presenting various examples of applying visual tools in three domains of qualitative research: **data collection, data analysis, and data representation**. Furthermore, I explained the connection between **Human-Centered Design (HCD)** and visual tools and how to utilise visual tools more successfully in the HCD process. This review yielded valuable information and knowledge, which contributed to the theoretical background for this thesis.

Furthermore, to be able to analyse and categorise the different aims of applying visual tools in qualitative field research, I examined a typology proposed by Glegg (2019). Based on this typology, I adapted a framework in accordance with the Human-Centered Design process. This framework provided a structural model for investigating and evaluating the use of visual tools *Before, During* and *After* a field research project in which researchers aim to apply the tools to (1) support secondary research, (2) formulate research outline, (3) facilitate communication, (4) engage participants, (5) elicit comments and foster ideas, and (6) construct knowledge and build impact. This framework was elaborated by reviewing a number of existing visual tools employed in field research.

Based on the framework, I co-created and produced a set of creative visual tools for a field research project in Bihar, India. Their creation and implementation in the field offered the opportunity for an in-depth and detailed case study. I also provided a model depicting the co-creation process between researchers and visual communication designers. In addition,

I explained the abstraction process of the visual representation of the tools. After that, with the feedback gathered from both the researchers and the participants, I evaluated the creative visual tools using the framework proposed in this thesis. Based on the evaluation, insights and knowledge emerged to measure the impact of creative visual tools on the data collection process.

This thesis contributes to both the field of qualitative research and visual communication design by identifying limitations and opportunities in current collaboration between the two disciplines. Moreover, by outlining a framework for the various aims of using visual tools in qualitative field research, this study can support researchers in determining and developing visual tools for their own projects. Furthermore, this thesis also provides an interdisciplinary design approach, encouraging more visual communication designers to create meaningful and functional visual tools in the future.

5.2 Limitations

Although this thesis attempted to offer a comprehensive overview of topics related to both visual methods and qualitative field research, their highly complex and multidisciplinary nature made it impossible to provide an exhaustive account. Therefore, this study mainly described my perspective as a visual communication designer who works in an interdisciplinary team. In addition, the co-creation process only reflected my role as a visual designer, and as such, it is probably more relevant to the field of visual communication design.

As for the use and evaluation of the creative visual tools, even though I went to the field research location before for another project, I did not have the opportunity to go there again for the project described in this thesis. For this reason, I was not able to gather firsthand information directly from the field. The reliability and validity of the evaluation I have provided rely on the interviews of the researchers who took part in the field research.

Aside from that, many examples of visual tools described in this thesis were gathered from research literature, online databases and my personal experiences. However, I believe that many more unpublished personalised visual tools have been developed and utilised by groups and companies aiming to build greater social impact. It could be valuable to examine as much as visual tools as possible and enrich studies of these areas.

5.3 Further research

As I mentioned in the previous section, new insights and knowledge can be discovered and understood by digging into the enormous world of emerging visual methods in different fields of research. This thesis attempts to build a bridge between researchers and visual communication designers, so that they can collaborate on projects aspiring to achieve a greater social impact.

Many approaches applied in the design process of the creative visual tools are evolving, including the Human-Centered Design, and co-design. It is also worthwhile studying how these approaches can be efficient and sustainable.

References

- Ambrose, G., & Harris, P. (2008). *The fundamentals of graphic design*: Bloomsbury Publishing.
- Banks, M. (2018). *Using visual data in qualitative research (Vol. 5)*: Sage.
- Banks, M., & Zeitlyn, D. (2015). *Visual methods in social research*: Sage.
- Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo*: Sage Publications Limited.
- Burgess, R. G. (2002). *In the field: An introduction to field research*: Routledge.
- Castells, M. (1996). *The information age: Economy, society and culture (3 volumes)*. Blackwell, Oxford, 1997, 1998.
- Collier, J., & Collier, M. (1986). *Visual anthropology: Photography as a research method*: UNM Press.
- Davison, J., McLean, C., & Warren, S. (2015). Looking back: Ten years of visual qualitative research. *Qualitative Research in Organizations and Management: An International Journal*, 10(4), 355-359.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*: Sage.
- Dey, I. (2003). *Qualitative data analysis: A user friendly guide for social scientists*: Routledge.
- Gantt, H. L. (1903). *A graphical daily balance in manufacture*.
- Garrett, J. J. (2010). *The elements of user experience: user-centered design for the web and beyond*: Pearson Education.
- Gavan, J., Washburn, S., & Lewis, P. (1952). Photography: an anthropometric tool. *American journal of physical anthropology*, 10(3), 331-354.
- Glegg, S. M. (2019). Facilitating interviews in qualitative research with visual tools: a typology. *Qualitative health research*, 29(2), 301-310.
- Grinstein, U. M. F. G. G., & Wierse, A. (2002). *Information visualization in data mining and knowledge discovery*: Morgan Kaufmann.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice*: Routledge.
- Harper, D. (1988). Visual sociology: Expanding sociological vision. *The american sociologist*, 19(1), 54-70.
- Henderson, S., & Segal, E. H. (2013). Visualizing qualitative data in evaluation research. *New Directions for Evaluation*, 2013(139), 53-71.
- IDEO. (2009). *Human Centered Design: Field Guide*: IDEO.
- IDEO. (2015). *The field guide to human-centered design: design kit*: IDEO.
- International Organization for Standardization. (2019). *Human-centred design for interactive systems (ISO 9241-210:2019)*. Retrieved from <https://www.iso.org/obp/ui/#iso:std:iso:9241-210:ed-2:vi:en>
- Johnson, J., & Henderson, A. (2002). Conceptual models: begin by designing what to design. *interactions*, 9(1), 25-32.
- Judy M Johnson. (2015). *History of Paper Dolls*. Retrieved from: <https://www.opdag.com/history.html>
- Jupp, V. (2006). *The Sage dictionary of social research methods*: Sage.
- Mannay, D. (2015). *Visual, narrative and creative research methods: application, reflection and ethics*: Routledge.
- Margoluis, R., Stem, C., Salafsky, N., & Brown, M. (2009). Using conceptual models as a planning and evaluation tool in conservation. *Evaluation and program planning*, 32(2), 138-147.
- McCloud, S. (1999). *The Big Triangle*. Retrieved from: <http://scottmcloud.com/4-inventions/triangle/index.html>
- McCloud, S. (1993). *Understanding comics: The invisible art*. Northampton, Mass.
- Mead, M. (1995). Visual anthropology in a discipline of words. *Principles of visual anthropology*, 3, 3-12.
- Meggs, P. B., & Purvis, A. W. (2016). *Meggs' history of graphic design*: John Wiley & Sons.
- Muratovski, G. (2015). *Research for designers: A guide to methods and practice*: Sage.
- O'Brien, D. (2013). Visual Research with Young d/Deaf people-An Investigation of the Transitional Experiences of d/Deaf Young People from Mainstream Schools using Auto-driven Photo-elicitation Interviews. *Graduate Journal of Social Science*, 10(2).
- O'cull, H. J., Sourov, A. A., Motwani, R. N., Magdalin, D., Boyes, L. D., & Power, K. D. (2011). *Method and system for generating a timeline associated with a project schedule*. In: Google Patents.

References

- Pablo, R. (2019, July 4) *Why rare earth matter*. Retrieved from <https://multimedia.scmp.com/culture/article/SCMP-printed-graphics-memory/lonelyGraphics/201907A236.html>
- Pain, H. (2012). A literature review to evaluate the choice and use of visual methods. *International Journal of Qualitative Methods*, 11(4), 303-319.
- Patton, M. (2015). *Qualitative Research*, *Encyclopedia of Statistics in Behavioral Science*. (Brian S. Everitt & David C. Howell, Eds.).(1633-1636). In: Chichester: John Wiley & Sons, Ltd.
- Pink, S. (2004). Visual methods. *Qualitative research practice*, 391-406.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of interactive marketing*, 18(3), 5-14.
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2013). *Qualitative research practice: A guide for social science students and researchers*: Sage.
- Roberts, L. (2006). *GOOD: an introduction to ethics in Graphic Design: ethics of Graphic Design (Vol. 26)*: Ava Publishing.
- Rowling, J. K. (2015). *Harry Potter and the philosopher's stone (Vol. 1)*: Bloomsbury Publishing.
- Sanders, E. B.-N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *Co-design*, 4(1), 5-18.
- Scope. (2018a). *About Core*. Retrieved from: <https://thisscore.org/about-core>
- Scope. (2018b). *Core's human-centered design process*. Retrieved from: <https://thisscore.org/human-centered-design>
- Scope. (2018c). *Let's play Coupling!* Retrieved from: <https://thisscore.org/lets-play-a-game>
- Scope. (2018d). *Life Course tool: Mapping critical health transitions*. Retrieved from: <https://thisscore.org/resource/the-life-course-journey-tool>
- Scope. (2018e). *The Core project*. Retrieved from: <https://thisscore.org/about-core>
- Scope. (2018f). *"Using this tool feels like socialising, not conventional research": Coupling*. Retrieved from: <https://thisscore.org/playing-this-game-did-not-feel-like-conventional-research-it-was-like-socialising>
- Snow, J. (1855). *On the mode of communication of cholera*: John Churchill.
- Spencer, S. (2010). *Visual research methods in the social sciences: Awakening visions*: Routledge.
- TeamGantt "What is a Gantt chart?" (2019, August) Retrieved from <https://www.teamgantt.com/what-is-a-gantt-chart>
- Tufte, E. R. (1997). *Visual Explanations: Images and Quantities, Evidence and Narrative*: Graphics Press.
- Tufte, E. R. (2001). *The visual display of quantitative information (Vol. 2)*: Graphics press Cheshire, CT.
- Verdinelli, S., & Scagnoli, N. I. (2013). Data display in qualitative research. *International Journal of Qualitative Methods*, 12(1), 359-381.
- Viégas, F. B., & Wattenberg, M. (2008). *Timelines tag clouds and the case for vernacular visualization*. *interactions*, 15(4), 49-52.
- Walker, S. (2017). Research in graphic design. *The Design Journal*, 20(5), 549-559.
- Wells, Y.-O., & Dietsch, E. (2014). Childbearing traditions of Indian women at home and abroad: An integrative literature review. *Women and Birth*, 27(4), e1-e6.
- Wilson, J. M. (2003). Gantt charts: A centenary appreciation. *European Journal of Operational Research*, 149(2), 430-437.

From Eyes to Notes: Designing and
facilitating qualitative field interviews
with creative visual tools

Yuzhou Wang / 2019 / Master's thesis