

CONNECTING THE DOTS:
A DESIGN APPROACH TO SERVICES
FOR THE POOR

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Abstract

Design thinking is increasingly being promoted as a tool to address social problems. There is little consensus around the term ‘design thinking’ and how if at all it differs from other forms of thinking. Further, evidence for how design can help to tackle social challenges, particularly in resource poor settings is scant. The thesis critiques the notion of ‘design thinking’ as framed in contemporary design practice and literature. It draws out the ontological (pattern), teleological (purpose), and epistemological (process) elements of design, in order to re-articulate ‘design thinking’ as the ‘way of design’ to embody its first principles. Additionally the thesis shows how the ‘way of design’ can help to understand and inform services in resource poor contexts, using the case study of artisan services in India. The study employs mixed methods and bricoleur techniques to carry out design research in a weaving village in India.

The study shows how ‘design as pattern’ helps to trace the underlying pattern of services in the artisan weaving ecosystem and highlight touchpoints for interventions. It reveals how ‘design as purpose’ prompts the assessment of: utility, social, emotional and epistemic values that underpin artisan service preferences and choices. It further illustrates how ‘design as process’ guides sense making and evaluation of artisan systems in ‘adaptive’ rather than ‘optimal’ ways. The thesis establishes how a design approach can help fundamentally to reframe the problems and prospects of artisan livelihoods. In redesigning design, the thesis demonstrates the transdisciplinary character of design and the kind of problems it can help to illuminate. In reframing artisan problems, the study shows how the ‘way of design’ can help to connect the dots of policy, practice and research.

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Authorship Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

Further, this work conforms to ethical standards and processes in force within the School of Design at the time it was undertaken.

Name: Priti Rao

Signature:

A handwritten signature in black ink, appearing to read 'Priti Rao', written over a light blue horizontal line.

Date: 21 May 2012

CHAPTER ONE

Introduction

1.1 The last mile challenge

In 2007, as I was graduating from the Institute of Development Studies in Sussex, an article in the alumni newsletter caught my attention. The article¹ featured Sussex alumna Hilary Cottam² as the winner of the ‘Designer of the Year’ Award. I became curious: what did Cottam, a social scientist by training, have to do with design³? A Google search led me to the Design Council UK website, where I learnt about the Redesigning Prisons project for which Cottam had won the award. My initial research revealed that the discipline and profession of design were increasingly engaging with the kind of public and social sector projects I was familiar with.

My work in India had involved developing services for the poor in the areas of health, education, sanitation and rural livelihoods. After nine years in the field, working alongside government agencies, private sector and not for profit organisations; it occurred to me that problems that had been framed as political and economic problems could in effect be viewed as design problems. In other words the challenges of working in the field and effecting change were more often than not strategic and operational in nature than about framing the right policies. This led me to consider a switch in disciplines from social sciences to design, to explore if and in what ways design could help to inform the ‘wicked’⁴ problem of delivering services to the poor. The shift to design was also driven by my deep need for beauty and aesthetics in problem solving that could inspire people beyond just satisfying their needs.

¹ Falmer (2007)

² Hilary Cottam was formerly Director of the Design Council’s RED team and is presently a Partner at Participle, a social design consultancy in London.

³ In this thesis the term ‘design’ is employed in a number of ways- as a verb, a noun, to signify design practice and also the design discipline. Most of all however it is used to signify a design approach, which I will outline in detail in Chapter Two.

⁴ Rittel and Weber (cited in Forlizzi, 2008) described wicked problems as a ‘class of social system problems which are ill-formulated, where the information is confusing, where many [shareholders] have conflicting values, and where the ramifications in the whole system are thoroughly confusing.’

This personal motivation however was also rooted in the larger challenges of service delivery for the poor that persists in many parts of the world. According to the World Bank (2008a) close to 2.5 billion people live on less than \$2 a day, making poverty reduction one of the key Millennium Development Goals⁵. This income poverty further affects the ability to fulfil basic needs and access vital services. To elaborate, an estimated 824 million people suffer from chronic hunger and malnourishment despite there being enough food in the world to feed them (United Nations, 2006:5). Approximately 1.1 billion people lack sufficient access to water (World Bank, 2008a) and nearly 121 million children of school going age are deprived of education (UNICEF, 2005:9).

Explanations for such problems have primarily been considered through political and economic lenses. From a political perspective, lack of good governance⁶ is cited as one of the reasons why states often deliver poor services to their citizens⁷. Another mechanism said to affect service delivery is the institutional arrangement of services in the form of centralised or decentralised delivery systems, where the latter is argued to be more effective in delivering services⁸. Besides these ‘supply’ side explanations, political explanations have also extended to the ‘demand’ side reasons where it is argued that citizens, and particularly the poor, need to actively engage in demanding their rights and services⁹. When viewed through an economic lens, it has been widely regarded that it is not profitable for businesses to serve the poor, who often reside in remote areas that are difficult to reach (Prahalad and Hammond, 2002). Besides the difficulty in reaching the poor, businesses also face numerous bureaucratic and infrastructural barriers that add to the costs of delivering services to the poor (ibid).

The failure to get services to the poor has been termed as the ‘last mile’ problem by Mullainathan (2010), where the ‘last mile’ is a metaphorical term used to denote the final leg of the service delivery. Mullainathan (ibid) argued that we have cracked 95 percent of the problem. We have the necessary technology, raw materials, resources, drugs and vaccines to meet many of the development challenges, but where we have failed is in the last mile: in getting these services in order to reach those who need them the most. Apart from the practical challenges of delivering services in the last mile, there is little research in terms of precisely how

⁵ See the United Nations Millennium Goal Development Report 2011 (United Nations, 2011).

⁶ The term ‘good governance’ was first promoted by the World Bank broadly referring to the institutions and mechanisms whereby states are free of corruption; transparent and accountable to their citizens.

⁷ See Devarajan and Reinikka (2002), Lam (1996), Nelson (2007)

⁸ See Ahmad et al. (2005), Kheffer and Khemani (2004)

⁹ See Goetz and Gaventa (2001), Standing (2004)

services unfold in these resource-poor settings. Manor (2006) called this the *terra incognita* of research. He stated:

We know much about events and conditions at the local (village, town or city) level—thanks mainly to anthropologists. And thanks to analysts from several disciplines, we know much about events and conditions between the national level and the intermediate level. But we know far too little about what happens in the space between the intermediate and the local levels. It is largely a *terra incognita*. This is a serious problem, because it is in that space that service delivery, governing and politics, as ordinary (not least, poor) people experience them, mainly occur. It is there that state and society mainly interact. And—to lend real urgency to the problem—events within that space often determine whether efforts to deliver services and reduce poverty succeed or misfire.

It is on this space that the research focuses: the space where people living in resource-poor contexts experience services. The study explores whether a design approach can help to illuminate the gaps in understanding the last mile of services for the poor. How might our view of services for the poor change when viewed through the lens of design, rather than the more traditional social, economic and political lenses? The vast majority of social challenges¹⁰ have been tackled by non-designers or silent designers¹¹, persons who are not trained designers by profession but have used ingenious and hybrid¹² methods to tackle the problems of the world's poorest people. The research fully acknowledges these creative practices and solutions inspired by social entrepreneurs. However it cites the far-reaching scale of the problems that exist, and speculates as to whether a design approach might offer a more self-conscious and creative path to policymaking and practice. In other words, a move from design with a small 'd' to design with a capital 'D', as suggested by Dilnot (2003:18):

It is so in the sense that we are talking of designing as the process of shaping—things certainly, but also institutions, programs, systems.... This process is design with a small “d,” design as a verb, an activity. It occurs everywhere. What distinguishes Design, with a capital “D”, is a much more self-conscious process. Indeed, at best, that is what Design is, it's the process of becoming self-conscious about making, shaping and forming. All things, be they products, institutions, or systems, are configured, that is they are formed. Design in this sense, our sense, is the process whereby the form of things is put on the table as it were, where configuration is examined, self critically and often reinvented. This is design's great virtue.

¹⁰ Some well known initiatives set up by non-designers include: Mohammed Yunus's Grameen Bank- a micro-finance initiative for the poor in Bangladesh that has spread around the world, MPesa in Kenya, Tilonia Barefoot Project and Aravind Eye Care in India amongst others.

¹¹ Gorb and Dumas (cited in Candi, 2007:560) define the non-deliberate manner of designing as silent design. It is the process by which employees are engaged in design as an adjunct to their primary roles, basically non-designers doing design. They suggest that some kind of silent design activity is to be found in almost all firms.

¹² An example of this is the Grameen-Telenor collaboration to bring telephone services to the poor. Here Grameen, a not for profit organisation drives the social aspect of the project while Telenor, a private Norwegian company, drives the business aspect (Seelos, 2009).

1.2 The changing design territory

But why design? It is a profession that has traditionally been associated with the creation of products and services for the top ten percent of the population. As Potter (2002:69) remarked, ‘The only people who can afford design services are those who already have more than they need, and therefore professional design is a form of “cake decoration” when the rest of the world needs bread.’ Polak (cited in McNeil, 2007) similarly stated that ‘the world’s cleverest designers cater to the globe’s richest ten percent, creating items like wine labels, couture and Maseratis.’ This is not surprising given that the world’s richest 20 percent account for 76.5 percent of the total private consumption whereas the poorest 20 percent account for only 1.5 percent (World Bank, 2008a).

However in recent times there has been a shift and greater emphasis on designing for people living at the bottom of the pyramid. Bitner and Brown (2008:44) state the need for researchers and innovators to focus on services for the poor. They ask, ‘What types of services should be developed for this “bottom of the pyramid” population?’ (ibid, 2008:44). Such questioning within the design discipline is not entirely new. Papanek (1971), Margolin and Margolin (2002), Bonsiepe (2006), Buckminster Fuller (Rawsthorn, 2011), and Whiteley (1993) have all urged designers in the past to devote their energies to serving real world needs instead of focusing on artificial wants. However sustained initiatives involving professional designers in this area have been limited until now¹³; as debates on ‘social design’, ‘inclusive design’, ‘sustainable design’ gather a renewed momentum¹⁴.

One of the key events that marked the shift from commercial to social design in a very public way was the Cooper Hewitt Museum exhibition titled ‘Design for the Other 90 percent’¹⁵. This 2007 event showcased products designed for people residing in resource-poor settings, and since then there has been a surge in exhibitions¹⁶, competitions¹⁷, conferences¹⁸ and

¹³ Notable initiatives include Architecture for Humanity, Emily Piloton’s H21 project, the ‘treadle pump’ by Kickstarter amongst others.

¹⁴ See Vezzolo and Manzini (2008), Manzini (1994), Thackara (2005), Fuad-Luke (2009), Chick and Mickelthwaite (2011), Shedroff (2009), McDonough and Braungart (2002) and Clarkson (2003)

¹⁵ See Smith (2007)

¹⁶ MoMA, ‘Small Scale, Big Change: New Architectures of Social Engagement’ 2011; The Design Revolution Road show 2010

¹⁷ Buckminster Fuller Challenge, Victor J Papanek Social Design Award, INDEX Award, Core 77 Design for Social Impact Award.

¹⁸ Rockefeller Design for Social Impact workshop (Rockefeller Foundation, 2008), Design Activism and Social Change conference 2011.

design consultancies¹⁹ focusing on social challenges. The governments²⁰ of the UK, USA and Denmark have been paying particular attention to, and involving designers in, a bid to be more innovative in tackling deep-seated social challenges.

This suggests a shift in the image of 'designer as a stylist'²¹ to 'design as intelligent problem solving' (Bonsiepe, 2006) or a 'democratisation of design', to use Bonsiepe's (ibid) term. Hailed by some as the 'new design' it has stirred the roots of the design profession, its meaning and boundaries. A case in point is the public outcry when Cottam was awarded the Designer of the Year award in 2005 for applying design principles in order to solve social problems such as healthcare and the redesign of prisons (Nussbaum, 2005). The boundaries of this 'new design' are no longer restricted to the design of hard products and tangible material outputs such as buildings or clothing, but now extend to encompass a whole range of softer and more intangible creations such as services, systems, interactions and cultures²². By one account:

The new designers and their new design thinking began in Britain with the likes of Tim Brown at IDEO when the country's manufacturing base disappeared. They took the methodology of product design and applied it to services. Now they are moving beyond that to systematizing design methodologies for all kinds of arenas, including social problems (Nussbaum, 2005).

Regardless of the origins of, and motivations for the use of design as a tool for solving social problems, it is increasingly positioned as a process or way of thinking that transcends

¹⁹ IDEO (USA), Thinkpublic (UK), Participle (UK), Livework (Norway), Experientia (Italy), Emerging Futures Lab (Finland) amongst others.

²⁰ These include organisations such as the Design Council, NESTA, UK Parliamentary Group on Design and Innovation; Social Innovation Fund launched by President Obama in the US, Mind Lab by Danish government. Intergovernmental platforms include the United Nation's Design 21 Social Design group and the Design group at the World Economic Forum Davos.

²¹ The conventional image of the designer as a stylist has stuck since the Depression era of the 1920s when designers were first hired to enhance eye appeal and add value to the products (Whiteley, 1993:13). 'Raymond Loewy, Walter Dorwin Teague, Norman Bel Geddes, and Henry Dreyfuss who came to industrial design with backgrounds in illustration, stage design and the design of store windows, had a strong orientation to how things looked, and pioneered a way of designing known as styling, or giving the product a strong visual image' (Margolin, 2002:30).

²² Buchanan talks about the four orders of design. In the first order, design is used to create two dimensional signs, symbols and images. The second order is the creation of three dimensional products and objects. Third order design involves the strategic planning of interactive activities, processes and services. Fourth order design is about shaping systems and environments and guiding ideas and values (Buchanan, 1998:14). The fourth order also involves cultures and communities, where culture is not a state, expressed in an ideology but an activity, a search to understand values that guide action (Golsby-Smith, 1996:13) See also Young et al. (2001), Junginger (2009) for levels of design influence within an organisation.

disciplinary boundaries and offers a roadmap for creating solutions (Nerenberg, 2011). Design thinking is gaining currency, especially amongst non-designers in social sectors²³.

1.3 Research questions

There is little consensus²⁴ however, around the term 'design thinking', what it means and how (if at all) it differs from other forms of thinking? In this research I examine multiple views on design thinking as framed in contemporary design practice and academic literature, and consider how one can articulate the intrinsic nature of design and designing.

The study further proposes to investigate how a design approach might help to understand and inform services for the poor. This broad and ambitious quest is pursued through a focused case study of artisan services in India. While India is the world's fourth largest economy, nearly half of its population lives on less than \$1.25 a day (World Bank, 2008b). Of the many concerns facing the Indian state, employment generation for the poor is one of the most important.

This study focuses on the artisan sector, which is the second largest source of employment in India after agriculture. There are an estimated 20 million artisans in India (Chatterjee, 2006), of which close to 6 million earn a living through weaving by hand (AIACA, 2007). The research focuses on *ikat* weavers in Orissa. While the textiles made by the artisans in this region are distinct, the artisans have much in common with artisans from other parts of India. The chief commonality lies in the range of services required by the artisans, such as access to raw materials, marketing, finance and skill development, which are provided by a mix of public and private service providers. Specifically the research explores what types of services are likely to enable artisans to improve their livelihoods²⁵. In answering this specific question, the study aims to assess the relevance and usefulness of a design approach.

To summarise, the research has three levels of inquiry:

- (i) What is design thinking and how (if at all) it differs from other forms of thinking?

²³ Some high profile organisations embracing design thinking include the Acumen Fund (Businessweek, 2007), The Bill and Melinda Gates Foundation (IDEO, 2009), Rockefeller Foundation (Foundation, 2008).

²⁴ See Walters (2011), Brown (2009), Nussbaum (2011), McCullagh (2010), Merholz (2009) for differing view and the state of design thinking. This concept is explored in greater depth in the next chapter.

²⁵ A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living (Chambers and Conway, 1992)

(ii) If and in what ways a design approach can help to understand and inform services for the poor?

(iii) What types of services are likely to enable artisans to improve their livelihoods?

The three questions are interconnected. While question (i) is an investigation in itself, it forms the guiding approach to answer question (ii). Question (iii) provides the context for the case study and also helps to answer question (ii).

1.4 The need for evidence for design in resource poor settings

While there is a gap in our understanding of how services take place in resource-poor settings, there is a parallel gap within design as to what role it can play in the social sector. Evidence for 'design thinking' as a tool for solving social problems, especially in resource-poor contexts, has been limited and there has been little to suggest that design thinking can tackle vast social problems, although several claims exist on blogs and new media. As Breslin and Buchanan (2008:37) pointed out, case studies published by design agencies often amount to little more than marketing pieces and so the gathering of evidence for benefits of 'design thinking' in the social sector has become the *bête noire* of design (Rajagopal, 2011).

Examples once hailed as the archetypes of design success for the poor were, on deeper probing, found to be problematic. These include the INDEX award-winning 'Life Straw', an inexpensive personal drinking device to purify water from an open drinking source that is unfortunately unable to protect people from infection by bilharzia worms (Stairs, 2007). The much celebrated \$100 laptop for children in developing countries, designed by Yves Behar and championed by Nicholas Negroponte of MIT's Media Lab, that had not accounted for the fact that the price of the laptop ballooned to \$195 without a minimum order of \$250,000, putting the product out of the reach of any organisation smaller than Oxfam (ibid, 2007). Or the case of D.Light²⁶ which despite its well-developed articulation of health, economic and education benefits was challenged by the Indian civil society for serving the mandate of social investors rather than maximising impact for rural Indians (2010). Thus, while the poor are collectively lumped together as the 'bottom billion', there exist cultural differences between micro communities that explains why One Laptop Per Child was embraced in Paraguay but reviled in India (Popova, 2010).

²⁶ D-light is an international consumer products company manufacturing solar and LED lights for people in developing countries without access to reliable electricity.

While there is a growing call for greater rigour in the claims for the benefits of design thinking, this is easier said than done. Firstly, valuations measuring the impact of design, as the European SEE Project network²⁷ for design, policy and innovation pointed out, are a costly exercise that not all design consultancies or small companies can afford (SEE Project, 2010). This study does not attempt to conduct an evaluation exercise of past design interventions, as without a thorough pre-existing baseline project information it is difficult to assess the impact of designed interventions. Secondly, success or failure, particularly of non-product related design interventions, could be due to a variety of factors. These may include client organisations' implementation capabilities, changes in market conditions and the capabilities of the users²⁸ involved. Finally, design interventions are often limited to consultation and generating propositions. It is less related to actual implementation beyond the creation of design specifications and prototypes, making it difficult to attribute success or failure to design engagements.

The research is not an action research project that employs professional designers to 'solve' a social problem, as social problems typically require a substantial commitment in time and resources that are beyond the scope of this PhD project. Additionally, while the research is based on existing data and assumptions, it does not make *a priori* assumptions about the true nature of problems in the artisan context. In fact one of the purposes of using a design approach is to potentially reframe and reconsider these problems in new ways that could guide decision-making for policy and practice. Design approach here is viewed primarily as a form of inquiry. The research is a case of 'research *by* design' (Sevaldson, 2010) rather than research *for*, *into* or *through* design (Frayling, 1993), though it has elements of these as well.

1.5 Research aims and objectives

The aim of this study is to establish if and how design thinking differs from other forms of thinking. The study aims to assess the notion of design thinking in contemporary design practice and academic discourse. It explores the fundamental nature of design and designing before synthesising the diverse threads in the literature to re-articulate the essential character of design as the 'way of design'. In doing so, the thesis makes an original contribution to the literature on design thinking.

²⁷ The SEE Project is a network of eleven design organisations in Europe, examining how to integrate design into regional, national and European policies.

²⁸ See Frei (2006) on customer capability variability and its implications for service design.

The thesis further makes a contribution to the literature on design in the social sector through the investigation of how a design approach might help to understand and inform services for the poor. It aims to explore how a design approach can help to reframe problems and inform policy, practice and research in the context of artisan services in India. The study was designed to meet the following objectives:

- i) To examine the notion of ‘design thinking’, and re-articulate it as the ‘way of design’ to encompass its ontological, teleological and epistemological elements.
- ii) To show how the ‘way of design’ helps to fundamentally reframe problems and prospects of artisan livelihoods.
- iii) To address the gap in micro level studies on artisan livelihoods in India by considering: how the ‘way of design’ illuminates the underlying patterns of the artisan weaving ecosystem; to understand artisan service preference values, and evaluate artisan services in light of ‘adaptive’ rather than ‘optimal’ lenses.

1.6 Organisation of the thesis

The thesis is organised in three main parts. The first part consists of Chapters Two and Three, which review the literature with respect to design thinking and the artisan case study. The second part consists of Chapters Four, Five, Six and Seven, which describe the research methodology and present the data and analysis on the artisan case study. The final part of the thesis consists of Chapters Eight and Nine, which interpret the results from the middle chapters and reflect on the findings, before concluding the thesis in light of the research aims and questions.

In Chapter Two, I examine the notion of design thinking as conceptualised in contemporary professional design discourse and literature. I begin by considering the ‘dual knowledge’ versus ‘integrated knowledge’ views of design thinking, and the equation of design thinking with design methods. I review the literature on design and designing before proposing an alternative way to frame the discussion around ‘design thinking’ that encompass its ontological, teleological and epistemological elements. Drawing from the literature on design and service design, I re-articulate the essential nature of design as the ‘way of design’, where the way implies a body of knowledge, a tradition with an ethic and an aesthetic. I propose the ‘way of design’ as constituting three elements: pattern, purpose and process, that together form the key guiding approach for this study.

In Chapter Three, I describe the artisan case study and justify its selection. I review the economic, cultural and political significance of handwoven textiles in India, and how they provide a vital means of livelihood to artisans in the country. I describe how the study views the three dominant artisan 'production' systems as service systems, and how this view helps to evaluate the services through the eyes of the artisan. The Chapter also outlines the key literature themes identified on artisans and Indian textiles and points out the gap in micro level studies that give consideration to artisan voices.

In Chapter Four, I outline the researcher positionality and worldview that guide this study. I discuss the 'axes of tension' of being a disciplinary insider versus an outsider, and a practitioner versus a theorist, and how it provided me with a special vantage point from which to consider the 'way of design'. I outline the pragmatist paradigm and mixed research methodology that guided the data collection and analysis, and state how 'hybridity' runs as a thread throughout the thesis. I discuss issues of ethics and validity and how the ethical stance taken in this research is one of recognising and celebrating artisan voices rather than anonymising them.

In Chapter Five, I consider the types of services that artisans need to secure their livelihoods, and ask: who are the actors involved in the weaving ecosystem? How do interactions take place between artisans and service providers? Using the concepts of network and journey mapping I draw out the underlying pattern of service in the artisan community. Specifically, I consider the 'zoomed out' view of the service by mapping the various actors and their network of interactions. At the same time I consider the 'zoomed in' view that maps the journey and interaction between artisans and service providers in the three systems of contract, cooperative and independent artisans. The journey is further illuminated using forms of capital to highlight the precise elements involved in the service exchange. In this Chapter I highlight how the concept of 'design as pattern' was used to uncover macro and micro patterns of artisan services.

In Chapter Six, I reflect on how discussion about purpose is a central element of the 'way of design', where the purpose is to create economic, emotional, epistemic and social values. In this Chapter I use the guiding purpose of the 'way of design' to explore what forms of value the present services help to create. In other words, why do artisans prefer one service system or provider to another? What values underpin these decisions and choices? And what are some of the specific service attributes that aid the fulfilment of these values? I begin by outlining the meaning of different forms of value, then trace the relative preference of values amongst the contract, cooperative and independent artisans. This chapter shows that while utility value was

a primary preference value amongst all three groups of artisans, other values such as social, epistemic and emotional also guided their craft making process and choice of service systems.

In Chapter Seven, I consider the epistemological character of design and its nature of sense making. I show how elements of design as process can help generate an understanding of the complexities of artisans' lives and their struggle for livelihoods, and how matching 'problem-solution pairs' cast the artisan agency in a new light. I describe how visualisation helped to generate insights and identify possibilities for future planning efforts. I use the concept of 'fitness' and 'adaptive' solutions to evaluate and answer the question: what types of services are likely to enable artisans to improve their livelihoods?

Chapter Eight shows how a design approach helps to connect the dots of policy, practice and research in the case of artisan services. Weaving together insights from Chapters Five, Six and Seven, this Chapter reviews them in light of existing literature and policies on artisans and handwoven textiles. The policies, as well as the literature, are set in the specific context of artisan services in Orissa, but also in the wider context of Indian artisans. In this Chapter I outline the eight main findings arising from this study and discuss their implications, and demonstrate how the 'way of design' has helped to reframe the problems and prospects of artisan livelihoods.

In Chapter Nine, I conclude the study by stating the original contribution made by this thesis. I state that in examining the notion of 'design thinking', the study has re-articulated it as the 'way of design', and extended the notion of design thinking beyond 'toolkits' and 'methods', to highlight what Buchanan (2001) called the 'first principles' of design. In redesigning design, the study has evidenced its transdisciplinary character. The Chapter shows how the 'way of design' has helped to illuminate the last mile of artisan services and reframe problems of artisan livelihoods. How it has helped to connect the dots: the dots between the artisan and the service provider, the dots between policy and practice, and the dots between disciplines. The thesis thus makes an original contribution to the literature on 'design thinking', and evidences the role that design can play in informing policy, practice and research in resource-poor contexts.

CHAPTER TWO

The Way of Design: Pattern, Purpose and Process

Designing is not a profession, but an attitude.

LÁSZLÓ MOHOLY-NAGY (FINDELLI, 1994)

Attempting to describe ‘design’, much less define it, is a task fraught with confusion. Design is like an ‘empty vessel’²⁹ that accommodates many different meanings and interpretations. As Heskett (2002:5) summarised, ‘To design is to design a design to produce a design.’ Design is thus a noun and a verb, a form as well as the process that creates the form. Design is an everyday activity carried out by each one of us, as noted by Papanek (cited in, Julier, 2008:40), ‘All men are designers.’ Whether we are designing our appearance or arranging our rooms (Lawson, 2006:5) we are engaged in the process of design. Yet like philosophy, articulating what one means by design is an inescapable, even if an impossible, task³⁰. Therefore, despite the conundrum of definition; writers, designers, and theorists have all tried to find ways to articulate the distinct nature of design. Increasingly this distinctness has come to be known as ‘design thinking’. In this chapter I examine the notion of design thinking as conceptualised in contemporary professional design discourse as well as academic literature. I begin by considering the dual knowledge versus the integrated knowledge view of design thinking and the equation of design thinking with design methods. I then propose an alternative way to frame the discussion around ‘design thinking’ that encompasses some of its deeper elements.

²⁹ Japanese designer Kenya Hara used the phrase ‘empty vessel’ to describe the philosophy of the company Muji. The empty vessel symbolizes Muji’s openness to receiving different customer interpretations and meanings of their products. (Hara, 2010)

³⁰ Political philosopher Michael Sandel (Justice, 2011) contends the task of answering philosophical questions is an inescapable even as it seems impossible, as we live some answers to these questions in our public and personal lives.

2.1 Design Thinking: 'dual knowledge' versus 'integrated knowledge' view and a focus on design methodology

Design thinking has often been positioned as distinct and different from scientific, management or arts thinking. A chief proponent of this view has been Cross (1999:7) who argued that design has its own distinct intellectual culture, its own designerly 'things to know' and 'ways of knowing' in comparison to the sciences or the arts. Before Cross (ibid), Archer (1979) advanced the idea of a designerly way of thinking and communicating as something different to scientific and scholarly ways of thinking and inquiry, and 'as powerful when applied to its own kinds of problems.' The distinct nature of design was framed as entailing a 'designerly' way of knowing which was based on imagination and practicality, as opposed to a 'scientific' way of knowing that was based on rationality and objectivity (Cross, 1999:7).

Where scientists used experiment and analysis, designers used modeling and synthesis to find and make things (Cross, 1999:7). Owen (1998:10) similarly advocated that disciplines such as mathematics and chemistry were more concerned about 'finding' and 'discovering' things whereas those such as design and engineering were oriented towards 'making' and 'inventing'.

Some have sought to raise this distinction on the basis of a design versus a scientific 'view of problems'. Ranjan (1997) argued that as compared to a scientific or management style thinker, a designer is 'willing to cope with a great deal of ambiguity while the boundaries of the design opportunity are gradually brought into focus'. Or as Johansson and Woodilla (2009) suggested, the focus of the designer is on the 'reconstruction and solution of problems rather than analysis of problems in contrast to the outlook of natural and social scientists'. The *telos* of the two disciplines were thus said to differ, where science was concerned with 'what is' and design with 'what ought to be' (Saikaly, 2005). This has led some to conclude that while science is concerned with the universal and predicting action irrespective of context and situation, design is concerned with the particular, namely looking at things holistically and describing conditions for change (Forlizzi, 2008:11).

The dual-knowledge thesis of design versus science, art or management has however been challenged by some theorists, who deem the divisions as 'institutionalised' rather than 'intellectually justified' (Newbury, 1996). To elaborate, individual creativity is often considered to be at the heart of design mystery and the rationale for its distinction, but exactly how the creativity of design differs from the creativity of science, political economy or other disciplines is not rationalised (Press, 1995). Friedman (2000:21) cites the example of Einstein, who believed that theory and hypotheses arise from intuition and free play of the mind, which are

then tested against empirical data. Nobel Prize winner Hayek similarly declared in his acceptance speech that 'what looks superficially like the most scientific procedure is often the most unscientific.' (McCallister, 2011). Moreover, as Simon (cited in Junginger, 2009) stated, design, like science, is a tool for understanding as well as acting. Lawson (2006:140) argued that 'analysis' and 'synthesis' in a design activity cannot be separated. Therefore, the view that 'design thinking' is 'unrestrained' (Li, 2002:394) and imaginative thinking as compared to restrained and structured scientific thinking is hardly useful. Such a division as Newbury (1996) stated of 'logical, analytical, rational, objective' on one side and 'idiosyncratic and irrational' on the other impedes successful development of art and design research.

However, recent articulations of 'design thinking', especially those stemming from professional practice, have sought to present a more 'integrated' view that combines rational-analytical styles of thinking with creative-intuitive styles. This integrated or 'third' way as proposed by Brown and Katz (2009:4) is different to Cross's 'third' way of design as something distinct to science and humanities. Brown (2005) argued that:

Most of us are trained in what I would call analytical thinking. Analytical thinking is good for analysis and cutting things apart and slicing and dicing the world. It's also good for extrapolation or prediction from the past into the future.... (It) isn't very good for trying to envision a new future and figure out how to change it. So we try to encourage companies to use what we call design thinking.

He further cautioned that while no organisation wants to run solely on feeling, intuition and inspiration, an over-reliance on rational and analytical thinking can be just as risky (Brown and Wyatt, 2010:33). This 'third' view thus attempts to assimilate the best of both worlds in 'design thinking', a use of imagination and insight on one hand with a commitment to scientific rigour on the other. Golsby-Smith (1996:5) similarly states that the 'essence of design thinking is that it is 'integrative, rather than merely analytical; visual rather than merely abstract; and humanistic rather than mechanistic.' This 'integrative' way of thinking for example also influences the kind of solutions that are sought to design problems.

Martin (2009) argues that true 'integrative' thinking is not restricted to producing either/or choices, but in considering the salient and sometimes contradictory aspects of a problem to create novel solutions that include elements of seemingly differing choices. In the pursuit of novel solutions according to Lawson (2006:14), the designer by necessity has to reach out and embrace knowledge from many different disciplines. These include but are not restricted to: the natural sciences, humanities and liberal arts, social and behavioural sciences, human professions and services, creative and applied arts, and technology and engineering (Friedman,

2005). Some such as Buchanan (cited in Sangiorgi, 2009:415) have gone as far as suggesting that design has 'no special subject matter of its own apart from what a designer conceives it to be.' In other words, the job of the designer is to focus on the given problem at hand, which may involve drawing on knowledge and expertise from a range of different subject matters. Some have argued that the new role for designers lies in synthesising these different strands of knowledge and creating tools that can enhance collective creativity (Sanders, 2001).

The notion of 'collective' as opposed to 'individual' creativity within design is a relatively recent phenomenon (Merholz, 2009). Professional practitioners of 'design thinking' consider it as one of the fundamental distinguishing aspects of their work. This form of design thinking takes on 'human-centred' perspective of problems and situations, where users are the chief focus of the design interventions and also active participants who are involved in shaping the solutions to their problems. As Brown and Wyatt (2010:32) emphasise, 'by working closely with the clients and consumers, design thinking allows high-impact solutions to bubble up from below rather than being imposed from the top.'

The focus on how designers work and think has been a subject of numerous investigations. Rowe (1987), Lawson (2006), Cross (2006), Cross (2011) have all attempted to draw out significant aspects of design thinking, doing and knowing. Yet as Wang and Ilhan (2009) point out, this literature is based chiefly on analysing the 'thinking styles' of 'great designers' to create an understanding of their 'innovative thinking' for the purposes of design education. Bayazit (2004:19) argued that the focus of design methods theorists was to work out the rational criteria of decision-making in order to optimise the decisions. However, this attempt to 'codify' design methods failed to capture the more 'irrational' nature of design (Lawson, cited in Jahnke, 2009). Many professional and experienced designers have similarly confessed that they do not always follow methods (Dorst, 2008:9). Often they rely on heuristics or tacit knowledge. The 'knowing-how' takes precedence over 'knowing-what' and methods are used based on experience rather than explicitly stated rules (Whiteley, 1993:145).

Given the variability, heuristics and non-linear aspects of the design process it may be short-sighted to equate design thinking only with design process or methods. As Dorst (2008:5) pointed out, there is an overwhelming focus in design research on the design process to the exclusion of other aspects of design and designing. Buchanan (2001:36) similarly highlighted that:

[W]e are better able to discuss the principles of the various methods that are employed in design thinking than the first principles of design, the principles on which our work is ultimately grounded and justified.

He (ibid: 38) further added that while matters of usability were important, human-centred design is fundamentally an affirmation of human dignity and that the role of design was to support and strengthen this, and actualise the values of a culture into concrete reality. The study places this affirmation by Buchanan as the starting point for its investigation into the nature of design and designing. It steps aside from a discussion centred on outward differences between disciplines, to probe deeper into the distinct character of design doing and being. It also believes that framing the essential character of design in terms of its 'thinking' only adds to the conundrum. As seen in the discussion above, issues of creativity, intuition or imaginative thinking cannot be considered an exclusive aspect of designers or design discipline. The study considers a new way from which to frame the discussion about the nature of design and designing.

2.2 The Way of Design: Pattern, Purpose and Process

The inspiration for the 'Way of Design' came in late 2010, when I had a chance to attend an ethnographic design research conference³¹ in Toyko. It was themed, 'Dō: The Way of Ethnography'. Dō in the Japanese sense signified a way or a path, a path one had traveled but also the path that lay ahead (EPIC, 2010). There are various forms of Dō in Japan: sa dō (the way of tea)³², ka dō (the way of flowers), sho dō (the way of writing) to name but a few. The concept of Dō implies a body of knowledge, a tradition with an ethic and an aesthetic. It embodies a sense of individual mastery that can only be achieved with the help of a community and a rich heritage (ibid). Dō urges practitioners to aspire for innovation within traditions, to see them as platforms of creative expression and not simply assimilation (ibid).

Design too has a Dō, a sense of ethic and an aesthetic within which designers are free to innovate and express themselves in unique ways, whilst still being part of larger culture and community. The conceptualisation of design distinctness as a 'way' gets around the issue of heterogeneity and what Lawson (2006) deemed the reluctance and non-adherence of designers to follow prescribed methods and rules. At the same time it allows design (and designers) to articulate the distinct qualities of their practice and discipline without necessarily resorting to separate these from science- or art- based styles of thinking. The discussion of design as a 'way' also helps to reorient and reframe it as a discussion on design distinctiveness beyond just 'toolkits' and 'methods', to embody the deeper and equally important aspects of its culture. As

³¹ The Ethnographic Praxis in Industry Conference (EPIC) August 2010 in Tokyo, Japan

³² See also Castille (1971) on the 'Way of the Tea' and concept of the path

Sir Richard Needham (2011) of Dyson stated, 'design is a culture, a philosophy that needs to be embedded in everything'³³.

I propose that the distinctness of the 'way of design' can be framed around three elements: *pattern*, *purpose* and *process*. The elements of pattern, purpose and process emerged while reviewing the literature³⁴ where the distinctness of design was expressed in terms of design ontology, teleology and epistemology. This understanding was reinforced through my practical experience of being situated in a design community³⁵. As such the framing of these elements is an attempt to synthesise both ideas from the literature and practice of design. The elements were distilled from the literature over a period of time and involved several iterations described below.

i) Identifying relevant literature, extracting key quotes and generating initial themes

A starting point for the literature review, consisted of putting together a bibliography. Key search words for the review included 'design thinking', 'design research', 'design theory', 'design methods', 'service design' and 'design and development'. Close to 150 books and journal articles were reviewed using the search words. During the review, I pulled out key quotes from the literature that referred to 'design' or 'design thinking'. This resulted in over 100 pages of notes organised author wise in a single document.

Using a highlighter, I pulled out key themes across the articles. This first sifting of data generated around twelve themes. These were labeled as: value of design thinking, user-centric and participatory, redefining the problem, design process, design representation, design versus scientific problem solving, design research, design in the social sector, the role of design/designer, design and development, what is design, the design focus, and history of design thoughts.

³³ Notable companies that have a design culture embedded throughout their companies include Apple, Muji, Dyson amongst others.

³⁴ The key search words for the review included 'design thinking', 'design research', 'design theory', 'design methods', 'service design' and 'design and development'

³⁵ Over the four years of carrying out the doctoral research I interacted with several designers from varying backgrounds of graphic design, multimedia design, interaction design, service design, product design, industrial design and design research. These include my immediate colleagues at the School of Design but also designers I met at conferences and studios in UK, Portugal, Tokyo and India. As part of my immersion into the world of design I spent a week interning at Thinkpublic London.

ii) Regrouping initial themes into a few big themes

The second round of sense making involved combining several themes into fewer themes under the two categories of 'conceptualising design' and 'design approach'. 'Conceptualising design' listed the ways in which design had been conceptualised in the literature such as: design as needs/problem solving, design as 'preferred situations', as more than problem solving, as an everyday activity carried out by people, as a conscious act, as a creative activity/experience. From these emerged 'design as purpose', 'design as process'. 'Design as representation' was renamed as 'Design as pattern'.

The second category of 'design approach' also had three major themes that were grouped from smaller themes. First theme was of 'problem framing'. This included all the literature that discussed characteristics of a design problem, wicked problems, redefining problems, matching problem-solution pair and problem framing as a skill. The second theme was around 'visualisation' and how data was represented. This included themes such as: agency of artifacts, representation to get user insights, reflection in conversation, prototyping, making instead of observing. The third theme was around the 'sense making character' of design thinking. This included themes such as: focus on whole instead of parts, design judgement, integrative thinking, synthesis, values in design, trade-offs and multidimensional considerations.

iii) Emergence of Pattern, Purpose and Process

At this point the two categories of 'conceptualising design' and 'design approach' came together to form one large category of the 'design approach'. The concept of the 'design approach' was expanded to highlight the ontological characteristic of 'what is design' under 'Design as Pattern'. 'Design as Purpose' focused on the teleological aspects of design to include values and other fundamental purposes of designing. 'Design as Process' focused on three elements of the design process: visualisation, problem-framing and decision-making while arriving at solutions.

iv) Refining the three elements under the meta frame of the 'way of design'

In the final stage, the literature under each of the elements was better organised for structure and coherence. Subsequently, the three elements were brought together under the metaframe of the 'Way of Design'.

The review in no way claims to be exhaustive and neither does it intend to propose the 'way of design' as 'the' approach characterising the distinctness of the vast and layered disciplines and practices of design. It is framed here for the primary purposes of guiding the study, its data

collection and analysis, but also as a way of inspiring the research to embody the spirit of the 'way of design', as later chapters will demonstrate. In the next section I detail the three elements of pattern, purpose and process.

2.2.1 Design as Pattern

A primary understanding of the term 'design' is its association with the term 'pattern'. Design in this sense is used as a noun to describe a 'decorative pattern' (Friedman, 2000:9) or a 'distinctive mark' (Friedman, 2005), that denotes the overall 'look' of a product such as, 'I like the design of that dress' (Julier, 2008:37). It is also used to denote more abstract ideas such as 'a plan conceived in the mind of something to be done' (Potter, 2002:10). Friedman (2000:9) spoke of design as an 'underlying scheme' that governs functioning, developing or unfolding of elements. Often this pattern is marked or uncovered through visual representation, especially when presenting complex ideas and propositions (Brown and Wyatt, 2010:34). In architecture for example, the sketch design of a building is often used as a means of eliciting response from the client, a way of gaining clarity about their wishes rather than trying to articulate performance specifications (Lawson, 2006:48). The sketch design also forms an effective way to make apparent the disparate needs of groups in multi user buildings such as hospitals and help to overcome perceptual gaps within a team (Cagan and Vogel, 2002:210).

Increasingly however, designers are involved in creating patterns that involve dynamic entities. Here, the pattern is no longer about a dress or a product, but involves representation of an entire system or service. A service is a deed, act, performance and a form of exchange (Bitner and Brown: 2008). For the purposes of design however, it has been viewed as a 'complex social system' that consist of many interacting agents, 'whose interactions create emergent properties, qualities, and patterns of behaviour' (Junginger and Sangiorgi, 2009). Depicting this pattern in order to restructure the elements of a service (involving people, artefacts, activities, processes) is particularly challenging when it involves multiple actors who interact across different spaces and times.

Kimbell's (2009) study of service design practice showed that the designers considered service in its entirety as well as in the detailed artefacts surrounding it. Viewing the service in its entirety helped designers to acquire an understanding of the context and shape the problem (Morelli, 2007:3). A key part of this process involves creating a visual representation of the network of actors that are part of a service system and influence it. It involves understanding their identities, aims and roles in the service process (ibid: 3) as well as their interactions with other actors in the system. While mapping the actor network creates an understanding of the

overall ‘look’ of the service system, further representation in the form of a ‘journey map’ helps to visualise each step of the user journey and highlight the ‘touchpoints’³⁶ between the service participants (ibid:5).

2.2.2 Design as Purpose

The discussion of purpose, that is, the ultimate basis on which design is grounded and justified (Buchanan, 2001:36) forms a central element of the ‘way of design’. While design practice may sometimes be limited to designing ‘experiences’³⁷, the full nature of design extends beyond these short term and often commercial considerations. At the outset, the purpose of design is summed up by Simon (1982) as helping to move from ‘existing’ situations to ‘preferred’ ones. Within these preferred situations are expressed a range of purposes from improving efficiency to promoting human happiness. A good way to understand this further is to use Frascara’s (2002:39) three categories of design, as design that makes life possible, easier, or better. In the making life easier category lies the efficiency or utilitarian discourse of design. ‘Why to design, otherwise, if not to increase the efficiency of something?’ (Frascara, 2002:39). Here design is often perceived as a means to ‘satisfy needs’, ‘increase comfort’ and ‘bring efficiency’ to people’s lives (ibid: 39).

Stepping aside from this utilitarian view, Forlizzi (2008:15) talks about the broader purpose of design in terms of ‘designing new artifacts, services, systems, or environments’ that consider not only their functional, but also aesthetic, symbolic, emotional and social qualities. In the same light Julier (2008:14) talks of design as primarily a value creation activity, not just commercial value but social, cultural, environmental, political and symbolic values³⁸. For Hatchuel (cited in Dorst, 2006:12), design is about problem solving, but cannot just be reduced to problem solving. He illustrates this through the following example:

[A] group of friends coming together on a Saturday night. One problem situation is that they are “looking for a good movie in town”; the other problem situation is that they set out to “have a party.” The first situation is considered to be “problem solving,” while the second situation is, in Hatchuel’s terms, a real design project.

³⁶ ‘Touchpoints’ in service design is used to indicate the tangibles that make up the total experience of using a service (Livework, 2008).

³⁷ Pine and Gilmore (cited in Bowen and Ford, 2002:448) coined the term ‘experience economy’ to argue that successful businesses offer engaging and authentic ‘experiences’ to customers, than products or services. The increasing investment of companies in delivering experiences (Brown and Katz, 2009:112), has led to many design firms being engaged to deliver better ‘user experience’. As Heskett (2002:196) suggests that this has increasingly led to designing for people so ‘incapable of experiencing anything for themselves that they have to be supplied with a constant flow of artificial, commercialised, and commodified experiences that take on their own reality.’

³⁸ These are defined in Chapter Six on Design as Purpose

There is an inherent aesthetic, novel element to problem solving that is characteristic of design (Lawson, 2006). Very good design, according to Lawson (2006:5) can approach the power of art and music to lift the spirit and enrich our lives. Similarly Pye (1978:102) stated that the aim of design is ultimately to promote human happiness. The true spirit of 'human-centred' design thus extends beyond matters of usability to a fundamental affirmation of human dignity (Buchanan, 2001).

Similarly within service design some have called for a shift from the focus on creating 'moments of truth'³⁹ to creating 'value systems' (Sangiorgi, 2009:416) and 'value propositions' (Edvardsson et al., 2005:112) where value is co-produced with and for users. The case for focusing on value in designing services is underpinned by the logic that 'consumers do not buy goods or services, but rather purchase offerings that render services, which create value' (ibid: 112). Consumer choices are influenced by human values, which are viewed as 'desirable trans-situational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity' (Schwartz, cited in Allen, 2001:112). Therefore, while some may value freedom, others may value a life of excitement or beauty (Allen, 2001:112). The purpose of design thus is to create products and services that allow individuals to attain their valued ends.

2.2.3 Design as Process

The conceptualisation of design as essentially a process, an activity, a way of moving towards ever changing goals has received foremost consideration in the literature. For some such as Friedman (2000:9), this meaning of design as a process takes precedence over all its other meanings. As highlighted in the introduction to this chapter, all men are engaged in the process of designing in moving towards 'preferred situations'. However, Potter (2002:10) distinguishes design from 'making' or 'spontaneous' activity. It is a conscious process of shaping and form giving to things but also 'systems and programs' (Dilnot, 2003). Ranjan (1997) combines purpose and process in calling design a 'responsible and creative activity that aims to understand human needs and aspirations' to generate effective solutions. Dorst (2006:17) described the design process as a 'resolution of paradoxes between discourses in a design situation'. A more dynamic conceptualisation of the process is made by Jonas (2007:1369), who referred to design interventions as 'episodes in the process of evolution'. He added that while most of the results disappeared a few are integrated further into the process

³⁹ This is described as the moment when the customer meets the front stage employee of a service provider and experiences the service (Norman, cited in Nesheim, 1990:182).

(ibid: 1369). In this section I highlight three main characteristics of the conscious process of designing. They relate to the use of visualisation for sense making, matching problem and solution to co-evolve them and using the principle of fitness to evaluate design solutions.

i) Use of sketching and visualisation as a tool for reflection

Sketching in design serves as a tool for a 'reflective conversation with the situation' (Schon, cited in Jahnke, 2009:3). This conversation or dialogue as Goldschmidt (cited in Lawson, 2006:281) points out is moving back and forth between 'seeing that' and 'seeing as', where 'seeing that' is a way of making reflective criticism and 'seeing as' a process of making analogies and reinterpretations. Ranjan (1997) highlighted that the marking on paper provided the designer with a:

a multilevel and internodal dialogue between the two brain hemispheres that is critical for creative reinterpretations of possibilities and for pattern recognition of complex new relationships that may have been studied in isolated instances but that need to fall together in the process of design synthesis.

Others such as Jones (cited in Lawson, 2006:26) stated that this vastly greater 'perceptual span' enabled the designer to make fundamental changes and innovation than would ever have been possible in the vernacular process. Sketching allows a designer to 'make creative connections and draw meanings between seemingly disparate and unconnected domains of knowledge', an ability to 'zoom in' and 'zoom out' to see both the big picture and the minute details at the same time (Kokotovich, 2007:67).

The fundamentally exploratory nature of design and its use of sketching as a means for exploration is summed up beautifully by Wylant (2008:13):

The sketch is exploratory, effectively a mini hypothesis in a what-if scenario used to establish relevance. The use of placements here allows the designer to make sense of one's design intent without an undue commitment to the idea while it is still embryonic. There is an inherent flexibility in this where ideas evident in the sketch may be adopted, or they may be forfeited in favor of other ideas as captured in other sketches. Further, features in one sketch may be interwoven with ideas from additional sketches. In evaluating the sketch using placements, the designer can learn more about the extent of the design problem, his or her design intent, and the necessity for further exploration.

Related to sketching is the use of 'prototyping', where proposed ideas for products or services are tested and developed further (Brown and Wyatt, 2010:35). Prototypes in design are used to 'uncover unforeseen implementation challenges and unintended consequences' (ibid:35). When these prototypes are shared with users, they help to develop insights that are not perceptible in the normal course of concept development (Ranjan, 1997). Prototyping also sometimes entails 'role playing', especially when the idea under development is a service. Role

playing can help to identify first hand the conflicting viewpoints or experiences that a potential user might undergo (Lawson, 2006:240).

ii) Problem framing and the use of matching problem-solution pairs

The resolution of paradoxes in the process of design often entails the process of reframing the problem so as to see different aspects of the problem, particularly when the problems include 'wicked' or 'ill-structured' problems. As Coyne (2005) pointed out, 'wicked' problems are subject to redefinition and resolution in different ways over a period of time. Further they are not objectively 'given' and their formulation depends on the 'professional' viewpoints of those presenting them. Similarly 'ill-structured' problems include those where problem-solving effort involves learning, or redefinition of the problem, and therefore cannot be considered as well-structured (Dorst, 2006:6).

The process of 'framing' such problems involves selectively viewing the design situation in a particular way for a period or phase of activity. This selective focus enables the designer to handle massive levels of complexity and the inevitable contradictions in designing by giving structure and direction to thinking, while simultaneously temporarily suspending some issues (Lawson, 2006:292). In creative design thus the designer often seeks to generate a matching problem-solution pair, through a co-evolution of the problem and solution (Dorst, 2006:10). Creative design involves a period of exploration in which problem and solution spaces are evolving, and are unstable until (temporarily) fixed by an emergent bridge, which identifies a problem-solution pairing (ibid:10). Cross (1982:102) called this process of oscillation as matching problem-solution pair. In this process several alternate scenarios are developed and examined critically which may lead to restatement of the problem itself (Ranjan, 1997).

Cross (1998) further identified problem-setting as an important design skill, a hallmark of expert designers who often stepped back to fundamentally reassess the purpose, function and use of the product (Cross and Edmonds, 2003). Problem framing is a primary aspect of the design process, not least because 'questions about which are most important problems, and which solutions most successfully resolve problems are often value laden' (Lawson, 2006:124).

iii) Pursuit of 'adaptive' rather than 'optimal' solutions

Design problems are frequently viewed as 'multidimensional', with a need to devise an 'integrated solution' to a range of requirements (ibid:59). To illustrate this interconnected nature of design problems and solutions, Lawson (ibid:60) cites the case of designing a window; he highlights that while enlarging a window might provide a better view and more

light, it may also lead to greater heat loss or loss of privacy. Design therefore involves embracing messy reality and making value judgements about which 'constraints to emphasise and which alternatives to choose from' (Lawson, 2006:81). This is a skill which according to Brown and Katz (2009:4) designers have learnt over many decades in matching human needs with available technical resources within the practical constraints of a business. Synthesising alternatives to the numerous constraints involves making sense of the 'whole', which is greater than the sum of its parts (ibid:56). The design quest is thus not for 'optimal' solutions but rather as Lawson (2006:121) suggests for a whole range of 'acceptable' solutions, 'each likely to prove more or less satisfactory in different ways to different clients or users'.

In addition to resolving contradictory objectives, the design quest is to create highly flexible and constantly evolving systems, rather than inflexible, hierarchical ones that are designed once and executed many times (Brown and Katz, 2009:187). According to Gray and Pirie (cited in Prentice, 2000:527) unlike social theories which sometimes tend to discuss events in static or absolute terms, the discussion and practice within design is comfortable with the idea of 'messiness, randomness, non-linearity, adaptivity and feedback'. This has led design to embrace the concept of 'fitness' from complexity theory. The concept of 'fitness' is embedded in the belief that complex systems shape their behaviour within a 'fitness landscape'. Further as these complex adaptive systems fit themselves to the landscape, the context itself takes on different shapes and meanings (Friedman, 2000:6).

Korhonen (2009:262) talks about 'fitness' as fitness for purpose. A design is 'considered to have better fitness than another design if it performs its intended function more efficiently or effectively' (ibid:262). Thus what is fit at one point may not be fit at another. Designing for fitness therefore requires making considered judgement in light of what is deemed as a 'fitness' criteria. According to Lawson (2006:271) this is not an easy task; he points out that the 'goodness of a view' and 'energy efficiency of a window' cannot be measured using the same scales. Negotiating a 'good' solution therefore to a complex design brief is tricky. Such an evaluation further requires making judgements and balanced decisions in an ethical and moral context (ibid:233). The 'sense making' aspect of design thus involves problem framing, problem solving, analysis and synthesis and evaluating solutions in light of the fitness landscape.

2.3 Conclusion

In this Chapter I have considered the arguments put forth for design thinking. I examined the dual knowledge and integrated knowledge view of design thinking and drew attention to how design thinking was viewed synonymously as design methods. I pointed out the inherent flaws and contradictions in the arguments, and proposed that there was a need to consider deeper ontological, teleological and epistemological elements of design (and designing) to better express the essential character of design. This essential character was re-articulated as the 'way of design' consisting of the three elements of pattern, purpose, process. Pattern indicated the changing nature of patterns that designers were engaging in; from two dimensional patterns such as a distinctive mark to more complex and dynamic patterns such as systems and services. Purpose described the *telos* of design, which is fundamentally to create value at an individual and community level; values such as utility, emotional, social, cultural and aesthetic value. Finally, I reflected on the process of design that is considered an essential element of its distinctive 'way'. The process involves use of visualisation for sense making, reframing problems by considering them in light of solutions, and viewing solutions in light of a fitness criteria. In other words the evaluation of solutions in design are considered from an 'adaptive' and 'flexible' perspective rather than a 'fixed' and 'optimal' perspective.

CHAPTER THREE

Artisans and services in Orissa

*The natives there shew very much ingenuity in their curious manufactures,
as in their silk stuffs, which they most artificially [ingeniously] weave,
some of them very neatly mingled with silver or gold, or both.*

TRAVELLER'S ACCOUNT, 'VOYAGE TO THE EAST INDIES' PUBLISHED IN THE MID-17TH CENTURY
(THAPAR, 2000)

As the traveller's account above illustrates, India has been home to some of the world famous textiles for centuries. Many of these exquisite textiles are handwoven by families, for whom craft is a vital source of livelihood. In this chapter I discuss the economic, cultural and political significance of handwoven textiles in India. I describe the case of artisans in Orissa who form the focus of this study, and outline their commonalities and differences with artisans in other parts of India. I outline the gap in the literature with respect to artisans and handwoven textiles and lay out the specific research questions that this study will answer using the 'way of design'.

3.1 Cloth: Cultural, political and economic significance

Few countries in the world have been more conservative about their dress than the various castes and races of India (Bayly, 1992:303). The way a turban is tied or blouse is cut can indicate everything from marital status to social status and caste. In ancient India, cloth, in addition to signifying the social and political status of a person was believed to transmit holiness, purity and pollution (ibid:285). Different colours and textures of a cloth were considered to alter the moral and physical substance of an individual (ibid:287). Many of these beliefs are true even of contemporary India today where certain types of fabrics and garments are worn on important celebratory and auspicious occasions.

The deep significance of cloth that bound the social and cultural fabric of India was perhaps best understood by Mahatma Gandhi, the legendary Indian freedom fighter. In his campaign

during India's freedom struggle he used *khadi*⁴⁰ to symbolise independence and self sufficiency (Gillow and Barnard, 1993) launching the first *swadeshi*⁴¹ campaign to boycott British goods (Bayly, 1986:310). 'Homespun' for him represented a talisman and the making of cloth through spinning, a prayer (ibid:312). He emphasised the purity and godliness imparted to the weavers by 'homespun'. In his hands *khadi* regained its transformative and magical qualities, while the spinning wheel took its place on the Congress flag (ibid: 314), which is today India's national flag.

The Gandhian ideology and political legacy of '*swadeshi*' played a key role in shaping post-independence textile policies in India (Leadbeater, 1992). Gandhi firmly believed that mills starved villages of employment. '*Swadeshi*' thus encouraged a set of values in relation to industrial development in India (Leadbeater, 1992:38). The political legacy of '*swadeshi*' continues to date where the handloom⁴² sector is protected vis a vis the mill sector (ibid:38). Promotion of handloom weaving is seen as a key to achieving the twin objectives of providing employment to the weaker sections of the society while catering to the consumption needs of the masses (ibid:25).

There are an estimated 6.5 million artisans in India who are involved in weaving by hand (AIACA, 2007). Of these close to 60 percent have been estimated as living below poverty line⁴³ (NCAER., 2010). Their large numbers has meant that they have traditionally been an important political constituency for the government. Various institutions have been set up to promote craft enterprises and implement artisan welfare schemes by the government. Budgetary outlays for handloom have risen from \$2 million in the first Five Year Plan⁴⁴ (1951-1956) to \$175 million in the Eleventh plan⁴⁵ (2007-2012). Handloom today accounts for nearly 15 percent of India's total textile production (Ministry of Textiles, 2011:136). The

⁴⁰ Khadi is a handspun and handwoven fabric which is still used in India today.

⁴¹ 'Swadeshi' was the key campaign motto during India's freedom struggle and literally translated means 'ones own country'.

⁴² In this thesis I use 'handloom' interchangeably with 'handwoven', the former being the official government term to represent the industry.

⁴³ Calculating poverty line in India has been a controversial issue with there being different standards for rural and urban areas and also amongst different states of India. For rural area, as in the case of this study the widely agreed benchmark is \$80 per month for a family of five people.

⁴⁴ Indian government uses a 'Five Year Plan' strategy to allocate resources and plan the economy of India. The plan is developed, executed and monitored by the Planning Commission of India.

⁴⁵ Planning Commission (2007)

handwoven cloth produced by the different artisan communities spread across India each have a distinct style of expression and technique.

3.2 Artisans of Orissa

From the large number of artisan case studies one could have chosen from, I have selected the case of *ikat* weavers of Orissa. At the outset my interest in these artisans and textiles go back to early college days, when I volunteered at craft exhibitions. The stunning *ikat* fabrics made a deep impression on me. But equally the choice is because Orissa, where these fabrics are made is one of the poorest and most industrially underdeveloped states in India. Located in the Eastern part of India (see *Figure 3.1*), the state has one of the highest rate of unemployment amongst low-income states in India. It faces many different levels of poverty as the Orissa State Development Report (2003) indicates:

Besides structural poverty, the state also faces poverty like conjunctural poverty (due to floods, cyclones, droughts, etc.) and destitute poverty (of persons lacking either money or material to survive). In terms of the development indicators like literacy rate, infant mortality rate, per capita income, etc, the living conditions of the people of the state are considerably lower than the national average.



Figure 3.1: Map of India and Orissa

Despite this developmental poverty, Orissa is rich in natural resources especially precious mineral deposits of bauxite, coal and iron ore (ibid). The state is dotted with ancient temples and monuments created out of stone carvings. It is also one of the richest and most diverse states in India with respect to craft traditions. Traditional crafts include wood and stone carvings, silver filigree, appliqué, dhokra casting, bell metal works, basketry, palm leaf paintings and handwoven textiles (ibid).

Craft based cottage industries are a major source of employment in the region, after agriculture. According to the Planning Commission (ibid) craft production holds considerable promise for gainful employment, especially for the less educated and technically under qualified poor people in Orissa. Further it provides multiple advantages such as low capital investment, eco-friendly nature and migration reducing effects, all of which carry great potential for economic development. The handloom industry in Orissa provides direct employment to an estimated 200,000 weavers (ibid), justifying its choice for the research. The Orissa government budget to support handloom industry was close to \$10 million in the year 2008-2009. Sales generated by the handloom sector in the same year were to the tune of \$45 million (Department of Textiles and Handloom Orissa, 2011).

Amongst the many textile traditions of Orissa⁴⁶, it is most renowned for its tie-dye tradition or *ikat*. The term *ikat* originated from the 'Malaysian term *mangikat*, meaning to bind, knot or wind around (Desai, 1989). It is a way of resist dyeing that involves a sequence of 'tying or wrapping and dyeing sections of bundled yarn to a pre determined colour scheme prior to weaving' (ibid). The Orissa *ikat* is visually striking in its fine feather like pattern motifs, and 'sophisticated curvilinear treatment of form that uses tonal gradation to enhance depth.' (Chisti et al., 2000).

Orissa produces both single and double *ikat* patterns. Single *ikat* pattern is when only the warp or weft is tie-dyed. In double *ikat*, both the warp and weft are tie-dyed to make complex patterns (Crill, 1998:9) (see *Figure 3.2*). Double *ikat* is presently found only in India, Indonesia and Japan (Desai, 1989:8).

⁴⁶ Amongst the traditional textiles from different parts of Orissa are the *Khandua* sarees of Nuapatna, *Bomkai* of Sonapur, *Kotpad* from Kalahandi, silks sarees of Berhampur and the Sambalpuri *ikat* sarees from Western Orissa.

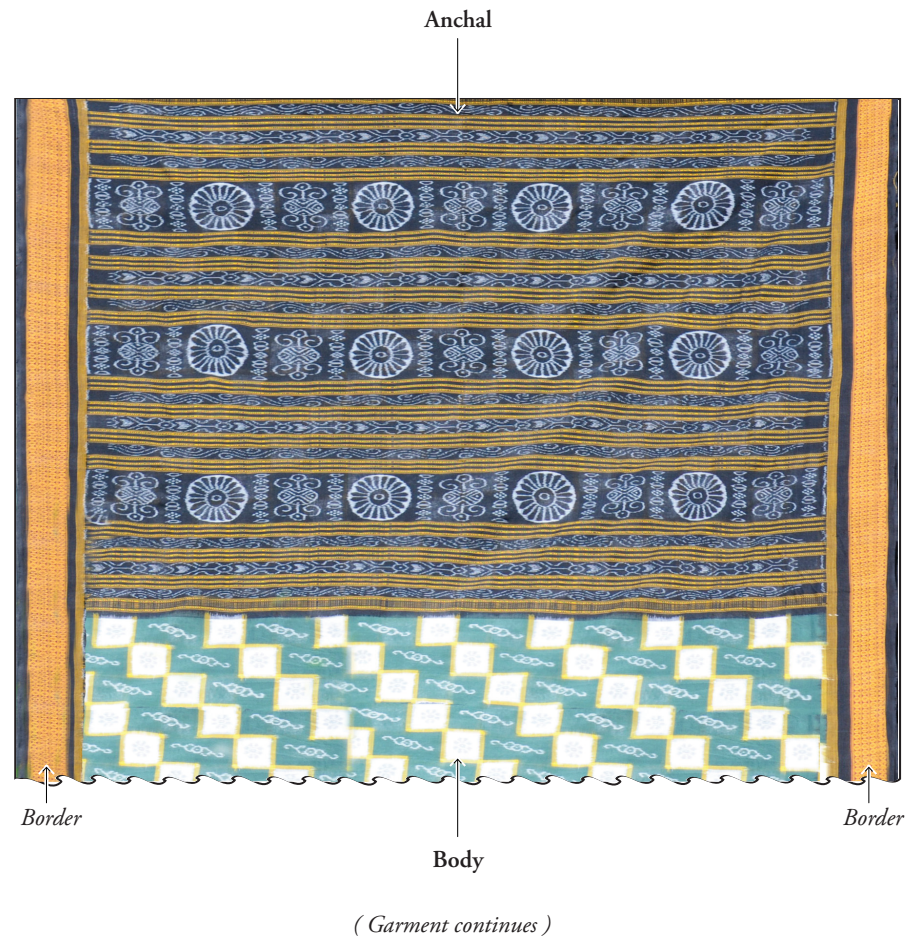


Figure 3.2: Structure of a double ikat saree

Crill (1998:9) described the skill required to make double *ikat* patterns as:

For any but the most random design the process obviously involves a great deal of careful sorting of the threads before and after dyeing, meticulously systematic wrapping and unwrapping of the areas to be resisted or dyed, and particular care in the setting up of the warps or wefts on the loom to ensure that the pre-dyed sections appear in the right place of the finished cloth. Extraordinary precision is needed to place even a single weft ikat motif within a woven square, although the result gives the appearance of one of the simplest ikat patterns; and infinitely more exactness is essential at all stages of the production of a complex double ikat Patolu saree.

Orissa *ikat* is popular all over India. It is chiefly used as sarees⁴⁷ but also as furnishing fabrics and fabric to make stitched garments. Much of Orissa *ikat* is identified in the market as *Sambalpuri ikat* after the region of production in Western Orissa. The small towns of Bargarh, Barpali and Jhilminda are the main centres of *ikat* weaving in Sambalpur district⁴⁸ (Crill, 1998:110).

⁴⁷ A saree is a traditional garment in India made of 5.5 metres of unstitched cloth.

⁴⁸ Barpali and Bargarh town are now part of Bargarh district.

The research focuses on the Meher weaving community who are the primary creators of *ikat* or *bandha*⁴⁹ in Orissa, in particular the Bhuliya Mehers who weave tie-dyed cotton sarees.



Figure 3.3: A Meher couple in Bandhpali

There is wide speculation about the origins of the Meher community who are thought to have migrated from another part of India. Mohanty (2003) proposed that they originally migrated from Northern India, perhaps Rajasthan. Gittinger (1982) argued that it was possible that they migrated from Uttar Pradesh in the 14th century, and before that had their home in Western India. Crill (1998) on the other hand argued that it is likely that they migrated from Chattisgarh (formerly Central Provinces) whose dialect they still speak, but which has no tradition of *ikat* weaving itself. She stated that:

As today's Sambalpur district, Orissa's main inland ikat weaving area was part of the Chattisgarh division of central provinces until 1905, it would seem very natural that residents of Chattisgarh would be found there. It is likely that the ikat technique was not 'brought' by any incoming group, but evolved there as a technique that assisted in the patterning of fabric, to be used alongside or instead of weaving techniques.

Unlike other parts of India, where local textiles are sometimes consumed by patrons largely outside the artisan community, in Orissa, it is the local people themselves who patronise these colourful fabrics. Crill (1998:109) adds that:

Today Orissa is the only part of India where locally made ikat saris are worn as the principal female costume and although they are often substituted for cheaper saris printed in ikat designs, traditional ikat fabrics outnumber all others in many Orissan villages and to a lesser extent, towns. They are also invariably worn by dancers performing Odissi, the Orissan style of classical dance.

⁴⁹ *Ikat* is referred to as *bandha* in local language Oriya, literally meaning tie-dyed yarn

In the next section I will discuss how the handloom industry is organised, as outlined in the extant literature on Indian artisans and handwoven textiles.

3.3 Organization of the handloom industry

The handloom industry in Orissa, much like the handloom industry in other parts of the country fall under the informal sector⁵⁰. The informal sector is described as a sector that:

[U]ses low levels of capital, technology, and skills. The productive enterprise is often not legally or practically distinguishable from the household controlling it. Production, consumption, investment, and reproduction are interrelated such that “net income” or “profit” cannot be calculated. The sector is highly heterogeneous, involving self-employed and wage workers, some acting entrepreneurially and making savings while others eke out survival under conditions euphemized as “distress” (Harriss-White, 2010).

The artisans thus primarily use their family labour and work out of their homes. Artisans purchase raw materials from service providers and access to market too is unorganised with multiple channels of reaching the consumer from village fairs to local shops, wholesale to retail trade.

The literature⁵¹ on Indian textiles suggests that there are mainly three types of artisan systems: the cooperative system, contract system and independent weaver system. These distinctions have been made as per different production arrangements in the handloom industry. The distinction is primarily based on the source of financial capital used for production. Below I briefly describe the three types of systems:

(i) **Contract weaver system**

Under this system the weaver works on contract with a master weaver. A master weaver is a weaver turned entrepreneur, who invests his own capital and employs other weavers (Narasaiah, 1999:51). This is sometimes referred to as the ‘putting out’ system where the weaver works on the materials ‘put out’ to him by the master weaver (ibid:52). Under the ‘putting out’ system, the master weaver supplies weaver with working capital, usually in the form of materials, design and so on and takes back woven cloth for marketing (ibid:52).

⁵⁰ Only 7 percent of India’s total workforce is employed in formal sectors. Close to 60 percent are employed in agriculture, which is not considered part of the informal economy. The informal sector in India is estimated to provide employment to 34.4 percent of the people and contribute 32.4 percent of the total GDP (Charmes, 2000).

⁵¹ See Narasaiah (1999), Roy (1993), Mines (1984)

(ii) Cooperative weaver system

In the cooperative system several member artisans are collectively organised, and each is a shareholder. The idea of the cooperative is to ensure a fair deal for each of its members and avoid artisan exploitation. While artisan cooperatives are supposed to be locally owned or managed, many a times they are promoted, subsidised and even managed by governments or non-profit organisations, giving them a quasi-public or social enterprise-like status. The cooperative typically provides its members with yarn, designs, marketing and financial services. Most government welfare schemes for weavers are channeled through the cooperatives (Mines, 1984).

(iii) Independent weaver system

In this system the weaver works out of his home with his own loom. He purchases raw material directly from the market from a variety of service providers and markets his products himself (Narasaiah, 1999). Theoretically an independent weaver is his own capitalist and employer but has limited capacity to withstand market fluctuations in supply and demand. This system is also referred to as the 'family firm' system where all members of the family are engaged in production.

According to the Handloom Census 2010 (NCAER., 2010), in India 61 percent handloom weavers work as Independent Weavers, 39 percent work on contract while 5 percent weavers work with cooperatives and institution.

3.4 This study

The literature review on Indian textiles shows that the majority of literature⁵² on Indian hand woven textiles has tended to be product-centric; that is it has focused largely on the craft object, technique, aesthetics and patterns involved highlighting the symbolic and cultural significance of textiles⁵³. Others have traced it from a historical perspective to describe its evolution from origins to present day status.⁵⁴ Yet others have written from a socio-economic or political perspective and have provided useful insights on significant contextual factors and

⁵² I discuss the methodology of literature review in Chapter Three.

⁵³ Crill (1998), Crill and Sutra (2006), Cooper and Gillow (1996), Chisti et al (2000), Dhamija et al (1995), Fischer et al (1973), Gillow and Barnard (1993)

⁵⁴ See Irwin (1957), Irwin (1975), Irwin and Schwartz (1966), Ramaswamy (2006), Guha (1989), Guy (1998)

policies that have shaped this industry⁵⁵. Similarly there is also a small body of literature that has focused on empirical case studies especially around the role of artisan cooperatives in India⁵⁶. While all of these help to understand the larger picture of the Indian handloom industry, they do not help us sufficiently to understand the perspective from the point of view of the artisan. In particular they do not help to understand how artisan services related to handloom production are organised and experienced at the micro level and their effective role in promoting artisan livelihoods.

As outlined above much of the literature views artisan systems as production systems and largely examines the financial exchanges taking place between the artisan and the service provider. In this research these 'production systems' have been viewed as 'service systems'. Instead of a discussion centred purely on financial exchanges, the research seeks to uncover the broader patterns of exchanges carried out between the artisan and service provider by using the 'way of design' to inform the inquiry. The specific question it investigates is what types of services are likely to enable artisans to improve their livelihoods? It seeks to explore what patterns exist in the weaving ecosystem of artisan service? Why do artisans prefer one service provider over the other? What are the underlying values that inform their decision making? The research aims to explore these questions across the three groups of artisan systems of contract, cooperative and independent artisans.

3.5 Conclusion

In this Chapter, I described the artisan case study and justified its selection. I reviewed the economic, cultural and political significance of handwoven textiles in India, and highlighted how they provide a vital means of livelihood to artisans in the country. I described how the study views the three dominant artisan 'production' systems as 'service' systems, and how this view will help to evaluate the services through the eyes of the artisan. The Chapter also outlined the key literature themes identified on artisans and Indian textiles, and pointed the gap in micro level studies that give consideration to artisan voices.

⁵⁵ See Gittinger (1982), Guha (1989), Haynes and Roy (1999), Hossain (1979), Hossain (1988), Mahapatro (1986), Nambiar (1996), Patnaik and Mishra (1997), Roy (1993) and Roy (1996)

⁵⁶ See Shanmugasundaram (1987), Ramaswamy (2006), Harper and Roy (2000), Dharmaraju (2006), Moij (2002), Kakade (1947)

CHAPTER FOUR

Hybridity: Study methodology

I am for richness of meaning rather than clarity of meaning; for implicit function as well as explicit function, I prefer 'both-and' to 'either-or', black and white, and sometimes gray to black and white.

ROBERT VENTURI (NORMAN, 2007)

'How has your experience been, coming from another discipline?'. It was only when this question was raised at one of my conference presentations that I had stopped to fully consider the implications of 'hybrid research' and a 'hybrid researcher'. Throughout the four years of this doctoral research, the tension of being a disciplinary 'insider' versus 'outsider', 'social scientist' versus 'design researcher', 'practitioner' versus 'theorist', 'looking back' versus 'looking forward' served as an axis around which my person revolved. In this chapter I begin by exploring these 'axes of tension' and how they guided the study methodology. I consider my position in the research and the world view that informed this study. I conclude by outlining the specific research strategies and methods that were used to collect data and guide analysis.

4.1 Research philosophy and methodology

4.1.1 Researcher positionality

A starting point for this study was my disciplinary training and background in the social sciences and my curiosity and eagerness to explore how the 'way of design' could inform problems of poverty and services for the poor. My primary challenge therefore at the beginning of the study lay in acquiring the depth and understanding of a new disciplinary culture and taking care to represent and frame it in an authentic manner. While many (including my immediate colleagues at the School of Design) considered me as a disciplinary 'outsider', my own view until that pivotal question raised at the conference, was that of being an 'insider', as someone who intuitively grasped and understood the 'way of design'. Aside from the fact that I

had spent a year training in interior design at the end of my senior secondary schooling⁵⁷; my nine years of practical experience of development projects in India had involved dealing with ‘wicked’ problems. I had to operate under multiple resource constraints and find ways to balance the needs of the community, with agendas of donor organisations, and delivery capacities of the organisation I was working with. In other words I was ‘designing’ solutions to poverty. This made the ‘way of design’ intuitively familiar to me. My view of things as ‘black and white, and sometimes grey’ found resonance with the ‘way of design’ that was comfortable with messiness, ambiguity and non-linearity. I therefore viewed myself as a disciplinary ‘insider’. At the same time, having encountered some of the uncritical arguments and overclaims of ‘design thinking’ I was compelled to be a skeptic and consider myself as a disciplinary ‘outsider’. In this study I have exploited this axis of tension of being an ‘insider-outsider’ to my special vantage point. Being an ‘insider’ enabled me to grasp and assimilate the ‘way of design’, while being an ‘outsider’ helped me to articulate the distinctness that was at times lost on the ‘insiders’, and with distance to allow consideration of ‘intellectually’ rather than ‘institutionally’ justified claims of design thinking.

In determining how to answer the question of ‘if and in what ways a design approach can help to understand and inform services for the poor?’, I considered three possible routes before justifying the one that is taken in this study. A primary route to answering the question of how design approach helps to inform services for the poor would have been to study how it has helped in a specific context. As outlined in the introduction, studies of design (with a capital D) interventions in resource poor settings—especially when they concern services rather than products for the poor—have been limited. Even if one did succeed in identifying such a project, the need for baseline information along with the many variables that could affect success or otherwise of project outcomes (expertise of the designer, capacity of the implementing organisation, capability of users) made it difficult and potentially costly to establish how a design approach has helped. This approach was therefore considered unviable.

The next option was to employ or observe a professionally trained ‘designer in action’ who was involved in solving problems in resource poor settings. As mentioned above there were few designers/design firms in India and outside who were actively engaged in designing services for the poor, when this study commenced in early 2008. The increasing involvement of designers in social development settings is a relatively recent phenomena compared to its more established involvement in commercial and market-driven ventures. Furthermore, this

⁵⁷ Senior secondary schooling in India is Class XI and XII.

approach of observing how expert designers approached problems would have been similar to what Dorst (2008:5) criticised as a focus of design method theorists. As outlined in Chapter Two, there is considerable heterogeneity in how designers approach problems, with no two designers approaching problems in the same manner. Further this amounted to equating a designer with a design approach, whereby the outcomes were designer-specific. While there is no getting away from designer-specificity (as I will discuss in the concluding chapter to this thesis), the aim of this study was more fundamental than engaging professional designers and measuring design outcomes of practical projects; both of which as outlined above are impacted by a number of variables. Aside from this, social problems typically require substantial commitment in time and resources that were beyond the scope of this doctoral project.

The aim of this study was to explore how the 'way of design', by which I mean the concepts, principles and purposes fundamental to its disciplinary culture and practice, might help to view problems of poverty and services to the poor. What new language (including visual) does it offer from which to frame and make sense of the last mile where services happen? How might our view be altered as a result of this? What new 'implications' and 'propositions' rather than 'certainties' and 'outcomes' does it help to generate? The approach taken in this research therefore was to synthesise the different views on the nature of design as articulated by its various practitioners and theorists, and use this as a guiding path from which to view services for the poor. This synthesis was framed as the 'way of design' to encompass its full richness and meaning. This 'way' then guided the process of inquiry in the specific context of artisan services.

In adopting the 'way of design' I had to consider the question: who am I in the research? This question remained an axis of tension throughout the research. Am I a designer since I was using design methods such as journey mapping and visualisation to gain information and answer research (or perhaps design) questions? Am I a researcher as I was reflecting on the research process simultaneously and had to explicitly consider and articulate the rationale for my research for the purposes of a doctoral study? A reflective practitioner? A design researcher? In answering this question I return to Lawson's (2006:140) comment on analysis and synthesis where he argued that the two cannot be separated in a design activity, and I would like to add, in a research activity. Analysis and synthesis form an integral part of sense making. In this research I primarily viewed myself as a design researcher; as someone using the 'way of design' to engage in the process of research with the explicit aim of understanding practical situations in order to generate insights and implications to inform futures; which in this case was

policies, practices and research on artisan livelihoods. While being a design researcher I was also reflecting on how the 'way of design' helped to guide inquiry and create insights and ultimately assessing how it informed artisan services.

4.1.2 Researcher world view and research methodology

In keeping in line with the 'way of design' that was rooted in practical concerns, and the stated objectives of this research; the world view underpinning this study was that of a pragmatist.

Cherryholmes (cited in Robson, 2011:24) stated that:

For pragmatists, values and visions of human action and interaction precede a search for descriptions, theories, and explanations, and narratives. Pragmatic research is driven by anticipated consequences. Beginning with what he or she thinks is known and looking for consequences he or she desires, our pragmatist would pick and choose how and what to research and what to do.

My world view as a pragmatist and interest in 'what works' formed the primary motivation for this doctoral study. The disciplinary switch as well as the research question was a route to descending the ladder of abstraction. The research question and strategy in this study were concerned with understanding how artisans experience services in the last mile and how design approach could be useful in helping to understand this. The route taken to answering the central question in the thesis was therefore of: 'practical empiricism' Robson (2011:24).

Further pragmatism recognises the importance of both natural and physical worlds as well as the emergent social and psychological worlds (ibid:27). It shuns philosophical dualisms, and believes that it is possible for a researcher and the research study to encompass multiple approaches (ibid:27). Its view of knowledge endorses 'fallibilism' which is to say that current beliefs and research conclusions are rarely, if ever, viewed as perfect, certain and absolute (ibid: 27). As will be demonstrated in the data analysis chapters the ever changing realities of artisan lives and choices make it difficult to objectively claim 'truth' or 'understanding'. Both truth and meaning are provisional.

Pragmatism thus allowed a multiplicity of ontologies and epistemologies to be embraced by the researcher. This strongly aligned with my own personal belief system of not being committed to any one ideology or method of data collection but to be guided primarily by the questions at hand and using the most strategic means available to answer them. In its essence it is very close to 'bricolage'. Bricolage or 'bricoleur' is a term used by Claude-Levi-Strauss (1966) to talk about the characteristic 'make do'. The bricolage can be described as the process of getting down to the nuts and bolts of multidisciplinary research (Denzin and Lincoln, 2011:168). In this way, 'bricoleurs move beyond the blinders of particular disciplines and peer

through a conceptual window to a new world of research and knowledge production' (ibid: 168). 'Bricolage, in a contemporary sense, is understood to involve the process of employing these methodological processes as they are needed in the unfolding context of the research situation' (ibid:168). Being in a remote environment with constraints of language, culture and technology; 'make do' was definitely the norm during field research, as the data collection section will show.

The methodology frequently associated with pragmatism is mixed methods (Creswell and Plano Clark, 2011:26). The pragmatist world view aligns with the 'pluralistic stance' of the mixed methods researcher who 'gathers all those types of data that best answer the research question' (ibid:46). In this study I used both quantitative and qualitative methods to collect and analyse data for 'development' (one method helps to develop or inform the other), as well as 'triangulation' (seeking convergence and corroboration of results from different methods) (ibid:62). To elaborate, in the data collection phase, mixed methods were used sequentially. The study began with qualitative research in the form of focus group discussions (see section 4.2.2). This initial qualitative phase guided the quantitative phase of survey. The analysis and subsequent narrowing down of the survey results informed the in-depth interviews phase with artisans. In the data analysis phases mixed methods was used to triangulate and reinforce findings. Thus qualitative coding of interview data, especially the analysis of preference values was followed by enumerative content analysis.

4.2 Research methods: Data collection

4.2.1 Literature review and shift in research questions

One of the first acts of data collection involved reviewing secondary literature on artisans and Indian textiles to identify the key themes and gaps in the literature. The search words used for the review included, 'Orissa *ikat*', 'Indian handlooms', 'Indian handwoven textiles', 'Indian textiles', 'economic history of India', 'cottage industries', 'small enterprises weaving', 'Indian weavers' and 'Indian artisans'. These key words were looked up in the library catalogues of the British Library, School of Oriental and African Studies (SOAS), Royal College of Art London and Northumbria University in the UK. The search also included regional libraries in India such as Hyderabad Central University and Utkal University Orissa, though these contained far fewer resources on Orissa *ikat* than the British Library.

The main findings from the literature review was that much of it was focused on craft and handloom sector in India than the artisan. There were hardly any micro level studies as

mentioned in Chapter Three that covered artisan voices: their aspirations, decision making rationale, service transactions and preference values, which could guide the design of future artisan services and policies. My Initial Project Proposal (IPA) proposal therefore revolved around understanding what types of services would better enable artisans to continue and enhance their livelihoods? What would ‘user oriented’ service mean in this context? What parameters best help to define artisans’ perceptions of ‘service quality’? The study aimed to understand these questions using a design lens. The aim was to gather sufficient insights into the artisan ecosystem of services as well as highlight key constraints and opportunities that would serve to inform future design of services.

In the process of answering this question, I encountered the conundrum of design thinking, and the gap in understanding how a design approach could be used to better understand resource poor contexts. The thesis took a turn at this point, where the primary focus shifted to understanding the ‘way of design’ and using it in the context of the artisan case study, to generate evidence for the role that design could play in understanding services in resource poor contexts. While the two questions are not mutually exclusive, and the thesis shows how each helps to illuminate the other; the central question became, ‘if and in what ways could a design approach help to understand and inform services for the poor?’

4.2.2 Preliminary field work

Selection of the study village and focus groups

To answer this question using the artisan case study, a field work strategy had to be determined, for which I made a preliminary field visit to Orissa. The purpose of this visit was to establish initial contacts and get a quick overview of the area, artisan villages and the weaving industry. Starting with government offices in Bhubaneswar, I made my way to Bargarh district in Western Orissa, 400 km away from the capital. As indicated in Chapter Three, Bargarh was one of the main centres of *ikat* weaving in Western Orissa. During this visit, I made contacts with the Office of the Assistant Director of Textiles (ADT) and the Sambalpuri Bastralaya Cooperative, who became key sources of information throughout the field research. I conducted informer interviews (see *Appendix X*) with yarn traders and academics in the region. During this initial trip I also visited Bandhpali village (26 km. from Bargarh), as recommended by the ADT, to initiate myself into artisan life and weaving.

Meeting the weavers was inspiring as this excerpt from my field diary indicates:

Most of these weavers have little or no land and have been weaving for generations. The fields around had only paddy. There were no millets, vegetable and very little maize. No flowers even. Life seemed simple and surroundings so modest and yet the designs they

produced were simply mind boggling. Lions, elephants, deers, crocodiles, fishes, conch shells, temples, dancing figures, feet of Lakshmi and more. The design vocabulary is extremely rich and varied and mostly the artisan is the designer himself. Very little outside influence was visible.

Besides seeing the richness of the craft, I witnessed a variety of artisan service systems (independent, contract and cooperative weaver systems) within one village of nearly 300 households. A discussion with the supervisors post this initial field trip led to the decision that, instead of comparing artisan services across villages with their varied locations, weaving styles and weaver ethnicities, it would be better to focus all efforts and concentrate on one village in depth, particularly as the research aim was to compare services across the three groups of artisans.



Figure 4.1: Bandhpali village

However, selecting one village from nearly 1000 villages in Bargarh and Sonepur districts required a sampling strategy. A systematic sampling strategy would have been difficult and costly, especially where primary data about the villages was lacking and hard to come by. I decided to use a snowball sampling strategy: a ‘non-probability method of sampling also known as network, chain referral or reputational sampling’ (Blaikie, 2010:179). While the decision to study one village was made, it was nevertheless important to decide which particular village; as despite the similarities in terms of the artisan systems, villages still differed in terms of their ease of access, basic facilities, caste and other factors. I decided to do a sampling of 8 villages spread over the different geographical blocks, with a mix of different characteristics as listed below:

- i) Villages having weavers with different caste backgrounds; caste determined the type of weaving that the weavers could engage in.
- ii) Besides the variation of caste groups, I decided to select villages that were doing well, as well as those that were not doing well⁵⁸.
- iii) A mix of villages that were located close to the main town, and those that were further away in the interiors.

Once again I enlisted the help of the ADT office Bargarh to draw up this sample list. Over a brainstorming session with the field staff at the office, 8 villages⁵⁹ on the map were marked. These were spread across Bargarh and Sonepur districts and together fulfilled the above listed criteria.

I used focus groups in each of the villages to get a quick sense of the similarities and differences between them as well as to start formulating specific questions for the survey design (section 4.2.3). Krueger and Casey (1998:18) define the focus group as ‘a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment’. The focus groups were a source of many insights that went into the planning and design of the survey as well as qualitative research conducted during the main study. It also confirmed the initial hypothesis that while the villages were distinct with respect to single caste or multiple caste weaver population, being better off or poorly in terms of artisan enterprise, weaving fine cotton *ikat* or weaving coarse cloth; they all consisted of weavers mainly subdivided into three artisan systems: independent, cooperative and contract systems. Given this finding, I decided to select Bandhpali village, the village of the first field trip. The selection was due to three main factors: (i) It was relatively easier to access as it was located 7 km from the nearest town of Barpali. (ii) It had a sizeable weaver population of over 300 households mainly belonging to the Bhulia Meher caste. (iii) Weaving was a vibrant and central occupation of the community. Again, in line with the pragmatist philosophy, I was interested in exploring ‘what works’ and why.

4.2.3 Design and implementation of survey

As the research aimed to map all the actors involved in the weaving ecosystem of Bandhpali village; survey, formed the chief strategy for systematic data collection. The survey also formed

⁵⁸ I relied on the Assistant Director Textiles office for information in this aspect.

⁵⁹ The villages were Kusanpuri, Pada, Jaring, Jhilminda, Chichinda and Bandhpali in Bargarh district; Pattabadi and Kendupalli in Sonepur district

the first step to identify artisans and service providers for in depth interviews. The design and implementation of the survey involved several stages starting from the design of the survey questionnaire, to recruitment of local researchers, and final implementation of the survey. Below I describe these various stages along with particular challenges of carrying it out in the rural setting of Bandhpali village, involving multiple languages.

I) Design of the survey questionnaire

The design of the survey questionnaire went through four rounds of iterations. Below I describe the development of the questionnaire over a period of nine months.

(i) Draft survey form

The first prototype of the survey form was created primarily on the basis of themes identified in the literature on artisans and Indian handwoven textiles. In addition it was informed by the preliminary field visits and focus group discussions mentioned in the previous section. The questions were grouped under four major themes: i) personal overview of the weavers (name, education, caste) ii) family related questions (number of working members, income and so on) iii) household status (land, assets, type of housing) and iv) weaving related questions (weaving services, skill level, productivity). The draft survey form was designed as a multiple choice form where nearly all possible responses to the question were listed.

(ii) Pre-final survey form

The draft survey form was modified based on feedback received from the supervisors as well as a further exploration of the survey technique and methodology. At the outset the questions that were seen as less relevant to the study aims and objectives were eliminated. The remaining questions were framed to be as unambiguous as possible (De Vaus, 2002:55). The questionnaire consisted of multiple item indicators where the same question was asked in different ways (ibid:55). For example if the weaver reported as working with the cooperative the questionnaire included different questions to check where he procured the raw material from, where he purchased the dye or where he got the design from to ensure triangulation of responses and spot anomalies in data. De Vaus (2002:52) also suggested that care should be taken to ensure that concepts measured what they should (validity) and that even if asked again the answers would be similar (reliability). While caution was taken to ensure validity of concepts including pre-testing of survey form through pilot survey (mentioned in the subsequent section), it was difficult to ensure complete reliability of data, particularly with regards to the question on artisan income. Getting reliable answers here proved to be a major challenge as the artisans hesitated to reveal their incomes for the fear of being taxed by the

government. Therefore when the artisans were selected for in depth interviews this did not form a baseline criteria for the selection.

After finalising the questions the answers to each of the questions were pre coded. Other features incorporated in the survey form included grouping questions in sections, listing alternative responses down rather than across, having a column for survey researcher's signature and leaving blank section at the end to write additional comments and observations.

(iii) Final survey form after translation

The penultimate version of the survey form was translated into Oriya, the language spoken by artisans of Bandhpali village. The survey form was designed as a bilingual form for the understanding of the local research assistants as well as to facilitate data analysis. The translation of the form was done by a local person in Barpali who had native understanding of Oriya and Hindi languages and working knowledge of English. It was then typeset at a local computer centre for printing. Limited copies were printed for pilot testing in the field (next section). Based on the response received from the artisans and the local researchers, the survey form was once again modified. The chief modifications included rephrasing of some questions and answers for better understanding in Oriya (See *Appendix III*).

II) Recruitment of local research assistants and pilot survey in Jhulopali village

As Bandhpali village consisted of over 300 artisan households, most of whom primarily spoke Oriya, I had to enlist the help of local researchers to assist with the survey. It was not an easy task to find reasonably educated (Class X and above) youth in search of temporary employment. My local research coordinator based in Barpali printed small advertisements to put up in local shops and computer centres. We received 14 applications. Each of the applicants were interviewed and in all 11 applicants were selected (2 girls and 9 boys). Many of these resided in villages close to Bandhpali. However, a few traveled as far as 12 kilometres on bicycles.

The researchers, most of whom had not carried out a survey before, were trained in the techniques and principles of conducting a survey. I designed a simple field manual (see *Appendix IV*) for them which was translated in Oriya. The young participants were eager to learn, and whilst most of them came from a weaving background, some were unfamiliar with the specific weaving related terminologies. After the training we conducted a pilot survey in Jhulopali village (4 kilometres from Bandhpali). During this pilot phase the researchers were asked to get feedback on the survey form. Simultaneously they were being tested for their

survey skills. At the end of the pilot survey a debrief session was held where based on the feedback received, some questions were modified (as mentioned in the earlier section). The researchers were also given feedback on their performance with aspects they could develop further.

III) Final survey of artisans in Bandhpali village

For the final survey, the researchers were split into three teams, each with a designated team leader. Using the village map drawn out by one of the research assistants (I discuss this in detail in Chapter Seven), the groups were designated specific geographical areas to cover within the village. One of the challenges of the study was in defining the ‘household’ and the ‘interviewees’. Many of the families resided as joint families, with more than one loom and weaver in the house. Would it make sense to interview the father and the son living in the same house but operating separately? The strategy agreed through a collective brainstorm was that if the ‘family maintenance’⁶⁰ was a joint responsibility despite the looms being separate, then only one person from the family would be interviewed. If the sons had their own family maintenance then they would be interviewed separately.

In terms of interviewee availability, if the head of the family was not available for the interview, the second available person would be interviewed. In case no one was available or they didn’t have the time, the researchers were asked to make note and come back at another date and time to interview. It was also agreed that if people happened to meet non weavers or non respondents this should be entered in a separate form for record. Other guidelines included strictly adhering to the script and giving the respondent a choice whether they wanted to answer the questions.

Barring one person, all others took part in the survey. A few people who had got left out even came forward to ask to be interviewed! In all 309 artisans were interviewed over a period of five days by eleven researchers (see *Appendix V* for list of interviewed artisans).

4.2.4 Qualitative data collection

Oral History interviews

One of the foremost aims of the study was to map the artisan journey in making, in particular identify the service inputs and interactions with service providers. The objective also included understanding the preference values that underpinned artisan decision-making, and correspondingly the value they perceived from the service. To do this the research employed

⁶⁰ ‘Family maintenance’ was the term used by local researchers to indicate household expenses of a family.

three main techniques that included: oral history interviews with artisans, field observation, and self documentation by artisans.

Oral history is a form of personal experience narrative, ‘autobiographical stories crafted to communicate meaning or what is valued to the other’ (Denzin and Lincoln, 2011:451). The stories are not just people telling their stories, but telling their stories in response to questions of another, ‘it is this dialogue that shapes the interview’ (ibid:451). While there is a lack of reported instances of the use of oral history within design⁶¹, this study has benefitted from using an oral history interview style to elicit artisan stories and gain access to their interpersonal and subjective world.

One of the primary reasons for using oral history style interview was because it offered a gentle and non-threatening means of engaging with the artisans. By beginning the conversation with a historical background of weaving within the artisan’s family, starting with their parents and grandparents, a rapport was built, and context set to understand the artisan’s present circumstances. This indirect or ‘parametric ethnographic design approach’, (Rao, 2010) focused on the object than directly on the artisan. To elaborate, I encouraged the artisans to narrate their journey of making, the series of steps that they and their families undertook in making *ikat*. As the artisans narrated these steps, I probed deeper into the what, where, how and why of each of the steps. In particular the whys: why did artisans prefer to buy yarn from a particular shop; why did they decide to switch from working with the cooperative to working independently? The questions were guided by the main research question along with those developed during village visits and informal discussions with artisans (the questionnaires are attached in *Appendix VI*). Prompts in the form of a pattern book on *ikat* weaving were used during the interview to help artisans to open up. As Denzin suggested, participants feel less pressured when discussing sensitive topics through intermediary artifacts (Denzin and Lincoln, 2011:484) The artisans started by recounting saree patterns with the help of a book, before gradually moving on to talk about their present weaving circumstances.

Other than the fact that the oral history style interviews helped to document stories related to the development of *ikat* in the region, and the artisan’s journey in making; the historical line of questioning served as a means to triangulate artisan preference values. Distinct patterns of decision-making were visible at the time of analysing transcripts, as artisans used the same guiding principle to help them make choices with respect to service providers, and service systems. To elaborate an artisan would use the utility value concept of ‘effort’ as a key decision

⁶¹ The British libraries National Life stories project uses Oral history to document lives of crafts people in the UK

making value that guided him throughout the course of his weaving career. At other times the deep belief and social value of being an 'independent' weaver had also strongly featured in the artisan's family background. Chapter Six discusses these preference values in detail. Oral history style interviews were also conducted with the service providers (individual shop keepers and master weavers, as well as organisations such as the cooperative and the government body in charge of the weekly marketing venue). This further served to corroborate data from the interviews with artisans.

In addition to artisan interviews, I also carried out ethnographic field observation of artisan activities and life in Bandhpali village. Hammersly and Atkinson (1995:1) talk about how the ethnographer participates,

[O]vertly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions; in fact collecting whatever data are available to throw light on the issues with which he or she is concerned.

My field immersion included going on village walks with women in the evenings⁶². The conversations held during these walks were a source of rich insight into the weaving life as well as the culture and customs of the weavers. At other times I went along for tea or dinner at weavers' homes. This night time access to the weavers, and the more relaxed conversations also deepened my understanding of their way of life. No matter what time of the day or night I stepped out, the sound of the shuttle loom, or the sight of old women spinning yarn, was always visible, signifying that weaving was almost a way of life for the artisans. Other sources of information included conversations during bus or jeep rides with fellow passengers and drivers, as well as talks with local shopkeepers. The observation also resulted in an extensive visual documentation of artisan life and weaving activities. Over the course of four field trips spread over three years, I shot nearly 4000 images. Many of these were given to the artisans as a token of gratitude for their time and hospitality, resulting in my becoming famous in the village as a photographer! Notwithstanding the momentary fame, the photographs were a crucial form of visual data analysis (see Section 4.3.3) that strongly guided this study.

Self documentation by artisans

One of the other design inspired methods used in this study was self documentation by artisans. Frascara (2002:4) stated that traditional design research methods focused primarily on observational research (in other words *looking* at what people use and do). Traditional market

⁶² Many of the houses in Bandhpali village lacked sanitation facilities. The girls and women in the village would go out twice a day, at dawn and dusk, in small groups to fields and ponds on the outskirts of the village to carry out their daily ablutions.

research methods, on the other hand focused more on what people *say* and *think* (through focus groups, interviews and questionnaires). Contemporary methods focus on what people *make*, that is what they create from toolkits provided to them to express their thoughts, feelings and dreams (ibid:4).



Figure 4.2: Self-documentation by artisans

Visual stories created by research subjects themselves are narratives that provide insights into typical activities surrounding a particular lifestyle (Cagan and Vogel, 2002:186). As a researcher I also felt it important to give artisans a 'voice' to express themselves, a chance to be collaborators in the research and not just 'objects' of research. This strategy was used in the research as a way to corroborate artisan journey mapping. It served as a vital complementary strategy to the interviews and visual documentation carried out by me. As part of the process each of the interviewed artisan families were given a Kodak camera with film roll. They were briefed in a workshop to photograph their daily activities around weaving for a period of one week. The film rolls were then developed in a nearby town. A subsequent workshop was held, where the artisans sequenced and described each of the photographs.

4.3 Research methods: Data analysis

In continuing the mixed methods strategy, data analysis in this study also used quantitative and qualitative techniques to corroborate data and increase the validity of interpretations. In this section I describe the techniques employed for data analysis in the two phases of: survey research, and qualitative interviews.

4.3.1 Analysing survey data

The data from the survey was analysed for two main purposes. The first purpose was to identify the types and number of actors in the different weaving profiles, and the second was to select cases for in depth interviewing. The profile data of 309 artisans was analysed using Microsoft Excel. The pre coding of survey forms aided analysis. The data was systematically categorised and narrowed in the following sequence:

- i) Each of the weavers were categorised according to their respective profiles as: independent weavers, contract weavers, cooperative weavers, master weavers and ancillary service providers, according to the pre coded response categories in the survey (the profile of the actors in the weaving ecosystem is discussed in Chapter Five).
- ii) The weavers were then categorised as: those working regularly with one service provider, and those working with multiple service providers. This criteria was important for the selection of artisans for in depth interviews, as the purpose was to understand the different types of capital aided by the service providers, and the service value the artisans perceived from the service. Having a regular service provider would generate reliable and comparable data across the three categories.
- iii) The weavers were further grouped as those weaving single *ikat* sarees, and those weaving double *ikat* sarees. This indicated the skill level of weavers in each of the categories of contract, cooperative and independent weavers.

At this stage a purposive sampling strategy was used. Silverman (2006:309) said in theoretical or purposive sampling, the researcher 'manipulates their analysis, theory, and sampling activities interactively during the research process, to a much greater extent than in statistical sampling'. While the main objective of the study was to understand the three artisan systems, narrowing down from a pool of 309 artisans to a handful of cases for in depth interviewing, required a consideration for the main characteristics that the respective cases should have. Whilst different criteria of age, income, education, skill level, could be employed, below were the key considerations in narrowing down the selection criteria:

- i) At the outset it was decided not to use income as a criteria for selection, as this data was not reliable. Many artisans under reported their incomes due to the fear of being taxed by the government.

- ii) The initial survey analysis showed that most artisans had similar education profiles of below Class X qualification. As such it was not a key indicator that could help to identify artisan preference value of working in different systems.
- iii) The two criteria left were age and skill. Using age as a narrowing down criteria, that is using artisans only in a certain age group to interview across the three categories, seemed restrictive. This strategy would have meant privileging the voices of the older artisans over the younger ones, or vice versa. The research objective was not to create statistical inferences for a particular weaving age group, but more to gather insights into the workings of artisans and the service providers in each of the three groups. In line with the pragmatist philosophy the research was interested in 'what works'.
- iv) This left the choice of selecting between weavers weaving single *ikat* versus those weaving double *ikat* sarees. As explained in Chapter Three, double *ikat* is a more complex weaving skill found only in some parts of the world, Orissa being one of them. Aside from my fascination for it, higher skills in weaving were known to correspond with higher incomes. I decided to focus on artisans in this category, so as to draw out the lessons from these more successful and 'better off' weavers. I was interested in exploring how these skills were acquired, and if the service providers had a role to play in augmenting this human capital⁶³, which is a vital asset for weaving. This narrowing down brought the number of weavers in the three categories down to:
- i) Independent weavers: 27
 - ii) Cooperative weavers: 5
 - iii) Contract weavers: 11
- v) At this point a 'maximal variation' strategy was employed. According to Flick (Flick, 2009:122), 'maximal variation is about integrating a few cases, but those which are as different as possible, to disclose the range of variation and differentiation in the field'. Accordingly three artisans were selected in each of the three cases as: (i) those that had worked the maximum number of years with a particular service provider(s), (ii) those that had worked for a minimum of five years with the service provider, (iii) those that had worked in between the maximum and minimum years. This coincided well with: older, younger and middle aged artisans, thereby providing a range of perspectives.

⁶³ The different forms of capital are outlined in Chapter Five

Table 4.1: Profile of the artisans selected for in depth interviews

	Artisan name	Age	Education	Number of adult family workers	Total number of years in weaving	Number of years with the service provider(s)
Contract	Gunanidhi	27	Between Class V to IX	2	5	5
	Binod	40	Between Class V to IX	3	25	5
	Bideshee	60	Unable to read and write	6	50	5
Cooperative	Gajendra	31	Above Class X	4	20	10
	Jadhava	32	Between Class V to IX	4	20	18
	Balmukund	65	Below Class V	6	50	40
Independent	Sanju	40	Between Class V to IX	3	28	18
	Narayan	54	Below Class V	5	45	45
	Tarani	60	Below Class V	5	48	48

4.3.2 Analysing qualitative interviews

First level data reduction

While the interviews with artisans and service providers were audio recorded, for transcribing post the field visit, I was keen to capture any immediate thoughts and insights generated after a long interview, as well as the questions that needed further exploration. For this purpose I wrote out a contact summary sheet (see *Appendix VII*) after each interview. A contact summary sheet is a single sheet summarising the discussion with a particular field contact. Miles and Huberman (1984:52) termed it as a ‘rapid, practical way of doing a first level data reduction’, and an ‘aide to capture impressions and jotting down hunches and speculations’. In addition to the contact summary sheet, I kept a ‘research diary’ (Gibbs, 2007:26) to record the journey, events and highlights of days spent doing field work. While the research diary consisted of unstructured personal musings or descriptions of wayside conversations during my walks in the village; ‘memos’ consisted of more deliberate reflections at making meaning out of data and observations in the field. Gibbs (2007:30) calls it a way of theorising and commenting that, ‘exhausts the analyst’s momentary ideation based on data with perhaps a little conceptual

elaboration'. Below is an excerpt from one of the memos written during field work (September 2009):

They [artisans] adapt according to their personal circumstances and the market. So things keep changing: sometimes single *ikat*, sometimes double [*ikat*], sometimes independent weaver, sometimes as contract weaver. They are the masters of adaptation. Highly resilient and equally vulnerable; from having an accident, to losing a child, to floods, to yarn rates going up ... they manage to stay afloat, if not come out on top of the adversities that life flings at them. And yet they find the time to celebrate, share each others pain and joys, and participate in the innumerable social and festive events.

These initial deliberations sparked further questions that were taken up during the latter stages of field work. They served as a means of developing and testing findings generated from the more formal data analysis processes.

4.3.3 Slicing and splicing of data

Developing transcripts of audio recordings

The formal data analysis began with the process of transcribing the audio recordings. The interviews were transcribed using ExpressScribe software. The first round of transcribing involved creation of a rough verbatim transcript to get a quick sense of the data. The second round involved developing a transcription style guide (see *Appendix VIII*). Flick (2004:249) stated that the development of the transcription system involved making decisions about, 'which features of behaviour are to be transcribed (verbal, prosodic, paralinguistic, extralinguistic); this selection is always determined by the goals and questions of a specific research project'.

The main purpose of the in depth interviews was to understand the subjective realities of artisans' lives, their values and beliefs, and factual information about their income, skill level and so on. As the recordings were bilingual (in Oriya and Hindi) and I was simultaneously transcribing and translating them into English, a practical strategy was required. Gibbs (2007:14) suggested that a, 'practical way is to preserve the dialect, regional terms and grammatical expressions, but not to try to capture the actual sound of the accent and also to use a standard and consistent spelling'. I followed this strategy and decided to do a word-to-word transcript for all those sections of the recording that were in Hindi, a language I was proficient in. The purpose of the word to word transcript was to minimise errors and omissions that could arise out of translated interviews, as well as to make the research process transparent. I decided to use the closest possible word to translate from Oriya-Hindi-

English⁶⁴. At times this resulted in, as one of my supervisors stated, ‘pidgin’ English. The artisans however, had a distinct set of words and expressions that they used to describe their life and weaving. The literal translation of this at times sounded a bit ‘odd’ or lacked grammatical fluency. It however captured the feel, context and meaning of their verbal expressions.

Further, developing a transcription style guide that was ‘practical’ and fulfilled the translation requirements of three languages proved to be challenging. The style guide was created from combining three sources⁶⁵, and was guided by the needs of data analysis. The metadata of interviews and transcriptions is attached in *Appendix X*.

Coding

The data in the transcripts were analysed using coding. Coding is a ‘way of indexing or categorising the text in order to establish a framework of thematic ideas about it’ (ibid:39). Gibbs (ibid:46) further stated that depending on the theoretical sophistication of the researcher, reflection of knowledge and inclination, the codes can be of two types: concept-driven and data-driven. As part of my analysis I carried out both these forms of coding. Each of the transcripts were coded three times to ensure rigour in data analysis.

The first step was creating a provisional ‘start list’ of codes (Miles and Huberman, 1984:58). This list was primarily drawn from the literature to fit conceptual categories of the analytical framework created prior to fieldwork. This start list comprised 66 codes (see *Appendix XIII*). The code names were given to ‘situations, perspectives, processes, activities and events’, and were described as close to the actual concept as possible (ibid:61). Codes were manually assigned on printed transcripts. They were marked on the right side of the text, whereas comments and reflections were entered on the left side.

Following this first round of concept-driven coding, I did a second round of more open or grounded theory style coding where codes emerged from the data. This second step was to ensure that I was not viewing data to simply fit the analytical framework and theories, but that relevant information and insights outside these categories were also considered. The data driven and concept driven codes were then compared, with many code categories found to be overlapping. The analytical framework was reviewed once again, and a combined code list was drawn up.

⁶⁴ The discussion between artisan and my research assistant was mainly in Oriya. The discussion between me and the research assistant in Hindi.

⁶⁵ Silverman (2006), Gibbs (2007), Flick et. al (2004)

This was followed by a third round of coding transcripts. The text attached to each code was then categorised as ‘chunks’ of data and entered into tables to enable a systematic comparison (Gibbs, 2007:78) (see *Appendix XIV*). The method followed was to enter text into the tables as original quotes rather than paraphrases. This was done to enable content analysis (next section), as well as for the purposes of data display in Chapters Five to Seven. The presentation of data display in these chapters feature the ‘artisan voice’ prominently alongside researcher analysis to enable the readers to get an authentic feel for the data, and judge research interpretations against it. Laying the text side by side helped to spot the similarities and differences between cases and establish patterns (ibid:82).

Once the data were entered into tables, the code list was reviewed. Huberman (1984:61) stated that codes were bound to change, as ‘some work, others decay and still others flourish’. Entering the data into tables helped to see which codes needed to be ‘split’ or ‘spliced’⁶⁶ and which could altogether be deleted. Accordingly the final code list was categorised as theme, code and sub code (see *Appendix XIII*). The final round of coding was done on the fair transcript after a gap of eight weeks to ascertain whether new categories of data emerged or interpretations changed. The data was once again organised in tables in each of the three categories of independent, cooperative and contract weavers (see *Appendix XIV*).

Content analysis

While thematic coding of data identified key value statements made by the artisans, content analysis further helped to assess the significance of these value statements. Content analysis is a method to systematically code and categorise large amounts of textual information in order to ‘ascertain trends and patterns of words used, their frequency, their relationships and the structures and discourses of communication’ (Grbich, 2007:12). With the research philosophy firmly embedded in mixed methods approach, the combination of quantitative and qualitative methods, ‘allowed for a more reflective approach to the analysis of documents and enabled contextualisation and the development of theoretical interpretations’ (ibid:116).

Content analysis was carried out for thematically coded data presented in comparison tables (see *Appendix XII*). A list of ‘key words in context’ was drawn (see *Table 4.2*). Generating ‘key words in context’ entails identifying a particular word and printing out some words on either

⁶⁶ ‘Splitting’ refers to the task of refining categories by subcategorizing data. ‘Splicing’ refers to combining categories to provide a more integrated conceptualising (Dey, 1995:131). Dey further suggested that the process of splitting up a category into subcategories is not just conceptual, but is grounded in our analysis of databits (ibid:131).

side of it whenever it appears, which provides greater detail about the contexts in which the word appeared (Grbich, 2007:116). These key words were used by the artisans to signify

Table 4.2: Key words used to signify different types of values

Utility value	Time	convenient, here, far, nearby, quicker, days lost, wasted, go, today, month, somewhere, work less
	Money	income, profit, wages, commission, work more, weave more, profitable, pays, rate, expenses, increase, expensive, paid better, market rate
	Effort	work, more work, difficult, work hard
Social Value		got prize, independence, identity, master of destiny
Emotional Value		feel, look, touch, match, felt good, polish, good, like, spend, love, quality, show, colour, defected, looked bad, good quality, good environment, very nice, shining, mind is sad, affects health, mood
Epistemic Value	High	watch, learn, not difficult, thought myself, my own idea, know, new design, trial, want, digging, learnt, different, interested, learning, might be able, made make, mind, see gauge, mix
	Low	can't, don't know, haven't, not, no, one type, same design, doesn't know, can't do, haven't tried, didn't succeed

utility, social, emotional and epistemic values (described in Chapter Six). The key words were then counted. The repetition and frequency of words in content analysis indicated their importance in the document. The enumerative quantitative approach thus helped to ‘reinforce findings and insights’ generated during the data collection and analysis phase (Grbich, 2007:114).

Visual analysis

In addition to analysing talk and text, the study used visual data analysis. Denzin and Lincoln (2011:480) suggested that, ‘pictures can offer ideas and irreducible experiences that cannot be restated or translated in linguistic terms’. This was certainly the experience during field work which recorded nearly 4000 images of artisans, their surroundings, weaving and their way of life. In addition to conveying moods and emotions, the ‘articulations produced through photographs can offer insights based on spatial and compositional arrangements’ (Denzin and Lincoln, 2011:480). Chapters Five and Seven make extensive use of visual data and analysis to complement and enhance textual analysis. While the visual analysis is discussed in greater detail in these chapters, here I would like to state that many nuances particularly related to the interior and architectural aspects of weaving that had escaped observation during field work appeared in the analysis of photographs. Capturing snapshots of ‘reality’ provided the space to reflect when away from the field. The study extensively uses visual images and illustrations alongside text to communicate. The juxtaposition of words and images is not seen as a

repetition or replacement of each other but rather a tandem development where ‘expressiveness of the text seems to have been born from the spare energy of images’ (Flick et al., 2004:232).

4.4 Ethics and validity

4.4.1 Validity

Establishing validity is one of the challenges of qualitative research. In this section I highlight the steps that I took to maximise validity of the research. De Vaus (2001:28) called internal validity as the extent to which the structure of a research design enabled the drawing out of ‘unambiguous conclusions from results’. One of the first routes to establishing validity in this research included ‘transparency’ of process and data (Flick et al., 2004:329). The previous sections have described the methods that were used throughout the research along with the rationale for using them. A sample of each of the key data analysis procedures is presented in the appendices for readers to assess the validity of interpretations. The data and analysis chapters further make extensive use of the artisan ‘voice’ to convey their stories, and findings from the research. As outlined in the previous section, visual data was highlighted for readers to gain access to field realities. ‘Selective plausibilisation’ (Flick, 2009:387) has been avoided by ensuring that cases were not made to ‘fit’ a theory. To elaborate, whilst distinct patterns were observed amongst the three group of artisans, at times one of the artisans in the group did not fit the group pattern. This was reported in the data as it was.

Triangulation was used as a form of validation (Silverman, 2006:290). Denzin and Lincoln (cited in, Silverman, 2006:292) termed triangulation as a strategy that ‘adds rigour, breadth, complexity, richness and depth to an inquiry’ rather than a way to obtain a ‘true’ reading. Further, quantitative and qualitative methods in data collection and analysis were used to add both richness and rigour to the research (Denzin and Lincoln, 2011:600). Gibbs (2007:94) pointed out that informants may not always be consistent in what they say and do. This was true of artisans whose informal activities and dynamic realities at times produced different accounts. Forms of data triangulation therefore involved not only interviews (verbal data) but observation (visual data), and cross checking with different members of the family, and at different times. Another form of triangulation included ‘member checks’ (Flick, 2009:392) where data along with interpretation were checked with the artisans. This was especially used during journey mapping and representation of artisan processes.

With regard to external validity and generalisability of the research, the research followed a clear sampling rationale. However, as Blaikie (2010:217) pointed out, replication and

production of 'standardised' sets of results were not appropriate goals for qualitative research. This holds true for this research, which has interviewed limited number of artisans amongst hundreds of artisans. However, as Blaikie (ibid:217) suggested more than replication, the aim of qualitative research is to produce a 'coherent and illuminating description'. This study has done that in illuminating artisan life and situation.

4.4.2 Ethics

The research was conducted in an ethically responsible manner. All participants of the research, including the local research assistants were given information regarding the research, prior to their participation. Participation in the research was voluntary. The research assistants were compensated for their time and effort. The participating artisans were allowed to keep the cameras, which they used for self-documentation. As a token for their time, I also made photo prints and gave them to the village people, having experienced how much they were cherished in rural areas.

At the beginning of the interviews I requested each interviewee permission to record and use the data for research purposes. They were asked whether they would like their names to be published. All artisans were agreeable to have their names published. Therefore, the artisans in this research have been referred to by their first names where applicable. As Silverman pointed, 'Certain people in particular contexts may actually want to be identified and would feel let down if their identity is concealed' (Silverman, 2006:320). Therefore, unlike some ethical guidelines that encourage anonymisation of participants, the aim of this research is to fully recognise and celebrate the voices and contribution of the artisans, who are routinely rendered as invisible, and part of a mere statistic. Non direct participants such as government officials who did not want to be recognised, were assured that their comments would be treated in confidence.

4.5 Conclusion

In this chapter I have clarified the researcher stance and positionality, as one of hybridity. I highlighted the 'axes of tension' around which my person revolved during this study. I discussed how the 'axes of tension' provided me with a vantage point from which to consider the 'way of design'. I justified the research strategy adopted in this study, as one of applying the 'way of design' to study artisan services. I stated how the worldview of pragmatism informed this research, and guided the study aims and questions. How it enabled the use a hybrid and bricoleur strategy for data collection and analysis. I outlined the specific data collection and

analysis methods that were used in this study along with the rationale of using them. The methods ranged from quantitative (survey, content analysis) to qualitative (focus groups, ethnography, oral history interviews) and together helped to triangulate and increase validity of the findings and interpretation. I summarised the ethical position adopted in this research, as that of celebrating and recognising artisan voices instead of anonymising them.

CHAPTER FIVE

Design as Pattern: Tracing the underlying pattern of artisan services

Designers can access the entire bandwidth of human perception by investing data with weight, space, and texture. In doing so, they provide sensuous experiences of communication, deliciously revealing the richness of complex datasets, so full of meaning and potential interpretations.

(KLANTEN, 2008:179)

What types of services do artisans need to secure livelihoods? Who are the actors involved in the weaving ecosystem? How do interactions take place between the artisans and service providers? These are some of the questions I answer in this chapter. Using the concepts of network mapping and journey mapping outlined in Chapter Two, I venture to draw out the underlying pattern of services in the artisan community. Specifically, I consider the ‘zoomed out’ view of the service through a mapping of the various actors and their network of interactions. At the same time I examine the ‘zoomed in’ view that maps the journeys and interactions between artisans and the service providers in each of the three systems of contract, cooperative and independent artisans. The ‘zoomed in’ view of the artisan journey is further illuminated using Scoones’s (1998) forms of capital (Section 5.2 of this chapter), in order to highlight the precise elements involved in the service exchange.

5.1 Tracing the artisan network and actors in the weaving ecosystem

In this section I highlight the types of actors that were identified in the Bandhpali weaving ecosystem (see *Figure 5.2*), their precise roles, profiles and their network of connections. The actors and their network are visually represented in the Artisan Network Map (see *Figure 5.3*). The visualisation of the Artisan Network Map evolved over several iterations (see *Figure 5.1*) during a period of two years. The hand drawn village map during the research planning phase formed the starting point for the map. The boundaries of the village path were traced using the image of the hand drawn map. This line drawing resembled the shape of a tree — with trunk and branches emanating from it. This inspired the subsequent decision to represent the

artisans as 'leaves'. During the survey data analysis five main types of artisans and service providers emerged. Each of these were represented using a distinct colour. The first objective was to depict the 309 artisans in their respective hamlets. At this point the exact location of each artisan was not known. Next, the connection between individual artisans and service providers was marked.



Figure 5.1: Evolution of the Artisan Network Map

This first draft of the Artisan Network Map highlighted gaps in the data. For example the service provider connections of some of the artisans was not known. These details were collected in a subsequent field visit. During this field visit, further efforts were made to refine the map. With the help of my local research assistant, we redrew each hamlet in detail that showed the artisan location as they resided side by side in the village. The distances between Bandhpali and other locations in the weaving ecosystem was also established.

The final round of map making involved reshaping the straight connecting lines between artisans and service providers to better understand and visually highlight the most connected actors in the network. This resulted in curved lines that was used as a metaphor for the threads in weaving. The process of visualisation not only enforced a need for data clarity leading to subsequent data collection in the field, it also led to new insights that are articulated in detail

Chapter Seven. In this Chapter I describe each of the actors that form part of the Bandhpali weaving ecosystem.

A total of 309 actors resided in the village and were connected with 60 actors outside the village. The mapping revealed eight main type of actors within the weaving ecosystem. The Artisans Network Map is conceptualised as a tree where the trunk represents the main road of Bandhpali village with branches as the smaller village paths. Along these paths are *padas* or hamlets with densely packed artisan houses. The leaves of the tree depict different types of weavers: contract, cooperative, independent and master weavers, and service providers (these include the yarn suppliers, cooperatives, people in ancillary weaving occupations and marketing channels).

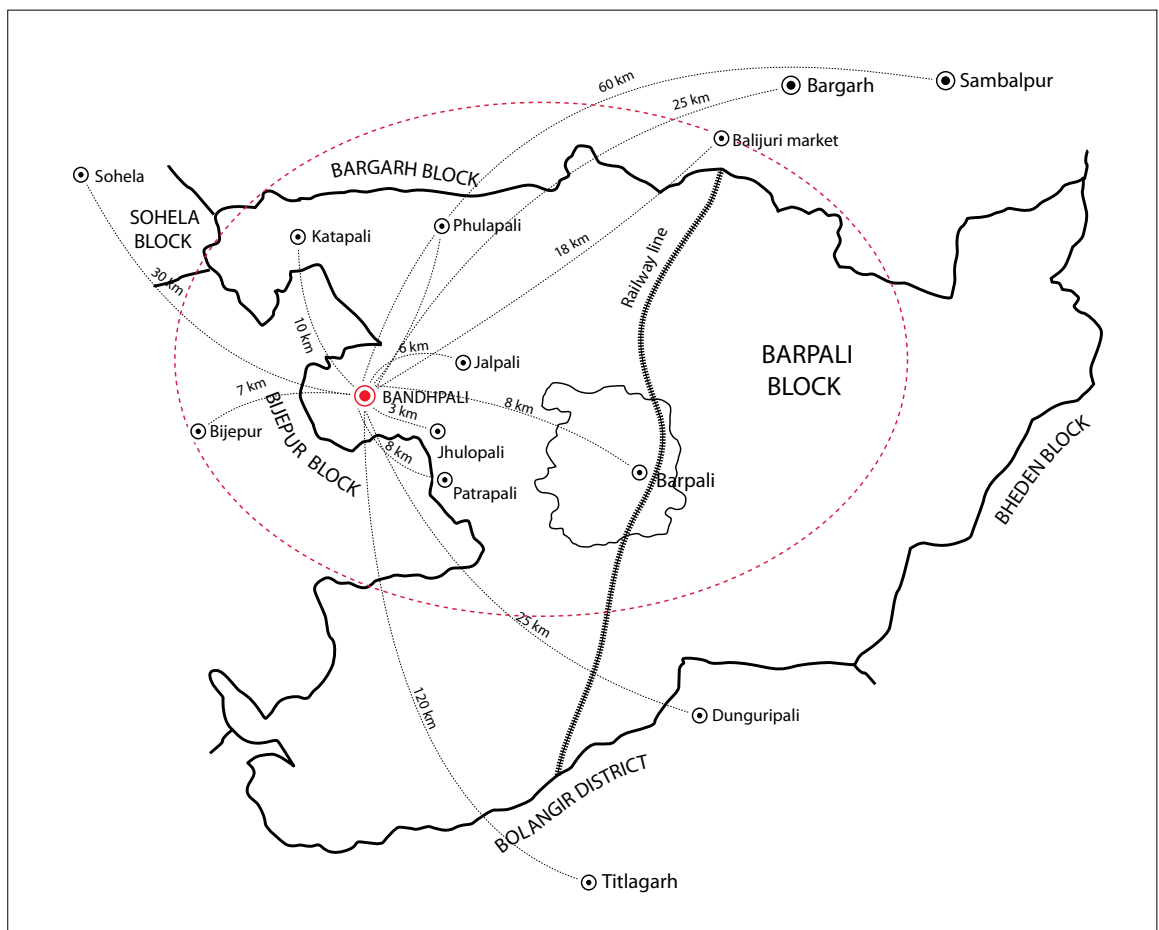
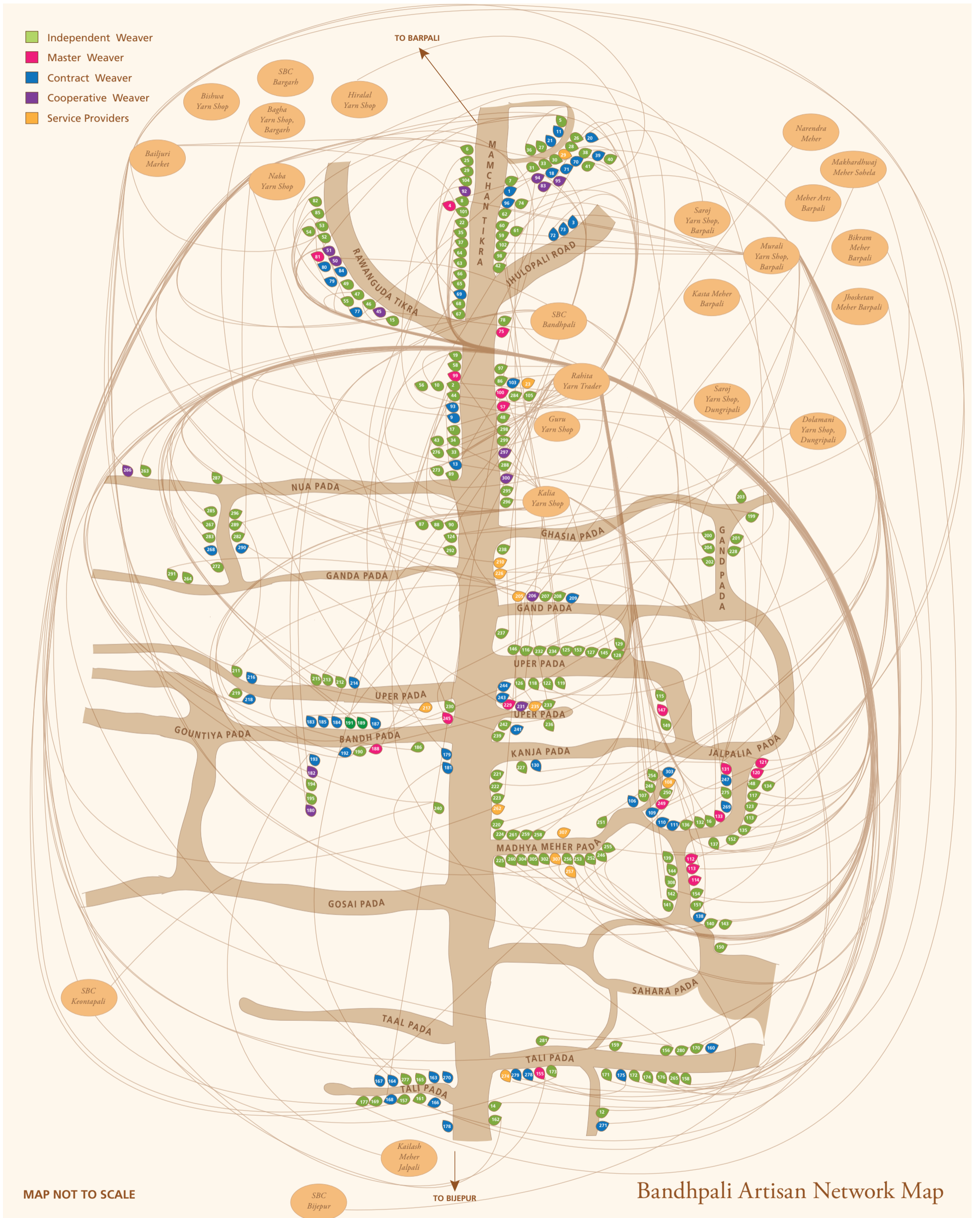


Figure 5.2: Bandhpali weaving ecosystem

The numbers on the leaves are those of individual artisans surveyed in the research. While the map is not to scale, the leaves mark the approximate location of artisans as they resided in the village. The service providers are marked in orange, as those residing in the village, but also those residing in neighbouring villages and towns. The interconnecting thread shows the

Figure 5.3: Bandhpali Artisan Network Map



network of connections between each artisan and the service provider(s). These interrelationships are explored in depth in the next section of journey mapping.

Contract weavers



Figure 5.4: Damburu Meher, contract weaver

The weavers in this profile worked on contract with master weavers who were largely located within the village, but at times in nearby villages. Typically they were weavers living in conditions of extreme poverty such as widows or people without their own housing. They had limited capacity to invest in weaving equipment or raw materials. They used their own and their family's labour to convert tie-dyed yarn secured from the master weavers into a finished saree. Of the 309 weavers in Bandhpali, 82 worked as contract weavers. Of this group, 38 weavers made sarees that they occasionally sold in local markets rather than to the master weavers. In other words at times they functioned as independent weavers.

Cooperative weavers



Figure 5.5: Jadhava Meher, cooperative weaver

The cooperative weavers were members of cooperative societies. The weavers in this group preferred the stability and reliability of the cooperative. They were also highly skilled in the technique of tie-dye making and weaving double *ikat*. The artisans in this group accessed services such as yarn, saree design, training and marketing facilities through the cooperative. Only 15 weavers in Bandhpali worked with the cooperative. Of these, 9 worked full time with the cooperative while the other 6 occasionally worked with master weavers or made their own sarees to sell in the local market.

Independent weavers



Figure 5.6: Narayan Meher, independent weaver

The independent weaver was the quintessential entrepreneur. Whether by choice or circumstance, the weavers operated independently with the help of their family members. They carried out all stages of the weaving themselves from the purchase of raw materials to making tie-dye, weaving and marketing the finished products. To do this they used a network of service providers within and outside the village. The financial investing capacity of weavers in this category was limited to a couple of weeks worth of production.

However, during the off-peak⁶⁷ season this capacity was stretched further, as the absence of a good market price compelled the weavers to stock their sarees till such a time when they got their desired price for the sarees, or they could no longer afford to hold on to their stock. More than half the weavers in Bandhpali—that is 178 weavers operated as independent weavers.

Yarn suppliers



Figure 5.7: Guru Meher yarn trader

The yarn suppliers consisted of small local traders⁶⁸ and privately owned shops. The shops ranged from small village shops who stocked plain and coloured yarn of varying counts for individual artisans, to the larger shops in Barpali and Bargarh⁶⁹ who procured yarn from factories and mills across the country and supplied it to the smaller village shops and traders. The larger yarn traders were typically Marwaris, a prosperous sub community of India known for their shrewd business acumen and money making skills.

They supplied yarn to private wholesalers, retailers as well as the cooperatives. The Mehers were the other yarn traders in smaller towns and villages. Because they were once weavers themselves, they were more empathetic towards other weavers. They sometimes gave yarn on credit to the weavers against the saree as a collateral. The yarn

⁶⁷ These were mostly for three to four months in a year during the monsoon season when there were fewer festivals and weddings causing a dip in demand. The moisture in yarn also made it difficult to weave.

⁶⁸ These yarn traders did not have any fixed shop premises. They sold plain or tie-dyed yarn through their homes or in markets.

⁶⁹ Bargarh was the main centre for yarn trade in Western Orissa.

suppliers performed the vital function of ensuring a continuous supply of the most vital raw material for weaving, without which hundreds of weavers and their families would have little means of earning a living through their traditional skills. Some of the yarn shops also participated in the weekly Balijuri market (see inset 5.10) where they made brisk sales. A total of 18 yarn suppliers were identified of which 7 operated in Bandhpali village.

Cooperatives



Figure 5.8: Rama Meher, Manager, Sambalpuri Bastralaya Cooperative

The cooperatives operated as hybrid organisations implementing state funded schemes and at the same time operating as a business with weaver members as shareholders. Two main cooperatives were found operating within the Bandhpali artisan network. One of them was the larger and well established Sambalpuri Bastralaya Cooperative founded in 1954 with weaver members (over 6000) all across Orissa and the other smaller (170 members) Meher Arts and Crafts Society that was started in 1955 as the American Friends Service Society. The artisans in Bandhpali were linked to four branches of the Sambalpuri Bastralaya Cooperative of which one was located in Bandhpali village. Both the cooperatives provided a range of services to the weaver members. These

included provision of plain and coloured yarn, designs, small weaving equipment, skills training and a marketing channel.

Master weavers



Figure 5.9: Ramesh Meher, master weaver

Master weavers were independent weavers who had expanded their enterprise to employ other weavers on a contract basis. They were characterised by their risk-taking ability where they raised the initial start-up capital through personal savings and loans from friends and family. The master weavers delegated or contracted out the pre-weaving stages such as yarn winding, twisting, sizing and weaving, and instead focused on higher order activities such as design and marketing. They employed anywhere between two to fifteen people at a time. The semi-structured interviews with master weavers in

Bandhpali revealed that the skill and production of tie-dye making was heavily guarded within the family and passed on only to one's sons and daughters. They also bore the market risk, as whether or not they managed to sell the sarees during a particular week, they had to pay their contractee artisans. A total of 49 master weavers were identified. Of these 19 were surveyed in Bandhpali village. The rest 30 were spread across Barpali, Bargarh and Bijepur.

People in ancillary weaving occupations



Figure 5.10: Juhi Meher, yarn winder

The people in ancillary weaving occupations carried out various tasks such as yarn winding, twisting and sizing and making tie-dyed yarn. The profile of artisans in this category ranged from very poor persons with little means or skills of taking on higher order weaving tasks, to the very talented skilled craftspersons who were proficient in the technique and art of making tie-dye. The former worked on contract with the master weavers whereas the latter worked independently selling their tie-dyed yarn in markets. Altogether 14 out of 309 people interviewed worked in ancillary weaving occupations.

Marketing channels

The marketing channels identified in the network mapping included primary, secondary and tertiary markets. The majority of the independent weavers in Bandhpali used Balijuri market (see inset 5.10) as their primary marketing channel. At times these independent weavers marketed through an intermediary trader or master weaver within the village or from neighbouring villages. The master weavers also predominantly used the Balijuri marketing channel where they sold to retailers and wholesalers who comprised secondary markets. The tertiary markets consisted of retail shops in the larger towns and cities who carried the products to the end customer. The Sambalpuri Bastralaya Cooperative acted as a primary marketing channel for their weaver members but also as a tertiary market where they reached out to customers across India through exhibitions and their branded retail outlets.



The Balijuri market is one of the most vibrant textile markets in India. Held every Friday in the small town of Balijuri, 18 km from Bandhapali village, the market is spread over six acres of land owned by the government. It starts in the early hours of the morning at 3.30 am with bulk of the trade being carried out under dim light bulbs. A nominal entry fee of 10 cents was payable by the artisans each week.

From bicycle-peddling weavers carrying two sarees in their *jhola* (cloth bag) to master weavers carrying bundles of sarees on their motor bikes to yarn traders with an entire jeep load of plain and coloured yarn, the market was a feast for the senses. Artisans everywhere sat on raised concrete platforms (built by the government), under trees next to puddles and in small shacks and tents. The sarees were displayed on polythene sheets, which made it especially challenging in the monsoons. Weavers selling two to three sarees sat next to traders with colorful piles of 50 to 100 pieces. Besides them there were yarn traders selling bundles of plain as well as coloured yarn and artisans selling tie-dyed yarn still wet from the night before.

There was something for everyone here. From small *rumaals* (handkerchiefs), *gamchas* (a small towel casually thrown around men's shoulders) and *lungis* (wrap around for men) to plain *Butti* sarees and the more intricate *ikat* sarees. The main buyers were wholesale shopkeepers and traders from within the state but also from the nearby states of Chattisgarh and West Bengal. Other buyers included local women out on their weekly shopping, who checked each piece meticulously before bargaining a successful price. The sale network was interesting. The smaller traders came early. They would purchase 100 to 200 pieces from the weavers. When the larger wholesalers arrived after a few hours, they sold the sarees at a mark up of 20 cents each, thus making a profit of \$20 to \$40 in a span of a few hours. The weekly turnover of the market was estimated to be nearly \$200,000, a sizeable sum for this impoverished region.

Figure 5.11: Trade at Balijuri Haat

Thus ‘design as pattern’ guided the uncovering of the pattern of the artisan weaving ecosystem. The Artisan Network Map showed the location of the actors in the Bandhpali weaving ecosystem. Further the network map identified the various actors whose roles and relative numbers in the ecosystem were detailed in this section.

5.2 Mapping artisan journeys and service interactions

In this section, the interconnecting line between the artisan and the service provider highlighted in the network map is magnified to provide a detailed view of the interactions between the artisans and the service providers. This magnified view was considered in the case of artisans selected for in depth interviews. It shows the sequence of steps involved in the artisans’ journey of making through a visual depiction in the form of a journey map. It further pinpoints the detailed nature of these interactions using the various forms of capital. Scoones (1998) identified five types of capitals that a livelihood activity may require (see Table 5.1). These are distinguished as human, social, natural, physical and financial capitals. These help to establish the ‘what’ of the service inputs provided or aided by the service providers at each step of the artisan journey. A further description of ‘how’ these interactions take place in case of each of the artisan groups helps to illuminate how artisan services unfolded in the last mile.

Table 5.1: Types of capital required for a livelihood activity

Human capital	skills, knowledge, ability to labour, good health
Social capital	networks and relationships of trust
Natural capital	land, forest, water (public goods)
Physical capital	infrastructure, shelter, transport, communications
Financial capital	inflow and outflow of money

5.2.1 Contract weaver system

The ‘what’ of the service provided

The journey map marks the steps followed by the artisans weaving on contract. The number of steps involved in the journey of the contract weavers were fewer as compared to the other two artisan groups (see *Figure 5.11*). This was primarily because the artisans in this group did not go through the initial process of making tie-dye. Instead they got the ready tie-dyed yarn from the master weavers they worked with. The human capital aided by the service providers included, on the job training in weaving double *ikat*.

In two of the three cases the weaver and the master weaver were related thus having a form of social capital between them that drove the relationship. In case of Binod, while he was not related to the master weaver, there existed enough trust for him to occasionally get a loan (financial capital) on an informal understanding basis. The artisans also received cash payment per saree of \$9.5 on an average. The physical capital provided by the master weavers apart from the ready tie-dyed yarn included soft infrastructure in the form of a marketing channel.

Table 5.2: Service offering in the contract weaver system

Forms of Capital	Artisans		
	<i>Bideshee</i>	<i>Binod</i>	<i>Gunanidhi</i>
<i>Human</i>	Opportunity to try weaving double <i>ikat</i> sarees	Training in weaving double <i>ikat</i> saree	Training in weaving double <i>ikat</i> saree
<i>Social</i>	Related to each other	Loan offered on the basis of trust	Related to each other
<i>Financial</i>	Income per saree: \$10. Weekly income: \$40 to \$50 for four to five pieces woven over two looms	Income per saree: \$10 Weekly income: \$60 for six sarees woven over two looms Gets loan at time of need.	Income per saree: \$9 Weekly income: \$18 for two sarees woven on one loom
<i>Natural</i>	Self sourced	Self sourced	Self sourced
<i>Physical</i>	Tie-dyed yarn Market channel	Tie-dyed yarn <i>Balloon</i> (machine fitted yarn) Market channel	Tie-dyed yarn Market channel

The 'how' of the service

The interaction between the artisans and the master weavers took place twice a week. Each Friday⁷⁰ the artisans received payment for the previous week's work and were given yarn for the next week's work. All of the interviewed artisans deposited the finished sarees each Thursday. An exception was made if the artisans sometimes needed the money during the week, as they would then deposit the sarees as they wove them during the week. All the three artisans interviewed lived in close proximity to the master weavers and either walked or took their bicycle to commute. The yarn issued as well as the payment record was maintained in a passbook. A point to note here is that two of the three artisans reported that their payment would be deducted in the case of faulty weaving. This would usually be \$1 to \$2 per saree that amounted to roughly 10 to 20 percent of their income.

⁷⁰ The payment was made on Friday after the Balijuri market sales.

Contract Weaver Journey Map



Figure 5.11: Contract Weaver Journey Map

5.2.2 Cooperative weaver system

The 'what' of the service provided

The weaving journey of the cooperative weaver involved 27 steps (see *Figure 5.12*). It was the longest sequence of steps as compared to the other two groups. The service provider for all the three interviewed artisans in this group was the Sambalpuri Bastralaya Cooperative (SBC). The cooperative augmented the human capital of the weavers by transferring skills and knowledge of mixing dyes, to produce new, innovative colours. One of the artisans who was not able to create his own designs also received tie-dye designs in the form of graphs. The cooperative further secured the health of the cooperative members by issuing them with health cards for a small annual premium of \$1 which entitled them and their families to receive free health treatment to a maximum of \$300 per year.

In terms of social capital, the cooperative provided a common platform for its weaver members. This collective strength was harnessed at times by the weavers to meet their demands. As Gajendra recounted:

All the weavers went on strike. When we did it three to four times then they called a meeting and increased the saree rate. All saree rates. \$2 to \$3 increase, then our saree rate became \$20. In the market everything increases, see, from pulses, rice, tomatoes everything. Everything increases, so why should our saree rate not increase? The yarn rate also increases. So if we get the saree for \$16 to \$17, then the payment should increase proportionately. So we went on strike we gave application, and the \$17 saree was then made \$20.

One of the most attractive offerings of the cooperative was the various forms of financial capital (see *Table 5.3*) it provided its members. Weavers in this group received a good income as reported by the interviewed artisans. They further received a commission (extra income) once a year to the tune of five percent of their total annual income. They got soft savings and loan facility from the cooperative. The savings facility was provided by deducting ten percent of artisan earnings each week and deposited in their savings account held by the cooperative. The compulsory savings helped weavers at the time of financial need, when they were able to secure a loan. The cooperative encouraged weavers to produce new, original designs by giving them financial incentives as well as awarding them a certificate and recognising their talent. In addition to making available high quality yarn to artisans, the artisans also received other weaving related instruments such as *pania* and *dungi* (see Glossary). Whilst none of the weavers interviewed had received a loom or weaver's cottage at the time of interview all of them reported that they were going to get it in the near future.

Cooperative Weaver Journey Map

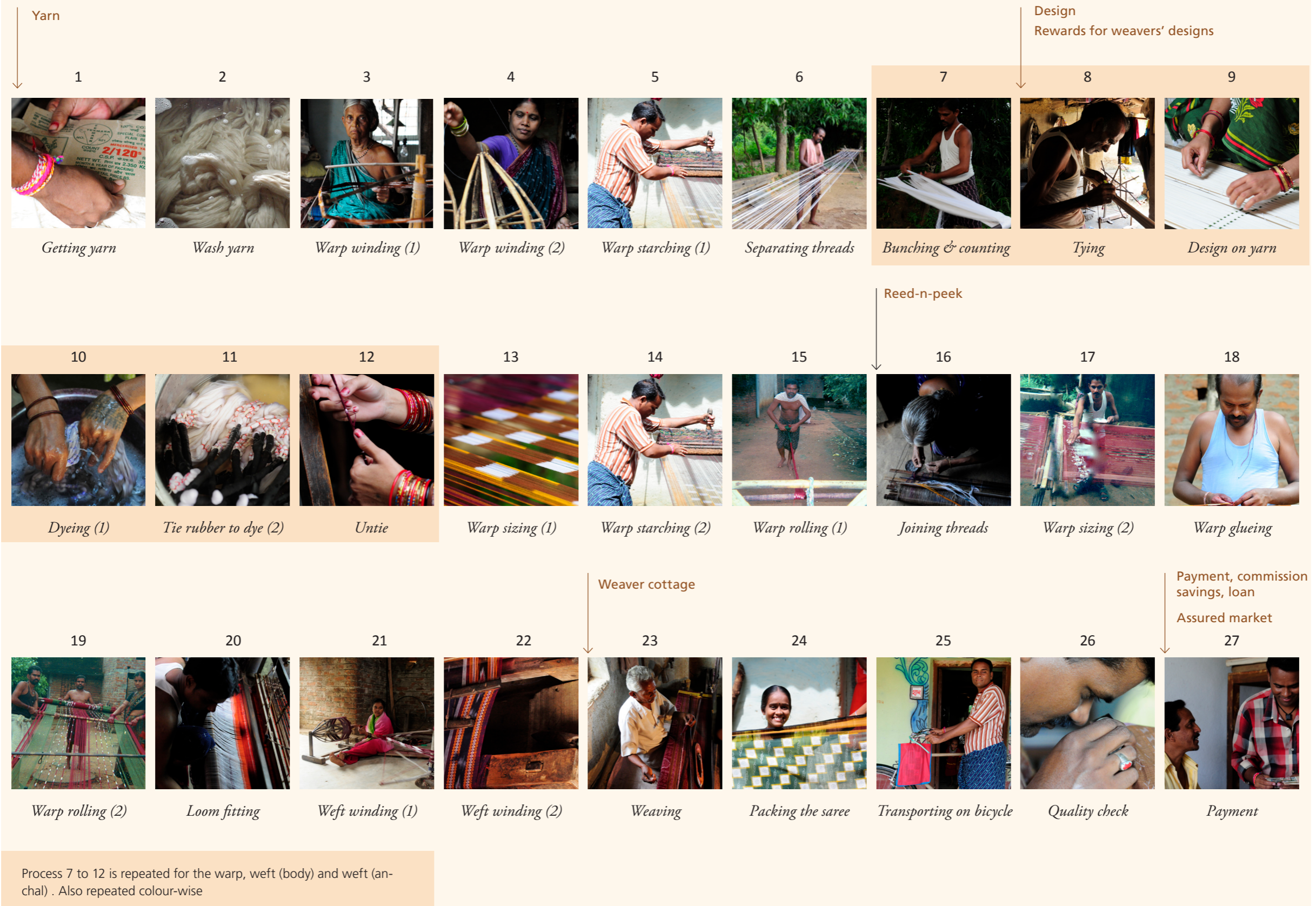


Figure 5.12: Cooperative Weaver Journey Map

Table 5.3: Service offering in the cooperative weaver system

Forms of Capital	Artisans		
	<i>Jadhava</i>	<i>Gajendra</i>	<i>Balmukund</i>
<i>Human</i>	Health card Inputs on mixing dyes	Health card	Health card Saree design
<i>Social</i>	Cooperative membership	Cooperative membership	Cooperative membership
<i>Financial</i>	Income per saree: \$19 Weekly income: \$38 for two sarees made in one loom Loan Savings facility Commission (5 percent of annual income) Reward for new designs	Income per saree: \$19 Weekly income: \$38 to \$57 for two to three sarees made in one loom Loan Savings facility Commission (5 percent of annual income) Reward for new designs	Income per saree: \$19 Weekly income: \$38 for two sarees made in one loom Loan Savings facility Commission (5 percent of annual income)
<i>Natural</i>	Self sourced	Self sourced	Self sourced
<i>Physical</i>	Yarn Market <i>Pania</i> <i>Dungi</i> Loom	Yarn Market <i>Pania</i> <i>Nail</i> Loom	Yarn Market

The 'how' of the service provided

The cooperative had a weaving branch office located in a prominent place in Bandhpali village. The branch was run by two employees: a manager and a quality check assistant. The office had two rooms. The front room was the interface area where weavers came to take yarn, deposit saree and collect payment. The other room functioned as a store for woven sarees and yarn. The office timings were 9 a.m. to 5 p.m. from Mondays to Saturdays. However these tended to be flexible as one of the staff members resided in the village itself. During my stay in the

village, I observed that it was open most days. It was closed during lunch hours and at times closed earlier than the designated time in the evenings.

However, all members of the cooperative were satisfied with the location of the office as well as the opening hours. In this system, yarn for four pieces of sarees was issued to the artisans once every two weeks and noted in a book. The weavers deposited the saree as and when they were ready with it. As with the contract weavers, the artisans in this system also used bicycle for transport (see Step 25 of *Figure 5.12*). When the saree was brought to the office, it was examined by the quality check assistant using a magnifying counting glass. Here the 'reed n pick'⁷¹ was measured. In case of satisfactory quality, payment was made immediately. In case of any damage or defect, the weaver would take it back for correction. At other times the manager accepted such items and sent it to the head office. In the event it was not accepted there, it was sent back to the branch office. The artisan would then have to accept a reduced income of \$1 to \$2 or take it back and sell it in the open market.

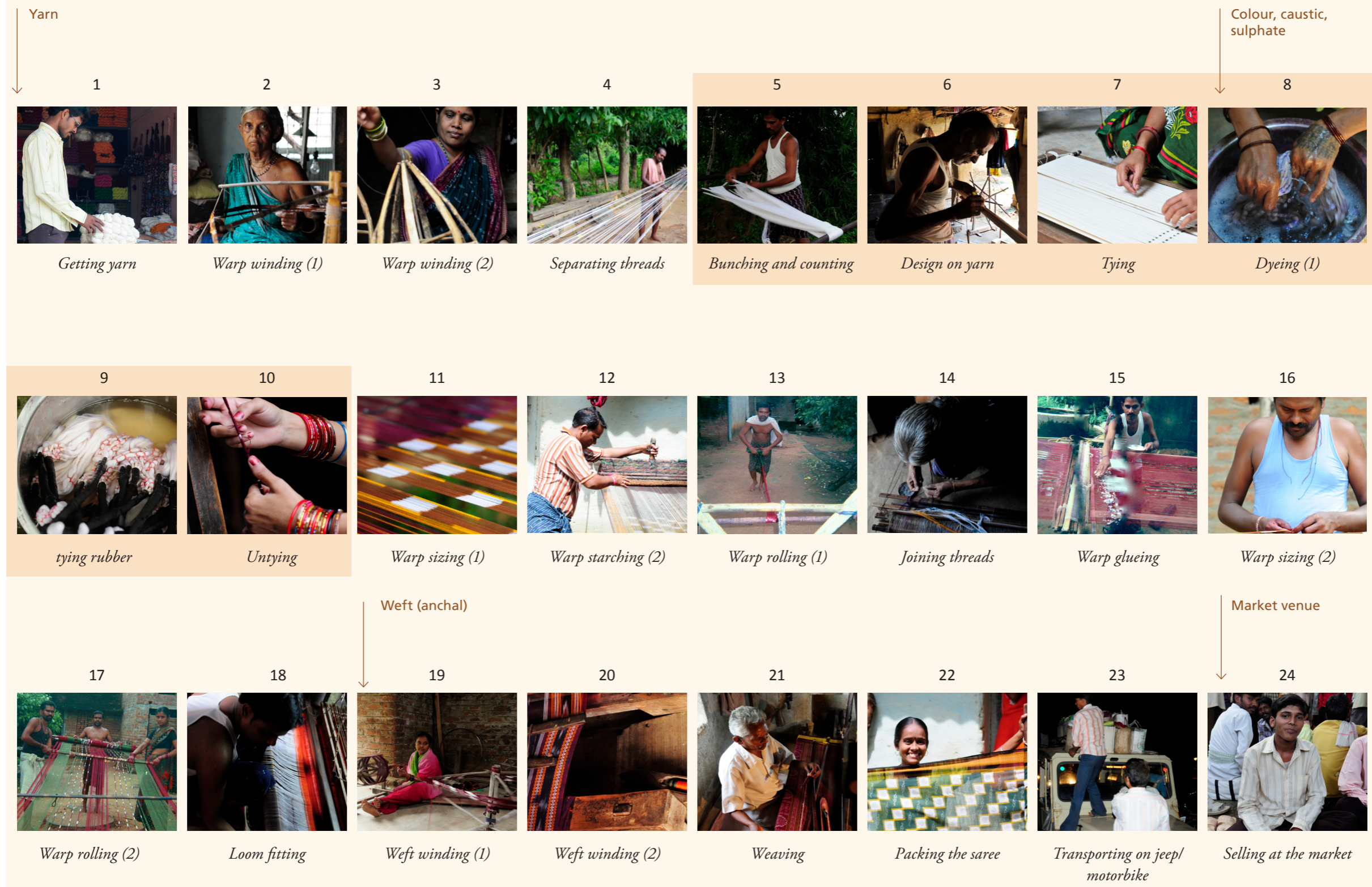
5.2.3 Independent weaver system

The 'what' of the service provided

The journey of the independent weavers entailed 24 steps (see *Figure 5.13*). While the needs of the artisans in the other two groups were largely met through one service provider, in case of the independent weaver these were met through multiple service providers. The plain yarn and dyes were sourced from local village shops, Barpali town or Balijuri market. At times these were given on credit on the basis of trust as in the case of Sanju, which enabled him to save the weekly trip to the market, allowing him instead to go only once a month. This shows that social capital facilitated the acquisition of physical and financial capital. Two of the three weavers reported that they purchased ready tie-dyed yarn for some parts of the saree such as the border or the *anchal* (see Glossary). These were used as a time saving measure but also as a way of achieving better design, especially when the artisans did not have the time or skills to tie-dye complex motifs that were desired by the customers on the saree *anchal* or border.

⁷¹ The term was used by the production manager to indicate the number of warp and weft threads in a square inch. In layman's term this meant the tightness of the weave.

Independent Weaver Journey Map



Process 5 to 10 is repeated for the warp, weft (body). Also repeated colour-wise. The weft (anchal) is sometimes bought from the market.

Figure 5.13: Independent Weaver Journey Map

Table 5.4: Service offering in the independent weaver system

Forms of Capital	Artisans		
	<i>Sanju</i>	<i>Narayana</i>	<i>Tarani</i>
<i>Human</i>	Self sourced	Self sourced	Self sourced
<i>Social</i>	Yarn on credit from shopkeeper	No reported instance	No reported instance
<i>Financial</i>	Varying prices from buyers: Average income per saree \$5 Weekly income: \$35 from 7 sarees made in one loom with two people weaving	Varying prices from buyers: Average price per saree \$8 Weekly income: \$32 from 4 sarees made in one loom	Varying prices from buyers: Average price per saree \$5 Weekly income: \$20 for from 4 sarees made in one loom Loan from Jagdamba SHG group
<i>Natural</i>	Self sourced	Self sourced	Self sourced
<i>Physical</i>	Yarn Dye Market venue Shared jeep for transport	Yarn Dye Ready tie-dyed yarn for <i>anchal</i> Market venue Shared jeep or transport	Yarn Dye Ready tie-dyed yarn for <i>anchal</i> and the saree border Market venue Shared jeep/ motorcycle for transport

The independent weavers also got a secure market venue provided by the government to carry out their weekly marketing activity. They used shared private transport providers to commute to and from the venue (about 18 km from the village). At times they used their bicycle or shared a motorcycle ride with a friend to get to the venue. In terms of financial capital, the independent weaver relied on the buyers and market to give him a reasonable price for his saree. One of the weavers was part of a self help group from where he received loans for his production activities. The human capital, that is the skills and knowledge of making new designs and tie-dye was almost entirely self-taught through trial and error and with the help of family and friends.

The 'how' of the service provided

The independent weavers too had a rhythm which revolved around the Friday market. They sold their sarees each Friday and from the income received bought new yarn from any of their chosen shopkeepers. One of the weavers however as mentioned earlier only used the market facility once a month when he had a sufficient number of sarees to sell. While Tarani

purchased six months worth of tie-dyed yarn for the *anchal* from the market, Narayan purchased these for eight sarees at a time. All three artisans in this group employed the principle of bulk buying to save costs. The dyes were purchased as and when required from the village shops or shops in nearby Barpali town. The artisans used the marketing facility provided by the government as a pay-as-you-go service, where each time they wished to use the facility they paid a nominal fee of 10 cents. One of the important aspects about this service mentioned by the weavers was the safety and security of the venue, which minimised chances of theft and allowed them to carry out trade in a peaceful manner.

5.2.4 Comparing the service offerings in case of contract, cooperative and independent weavers

In this concluding section of the chapter, I compare the service offerings made by the service providers in each of the three groups. I draw out which of the various capitals were sourced by the weavers themselves and which ones were aided by the service providers. In all three cases, the artisans made the initial investment in fixed assets such as the loom, yarn winding and sizing tools as well as wooden frames to make tie-dye. Each of the artisans also secured natural capital such as water and firewood required for weaving. All the artisans interviewed used their home as the working space and family members to assist with the weaving activities. The services compared below exclude these initial fixed investments. They primarily compare recurring forms of capital required such as raw material, skill development, finance and marketing facilities. If a service provider offered an input in addition to these, it is highlighted in the table.

Human capital

The elemental skill and knowledge of weaving, amongst all three groups of artisans, was acquired early in their childhood from immediate family members. The service providers however, in some of the cases helped to raise this skill either by directly imparting the requisite knowledge or by providing artisans with the opportunity to try new designs of higher order complexity, whilst providing an assured buy back. This was especially true of contract weavers. Both Binod and Gunanidhi were helped by their respective master weavers when they switched from weaving single *ikat* sarees to weaving the more skilled double *ikat* sarees. The cooperative weavers received inputs in the form of saree designs or dye mixing techniques. Due to the consistently high quality standard advanced by the cooperative, the weavers had a greater sense of excellence as well as the ability to produce high quality work. The cooperative also issued health cards to all its members thereby helping to secure the most vital asset of all: the 'body',

without which the hard, manual task of weaving could not be carried out. In the case of the independent weavers, the skill and knowledge of tie-dye making was mainly furthered through self experimentation. In the case of one of the independent weavers though the skill of tie-dye was only acquired after marriage, when he learnt it from his wife.

Social capital

The artisans in each group acquired and used social capital in different ways. In case of the contract weavers, two of the artisans and their service providers were linked through family ties which helped to foster mutual trust. The third artisan was not related to his service provider but managed to secure loans on a trust basis when required. Trust was also evident between the cooperative weavers and the branch manager of the cooperative, who advanced small sums of advance payment to the artisans on an informal basis. As Gajendra confided, ‘Sometimes we get an advance. He [the cooperative branch manager] doesn’t tell anyone, but he gives it to us. If there is a need, if there is a festival, we ask for advance.’ In case of the independent weavers social capital was most useful in securing yarn on credit. Trust also formed the basis of understanding between artisans and prospective buyers whereby sarees would sometimes be reserved on the basis of a phone agreement.

Financial capital

The artisans received financial capital in various forms (see Table 5.5) such as payment for sarees, loan and savings facility, bonus payments as well as rewards for creating new designs. The contract weavers as well as cooperative weavers received their payment as well as loan facility primarily through the service provider they worked with. The cooperative weaver was extended a savings facility by the cooperative where he could deposit ten percent of his income and take a loan against it at times of need. In addition the cooperative weaver received financial rewards for new saree designs created and a commission most years⁷² in the range of five percent of the total annual earnings through the cooperative, which none of the artisans in the other two categories received. The independent weaver received payment from multiple sources depending on who the buyer was. Credit for raw material purchase was forwarded by shop keepers on an informal basis whereas loan for production activities was mainly secured from friends and family and at times from Self Help Groups.

⁷² The commission was only paid during the years the cooperative made a profit in their business.

Table 5.5: Types of financial capital* received amongst the three groups of artisans

Financial capital	Contract weavers	Cooperative weavers	Independent weavers
Fixed payment	✓	✓	
Variable payment			✓
Loan	✓	✓	✓
Savings facility		✓	
Bonus		✓	
Reward for new designs		✓	

* Note: These vary for different artisans according to their productivity, earning levels, and complexity of designs

Physical capital

The number of service providers from whom the artisans secured the different types of physical capital (see Table 5.6) varied. As seen in the journey map of the contract weavers the number of steps in the journey were fewer as compared to the other artisans in the other two groups. The artisans in this group interacted only with one service provider for all their needs. This was also true in case of the cooperative weavers who mainly accessed different forms of capital through the cooperative. The only exception to this was in securing the dyes for colouring which was purchased from local village shops⁷³. Thus they interfaced with two service

Table 5.6: Types of physical capital received amongst the three groups of artisans

Physical capital	Contract weavers	Cooperative weavers	Independent weavers
<i>Yarn</i>	Plain Yarn		✓
	Tie-dyed yarn	✓	✓
	Machine-fitted yarn	✓	
<i>Colour</i>		✓	✓
<i>Market</i>	Assured buy back	✓	
	Market venue		✓
<i>Transport</i>			✓
<i>Weaving accessories</i>		✓	

⁷³ The artisans purchased the dyes from local shops as they felt it provided better quality and greater variety of dyes than the cooperative.

providers. In the case of independent weavers however, the physical capital was often secured from three to four different types of providers. These providers ranged from independent entrepreneurs to local shops to government organisations. To elaborate, the artisan in this group purchased plain yarn and dye from a village shop or one in nearby town. There were no fixed shops where he bought this from, but multiple shops depending on the need, convenience and price factor. He purchased small amounts of ready tie-dyed yarn for the border and *anchal* at the market (Balijuri Haat) from fellow entrepreneurs. In the event he did not use his own transportation (bicycle) to commute to the market, this facility was provided by local jeep owners who offered a shared ride. The market facility or venue was provided by a government agency called the Regional Marketing Committee (RMC). Thus the number of service interfaces and touchpoints for the physical capital were many more in case of the independent weaver.

5. 3 Conclusion

In this chapter I have highlighted how the concept of 'design as pattern' was used to uncover macro and micro patterns of artisan services. The macro pattern in the form of the Artisan Network Map revealed the types of actors present in the Bandhpali weaving ecosystem, ranging from contract weavers, to independent weavers and yarn traders to institutional marketing channels such as the Balijuri haat. The Artisan Network Map also mapped the connections between those actors, depicting them as patterns of threads. These connections were further magnified in the cases of artisans selected for in depth interviews. The journey maps of contract, cooperative and independent artisans illustrated the complexity and divergence of steps amongst the different artisan groups. They also assist in the identification of the various forms of capital that different service offerings provided. This chapter evidenced the transactions that unfolded between artisans and service providers in the Bandhpali weaving community.

CHAPTER SIX

Design as Purpose: Understanding artisan preference values

My father used to say, we know everything, we have the experience, why should we work under someone?

NARAYANA MEHER (INDEPENDENT WEAVER)

A discussion about purpose is a central element of the ‘way of design’, where the purpose is not only to create economic, but also aesthetic, emotional and social values. In this chapter I use the guiding purpose of the ‘way of design’ to explore what forms of value the present services help to create? What are some of the specific service attributes that aid the fulfilment of these values? In other words, why do artisans prefer one service system or provider over the other and which values underpin these decisions and choices? I first outline the meaning of different forms of value. I then discuss the relative preference and importance of each of these values amongst the three groups of contract, cooperative and independent artisans.

6.1 Understanding value

The discussion of ‘value’ has been divided; while some perceive value as being inherent in ‘goods or services’, others see it as inherent in ‘persons’. In other words, while the former hold an ‘objectivist’ view, the latter hold a ‘subjectivist’ position (Walker et al., 2006:26). Sandstrom et al. (2008:113) extended this discussion by stating that while the traditional ‘goods-dominant’ logic perceived value as produced into the object and exchanged to a customer (exchange value), in the ‘service-dominant logic’, it is the customer himself or herself who perceives and defines value when using a ‘good or service’ (value-in-use). This study takes the latter position in examining artisan values. It uses the concept put forth in ‘means/end theory’ that considers products or services as means and values as ends (Khalifa, 2004:653). It further

believes that while values are sought as ends through services, they also act as drivers of preferences for services, and as guides for evaluating them.

The analysis uses the concepts of utility, social, emotional, epistemic and conditional values as put forth by Sheth et al.(1991) (see Table 6.1) Utility value is further discussed using concepts of time, money and effort as these were the predominant themes that emerged during data

Table 6.1: Types of consumer value

<p><i>Utility value</i></p> <p>The perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance. An alternative acquires functional value through the possession of salient functional, utilitarian, or physical attributes. Functional value is measured on a profile of choice attributes.</p>
<p><i>Social value</i></p> <p>The perceived utility acquired from an alternative's association with one or more specific social groups. An alternative acquires social value through association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups. Social value is measured on a profile of choice imagery.</p>
<p><i>Emotional value</i></p> <p>The perceived utility acquired from an alternative's capacity to arouse feelings or affective states. An alternative acquires emotional value when associated with specific feelings or when precipitating or perpetuating those feelings. Emotional value is measured on a profile of feelings associated with the alternative.</p>
<p><i>Epistemic value</i></p> <p>The perceived utility acquired from an alternative's capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge. An alternative acquires epistemic value by questionnaire items referring to curiosity, novelty, and knowledge.</p>
<p><i>Conditional value</i></p> <p>The perceived utility acquired by an alternative as the result of the specific situation or set of circumstances facing the choice maker. An alternative acquires conditional value in the presence of antecedent physical or social contingencies that enhance its functional or social.</p>

analysis. Similarly epistemic value is analysed as statements indicating high epistemic value and those indicating low epistemic value to better understand artisan preferences. It is difficult to clearly distinguish between the precise values that guide decision-making, as they often overlap and more than one type of value may guide a decision, or constitute a means to achieving a higher end value. In this study I have attempted to uncover these with the use of coding and content analysis (as discussed in Chapter Four) where 'key words or phrases in context' associated with each value were identified and their frequency counted. The data is presented in this chapter for each of the groups and has been further illustrated through direct quotations from the study interviews. While the primary focus of the study was to understand which values artisans perceived as important with respect to a given service provider or system,

the data also revealed aspects of value, such as intrinsic or emotional values that the artisans gained from creating beautiful products. While these may not be directly attributable to a particular service/provider, I believe they are important to be discussed here as they help to arrive at a more comprehensive understanding of the three artisan groups.

6.2 Preference values of contract weavers

i) Utility value

Utility value was an important value for artisans in this group and took precedence over social and emotional values. Within utility value, money took precedence over time and effort.

Time

Time was a key deciding factor for artisans in this group and underpinned the decisions regarding which service provider to work with. In his 50 years of weaving career, Bideshee went from being an independent weaver to contract weaver, cooperative weaver and back to weaving on contract. When questioned about his reasons for switching from one service provider to the other he commented that, 'Going to the market [as an independent weaver] resulted in time loss, so I started to get contract work from others.' Time remained a consistent consideration for him in making choices throughout his weaving career. For Gunanidhi, time was the main limiting factor in expanding his skills and income. Being the sole bread earner of the family that comprised his elderly mother and himself, he could not leave his loom to learn tie-dye skills. While he was aware that learning to make tie-dye would fetch him higher income, he said he couldn't do two jobs (continuing to weave on contract and make tie-dye) at the same time. Binod perceived that spending the time to make tie-dye himself would bring down his weekly productivity from the present six sarees a week to two sarees. Getting ready tie-dyed yarn from the master weaver enabled him and his family to focus on the weaving activity and earn more income.

Money

Money was the most important utilitarian value in comparison to time and effort for artisans in this group. This is reflected by the number of value statements made (see Table 5.1) by the artisans. Money was as much about minimising losses as about maximising gains. To illustrate, when I asked Binod whether he had considered working with the cooperative who paid higher wages, his response was, 'Small, small children weave, so if a little bit goes wrong, they [the cooperative] cut more wages.' Therefore, although the cooperative paid higher wages, the fact that they would sometimes deduct wages for poor craftsmanship, made Binod decide to work

with the master weaver. Both Bideshee and Binod moved away from weaving single *ikat* to weaving double *ikat sarees* in order to earn higher income. As Bideshee said, ‘In single *ikat* the payment was about \$2 to \$3 per saree, but in double *ikat* it is about \$10.’ They thus traded off time and effort to acquire a weaving skill that would fetch them higher income.

Effort

Effort for this group of artisans was linked to time, though not always. Together with time, it constituted the key factor in deciding how much of it could be expended in relation to the potential financial gains. For example Binod decided to switch from making intricate pattern sarees to simpler pattern ones as he thought, ‘It [simpler pattern] is less effort, more money and profit. In the other [complex pattern] there is more work and less profit.’ Effort in the sense of physical inconvenience of traveling was also one of the reasons why Bideshee switched from working with the cooperative (located further away from the village) to working with a nearby master weaver, despite the former paying higher wages.

Table 6.2: Content analysis of preference value statements of contract weavers

Value	Sub concepts	Binod	Bideshee	Gunamidhi	Combined	Percentage
Utility	<i>Time</i>	1	3	1	5	
	<i>Money</i>	7	4	–	11	
	<i>Effort</i>	4	–	–	4	
		12	7	1	20	33
Social		–	–	–	–	0
Emotional		1	7	2	10	16
Epistemic	<i>High</i>	2	1	1	4	7
	<i>Low</i>	4	11	12	27	44
						100

ii) Social value

Content analysis did not highlight any key words in context that indicated social value that the artisan derived out of this particular service system. Some analysis regarding social value can be made however, from the stated aspirations of artisans in this group. The weavers in this group perceived their social identity as being dependent and lacking the means to elevate themselves to the status of an independent weaver. All three artisans in this group echoed this sentiment reflected in their various statements. As Bideshee recollected, ‘If we had learnt [the skill of

making tie-dye] then we could make our own saree.’ Despite not being able to make tie-dye, he had still tried to be an independent weaver. However, he also lacked the necessary financial capital to buy ready tie-dyed yarn from the market. When I asked Binod if he knew the price of his woven saree in the market, he replied, ‘No he [master weaver] sells outside at a higher rate. But I am dependent. So can’t help it. If I had my own money, then one can make some money. If I don’t have money, then I have to go to him.’ Gunanidhi similarly expressed a desire to be independent in the future when he said he will have to learn the tie-dye skill as his current income levels were not be sufficient. Thus they did not derive social value from working on contract.

iii) Emotional value

The key phrases indicating emotional value for artisans in this group played a more instrumental⁷⁴ than intrinsic role. Whilst this aspect cannot be conclusively proven here, on the basis of my field observation I am inclined to argue that this was because the contract weaver was more concerned with survival than self expression values⁷⁵. For example, Gunanidhi explained why threads need to be centred and not sticking out while weaving a saree. This statement was preceded by one where he admitted that occasionally his payment was cut when the design did not look good. Binod similarly expressed a desire to weave beautiful designs in silk rather than cotton. He had seen these designs at one of his relative’s. The price of the silk saree was far higher than the cotton saree he was used to weaving. At times however aspects of weaving did seem to provide affective value, which stemmed from a job well done and being able to exercise skilled judgement. As Bideshee explained while talking about the difference in weaving while using different yarn counts, ‘If the yarn is fine, it is plain, it has polish, it feels nice to touch. The duplicate one, is more rough textured, not plain.’

iv) Epistemic value

In analysing epistemic value that the artisan has or derived from the service, I divided the statements into those that indicated high epistemic value and those that indicated low epistemic value. Statements indicating high epistemic value constituted 7 percent of all

⁷⁴ Wenstop and Koppang (2009) make the distinction between intrinsic and instrumental values, where intrinsic value constitutes an end in itself and instrumental value is a means to an end. Alkire (2003) similarly talks about how certain beings and doings are intrinsically valued. In contrast Aristotle (ibid) pointed out that, ‘The life of money-making is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.’ In other words according to Aristotle it serves an instrumental rather than an intrinsic purpose.

⁷⁵ According to the world value survey, survival values are those that relate to economic and physical security. Once these are met there is a greater emphasis on self-expression values, subjective well-being and quality of life (Inglehart and Welzel, 2011).

statements in this group whereas those indicating low epistemic value constituted 44 percent, the highest amongst the three groups.

Epistemic high value statements

High epistemic value was indicated when the artisans exhibited a desire to acquire skill or knowledge and showed instances where they had overcome adverse circumstances to acquire it. Bideshee for example transitioned from weaving single to double *ikat* sarees in his late fifties. He said, '[I] learnt myself. Whoever I was working with at the time, used to give tie-dye, so just learnt while working.' The service provider in his case created epistemic value through their service offering. Gunanidhi expressed a desire to acquire higher skills and knowledge when he said, 'I am interested and would like to go and learn [tie-dye] outside, but if I can learn well then it is fine, or it will be a waste of time.' This indicates that the cost of acquiring knowledge and skills was perceived to be higher in later years of an artisan's life as compared to acquiring them in early childhood or teenage years.

Epistemic low value statements

Despite the instances where artisans in this group demonstrated a desire to acquire epistemic knowledge, nearly 44 percent of value statements showed that they were frequently unable to derive epistemic value or did not have a keen desire to do so.

Phrases such as 'can't do', 'didn't try', 'don't know' were used frequently by this group of artisans in the interviews, indicating a low desire and capability for knowledge-seeking. To illustrate, in recounting his childhood experience, Bideshee said in a somewhat resigned manner, 'They [his uncle's family] also didn't try and I also didn't try to learn [tie-dye making].' He was talking about his father's death and what happened after, when he went to his uncle's house to learn. There he had picked up all but one of the most important skills of *ikat* weaving- that of making tie-dye. Gunanidhi similarly admitted, 'I never learnt or try to learn.' His low desire for epistemic value appeared more a case of personal motivation than circumstances as in the case of Bideshee. Binod had the knowledge of making simple tie-dye. He had however not attempted to advance his skill levels and preferred only to restrict himself to weaving rather than make tie-dye. Thus epistemic value was governed by a combination of personal circumstances, self motivation and opportunity costs. It could be acquired either by oneself (as with trial and error) or with the help of a family member or service provider.

v) Conditional value

In exploring how conditional values operated in the lives of the artisans, I tried to elicit a response to ‘what if’ type questions (see *Appendix VI*). This helped to reveal which values had been or might be considered in face of other values. All artisans in this group were satisfied with the income they earned from the service provider. They were equally satisfied with the overall service provided. However, without exception each artisan in this group wanted to work as an independent weaver, if they had the necessary skills, finances and people.

When I asked Binod whether he had considered making his own designs, he replied, ‘No I don’t have the finances. If we had the money, then the brain will work! Then I can make my own design.’ On another occasion he stated, ‘I have interest [to be an independent weaver]. If I get more money then I can [have my own enterprise]. The world runs on money. If I get more money then I certainly will.’ The condition for switching from being contract to independent weaver in his case was the need for financial capital. For Bideshee it was a combination of skills, finances and even social capital. On one hand he wished he had the skill to make his own saree. At another level he thought that he could still overcome this barrier, if he had the money to buy ready tie-dyed yarn from the market and weave himself. When I asked him, if he would consider working with the cooperative since there was a branch nearby, he said, ‘Yes, if I join the Bastralaya [cooperative] through someone, then I will work.’ He needed a way to reach out to the cooperative. For Gunanidhi, it was a matter of having additional people (as he had a small family) as well as acquiring the tie-dye skills in order to become an independent weaver. Thus the artisans in this group primarily sought utility value through their relationship with the service provider.

6.3 Preference values of cooperative weavers

i) Utility value

Utility value was important for artisans in this group as well, as evident from the content analysis (see Table 6.3). Nearly half of the value statements made by the artisans focused on utility value. Within utility value, money was the most important aspect followed by time. Decisions made by artisans involved fine calculations of what gains were worth the time and effort.

Time

For artisans in this group the 'nearness' aspect of the cooperative office in the village was an important service attribute. This proximity saved them the time and money of going to the market. This time saved according to them helped them to make more sarees. In response to my question on whether it would not be more profitable to sell the saree in the market, Gajendra replied that, 'Going to the market is a day's loss'. Balmukund echoed this when he said, 'When we used to go to the market, time was wasted and we incurred expenses. So I thought if I worked with the Bastralaya and finished even one saree, I can go and get the money [immediately]. [By] staying at home, I could work more.'

Besides saving time for improved productivity, the other aspect emphasised by the artisans was the ease with which they could rectify damaged sarees or get their payment when they needed it. As Gajendra stated, 'Like [getting] yarn, colour or if something goes wrong in our deposited saree, we go and improve it.'. He added, 'It is in the village. It is very convenient. If we make phone call, they [the cooperative] keep the money.' For Jadhava, there were also seasonal benefits of the relationship with the cooperative. He said, 'When it rains, after making the saree, [we] go give it in the office nearby which is open till 5 p.m. and get the money and come back.' The value of getting the payment instantly was also emphasised by Balmukund when he said that while one gets the payment by selling in the market, the market only takes place once in eight days. With the cooperative he said, 'You can give it [saree] today and get the money at the same time. You can get the money and spend it.'

Money

When it came to money, this group was most conscious in ensuring that they got payment commensurate to their skill and effort. They demanded a good price for their saree. If necessary, they went on strike or would sell it in the open market, till their recommended price was agreed upon. When a particular saree earnings reached its maximum limit, they discontinued the saree pattern and switched to a new one. As Jadhava pointed out, 'When it [saree price] seems less, we stop this and make a new design. If we don't get benefit [money], then what is the point?' For Balmukund too if a current design didn't benefit him, he would make another design that would fetch him higher income. Similarly Gajendra stated, 'They [cooperative] had given their design once or twice, but when we made that design, we didn't get payment commensurate to the effort, so we left it. Our design is still working well.'

Effort

Only one artisan commented about the effort which was implied in its physical sense of hard work. Balmukund decided to switch from making sarees in 60 count yarn to making ones in 120 count yarn. This was because as he perceived that the effort involved in weaving with the heavier 60 count yarn was greater as compared to the lighter 120 count yarn. He added, ‘Working with finer yarn, it will be less effort and more wages. In thicker yarn, there will be a lot of effort and less wages. That’s why we prefer working with finer yarn.’

Table 6.3: Content analysis of preference value statements of cooperative weavers

Value	Sub concepts	Jadhava	Gajendra	Balmukund	Combined	Percentage
Utility	<i>Time</i>	9	13	7	29	
	<i>Money</i>	11	17	23	53	
	<i>Effort</i>	2	1	13	16	
		23	30	45	98	54.5
Social		7	3	-	14	8
Emotional		11	33	3	47	26
Epistemic	<i>High</i>	1	7	4	11	6
	<i>Low</i>	4	5	1	10	5.5
						100

ii) Social value

Jadhava expressed social value, when he described his joy of winning a prize from the cooperative for one of his designs. The social recognition motivated him to create new designs. When asked if he got any designs from the cooperative, he replied, ‘No we get, we get. But we don’t get prize when they [cooperative] give. When we make our own design we get [the] prize.’ Gajendra too took pride in his exacting craftsmanship and original designs. He said, ‘Whoever has never woven double *ikat* before, if they see this [his] saree, they will say, they won’t be able to make it. Even if they make [only] one saree a week, even then they won’t be able to do such neat work.’ Another form of social value derived by the artisan that seemingly superseded utility value was of their identity as a Bhulia Meher. Jadhava reasoned, ‘See actually the payment are not enough, it is not profitable, but since this is our caste occupation that is why we are working.’ This sentiment and the social identity of being recognised as a Bhulia

Meher, the maker of *ikat* textiles, was the strongest amongst the independent weavers, who I will consider in the next section.

iii) Emotional value

Amongst the three groups, the artisans in this group most sought affective benefits that came from creating new designs and precise craftsmanship. As Jadhava expressed, 'If the colour is not good, there is no show.' Gajendra similarly expressed, 'When the colour is good the more you wash the more it shines.' He enjoyed mixing and matching colours to come up with new, unusual colour combinations. He added, 'They [the cooperative] like it more as it is not available in the market. You get shading colour if you mix two or three colours that are not available in the market. That's why they like it more. That's why we make these new colours.' The weavers were also sensitive to their environment and perceived it an important factor in doing more and better quality weaving. Jadhava commented, 'Having a good environment, one can weave more, then we can improve. At the same time he talked about the importance of weaving with good quality yarn. 'Yes [we prefer] the same quality [yarn] otherwise we find it difficult to work.'

They were often emotional about their design. They aspired to achieve perfection by matching the double *ikat* precisely and creating beautiful designs. As Gajendra explained, 'In this the warp and weft have to be matched. Even if it [the tie-dyed threads] moves a little bit, it won't do.' He further explained how beautiful the saree looked when the warp and weft were connected precisely and how this could be appreciated:

If the warp and weft match, then it will appear white. It will also look good. If you see this [a single *ikat* pattern] from faraway, it won't be seen, but this [double *ikat* pattern], no matter how far you see it from, it will be seen.

On another occasion he talked about his excitement of creating new designs, by fusing traditional designs with a new style. He stated, 'In Sambalpuri saree we currently don't do embroidery work. I love this kind of work. But our saree quality is high quality.'

At times they would be disheartened or feel sad if they didn't receive wages proportional to their efforts. Gajendra talked about the times when they had to sell the saree in the market. 'If we are not able to sell the saree [in the market], and come back in the hot sun, then there are difficulties at home. It affects the health, then if you are not able to sell the saree, the mind is also sad.' The artisans had a deeper emotional connection with their craft practice that extended beyond just the utility value of the products they created.

iv) Epistemic value

Epistemic high value statements

All artisans in this group demonstrated a constant learning ability, appreciation of skills needed the ability to acquire them. They were keen to learn and produce new designs despite their constraints of time and money. There was a near obsession in connecting the dots, matching the warp and weft. Epistemic value was perceived to be important to attain high level of craftsmanship. Jadhava demonstrated this when he said, 'If the person doesn't do it [tie-dye] in line, it won't happen. If the person doesn't know geometry he can't do [it].'

For Balmukund who didn't know how to make intricate designs when he had first joined the cooperative, he had the motivation to learn. He carved out some time each day alongside his daily weaving routine to learn how to make the more complex tie-dye patterns than he was used to. He recollected:

First one or two years, when *Anuradha saree* design came, so what I thought, I might be able to do it myself. I got the design, I got the graph and made the *bandha* myself and gave it to the Bastralaya [cooperative]. From the morning, what I used to do, is take time out and do *bandha* work. In the morning after bathing I used to take one to two hours out and in that do *bandha* work, then after eating in the night when work got over at 10 pm, at that time I used to do *bandha* work. One to two hours till midnight and then sleep. Then from morning again the routine starts.

Gajendra aspired to transcend his capabilities to newer heights. He expressed his desire to learn embroidery, which is not a traditional Bhulia skill. He was keen to make, 'New designs that are currently not sold in the market.' The artisans in this group were thus strongly self motivated and driven to seek epistemic value and were aided by the cooperative in this effort.

Epistemic low value statements

They were however, limited in their capacity to make new designs more often. This at times forced them to operate within their current epistemic level. The main reasons behind a lower level of epistemic value fulfilment had to do with lack of time and money. They could not afford the luxury of trying out new designs and abandoning the old ones that fetched them their daily bread. As Jadhava admitted that they made sarees with same design but different colours. 'One colour for every four pieces [sarees].' Gajendra similarly admitted, 'Yes, only one type of design. The colours are different but the design is the same.' Change in design was made only when necessary, that is when they felt the payment for the current saree was not enough compared to the rising cost of living.

iv) Conditional value

In understanding conditional value for artisans in this group, I explored whether and under what circumstances weavers might consider leaving the cooperative and explore other options for marketing and service provision. I also probed what it might take them to create more new and original designs?

The location and proximity of the cooperative office in the village was a key service attribute for artisans in this group. Both Gajendra and Jadhava emphasised this aspect when they stated that, had the office been located in another village, they might not have worked with the cooperative. Utility value thus played an important role in deciding which service provider to work with. Within utility value, money superseded time and effort. Jadhava for example stated, 'There is more payment in double *ikat*.' When I asked him if it didn't take more time as well compared to the single *ikat*, his response was, 'But despite more time we get more payment.' Thus more effort was worthwhile for artisans in this group if it correspondingly matched with higher income.

When things didn't go as they wanted, especially on the price front, the weavers would not hesitate to go on strike with the cooperative and temporarily sell in the market. Gajendra talked about a saree for which they received \$17 as payment from the cooperative. However, when they took the same saree to the market, they got \$20. The cooperative subsequently raised the payment for the saree. Jadhava echoed a similar sentiment when he felt that the cooperative at one time did not adequately support the weaver, when its President was accused of malpractices. He said that it was the chief reason why he and other weavers switched over to private service providers from the public (sector) cooperative.

Under normal circumstances however, that is when things went according to their preference, the weavers in this group preferred the stability of the cooperative to the occasional high gains that they could make by selling in the market. As Gajendra explained,

If we sell on our own, the market is not sometimes good. Sometimes it sells at this [good] rate. Then we go to the market at less rate, two to three months we can sell at a higher price, but for the whole month, we won't be able to sell. Not through the whole year.

Gajendra was trying in effect to explain that while sometimes the market might give a higher price for their saree than the cooperative, this only happened during certain times of the year such as the festive season. The cooperative in contrast offered a steady price throughout the year.

An interesting aspect that was highlighted during the interviews was how the weavers were not able to fulfil their epistemic or emotional values in the face of having to prioritise utility value. For example, Gajendra expressed it as, ‘No we feel like making a different design, but we are not able to get fair payment for the same.’ Or on another occasion he stated, ‘No we want to make [*saree*]. One design is not good all the time. We also don’t like this design after so many days. But it is necessary, we have to make.’ He explained his main constraints and how they might be overcome. He said:

No problem in weaving. Takes time to make. New saree takes a lot of time to think. If it goes wrong then our money is gone. To maintain that loss, if we have more money on our hand, then we can balance it.

Similarly Jadhava explained why he wasn’t able to make newer designs when he said, ‘There will be a new design, but for a new design, this loom will be shut. It takes ten to fifteen days for a new design. The loom will be shut for ten to fifteen days. Then what will we eat?’ He further stated what would help him to overcome this constraint:

Yes, I have new, new designs. No time to make. When I have money, then I can. If I get the *bandhapura* (yarn winding machine) then what takes two days, it will take three hours, then how much time will be saved, then I can do different work.

Thus the artisans in this group were also strongly oriented towards utility value that formed the basis of their choice to work with the cooperative. At the same time they sought epistemic and emotional values from creating near perfect double *ikat* designs, that matched with the high quality standard of the cooperative.

6.4 Preference values of independent weavers

i) Utility value

For the independent artisans, money was the most important utility value followed by effort and time (see Table 6.3). The artisans in this group were most concerned with saving money, cutting losses and being efficient.

Time

Time was a less frequently mentioned concern for artisans in this group. This serves to explain why unlike the weavers in the other two groups, the artisans in this group were willing to expend the time and effort required to go to different service providers to procure materials for weaving. They also did not consider going to the market once a week as a major time loss, unlike the artisans in the other two groups.

In contrast to the cooperative weaver for whom working with finer 120 count yarn was perceived as less effort, the artisans in this group preferred to weave with heavier yarn counts such as 80 or 100 counts. In their view, it saved more time and more effort as compared to weaving with 120 count yarn. Narayan expressed this preference as, '[The] 80 count yarn is thicker than 120 count yarn. So it was faster to weave than 120. But it was more difficult [to weave] because it was thicker. 120 count yarn is lighter, it is less effort to weave even if it takes longer.'

Money

The importance of money was expressed in two ways. At one level there was an effort to save money by buying cheaper raw material or buying materials in bulk. At another level there was a conscious effort to make the most amount of money with the least amount of time and effort required.

Buying cheaper raw material, more profit for less price

'More profit in less price' was Sanju's mantra for weaving. This was reflected in all his activities from the purchase of raw materials to sale of sarees. As he stated, '[In] one shop the [yarn] rate is more... the other shop the yarn rate is less then why should we buy from the more expensive one?' In selling the saree too unlike other independent weavers, he only went once a month to the market and took 12 to 14 sarees with him to sell. He also emphasised how it was better that the market had shifted from Bargarh to Balijuri, which reduced his travel expenses from \$1 to 50 cents.

Unlike the two other weavers in this group, his reason for not working with the cooperative was also primarily utilitarian, that is related to money. He explained:

Society [cooperative] the work is strict. They say give us 12 hands [designated saree length] but when we weave sometimes it is 11.5 hands and sometimes it is less. When we take the saree to the master shop [cooperative] it doesn't work, but in the bazaar it works. In the master shop for example they would would cut \$1 and give us \$19 [for the saree], but if we go to the bazaar then we sell it for \$20 or \$1 to \$2 more. That is why we don't go to the cooperative.

Getting more money for less time and effort

While on one hand there was a conscious effort to save money, find better bargains for raw materials, on the other hand there was a strong orientation towards earning money in as efficient a manner as possible. Unlike the cooperative weaver who made more intricate or complex designs to earn more money, the independent weaver sought to make smaller, cheaper

designs. For him this was more profitable. As Sanju said, ‘I used to make big, big saree. Elephant, horses [motifs on saree] etc. But we didn’t profit.’ Or Tarani’s response when I asked him if he had never considered making bigger designs, ‘Make big design, you die of hunger.’ He added ‘I cannot afford to be a big artist. To show the world. I am only filling my stomach.’ Money was also the reason Narayan changed his designs, when he found a particular saree rate had gone down.

The independent artisans were also price conscious when it came to selling their sarees. They were not particularly committed to any buyer. As Sanju said, ‘Whoever gives us more money, we sell it to him.’ Or as Tarani said about a village trader who bought sarees locally, which saved him time of going to the market, ‘If he gives market rate here [in the village], then we give it here. If it is less we take it to the market.’

Effort

Effort and time were used together or interchangeably by the artisans in this group. Talking about one of his earlier, more complex designs, Sanju stated, ‘There was too much work for that design [than] there was [with his] experience in tie-dye [making].’ What he was trying to say was that for someone less experienced in making bigger designs, it took longer to make intricate sarees and hence was less profitable. Narayan and Tarani’s conception of effort differed somewhat. For Narayan weaving with 80 count yarn was more physical effort compared to weaving with 120 count yarn, but it was faster. For Tarani too weaving with 120 count yarn meant more time, more effort in terms of skill level required.

Table 6.4: Content analysis of preference value statements of independent weavers

Value	Sub concepts	Sanju Meher	Narayan Meher	Tarani Meher	Combined	Percentage
Utility	<i>Time</i>	3	2	1	6	
	<i>Money</i>	23	1	5	29	
	<i>Effort</i>	1	2	4	7	
		27	5	10	42	41
Social		1	2	11	14	14
Emotional		–	6	12	18	18
Epistemic	<i>High</i>	2	7	13	22	21
	<i>Low</i>	3	–	3	6	6

100

ii) Social value

The artisans in this group had a strong social identity of being an independent weaver. As Tarani stated, I like to be ‘independent’, not ‘dependent’. Or as Narayan recounted:

My father used to say, we know everything, we have experience, why should we work under someone? If we work in master shop [cooperative] and if there is a bit of damage, they will cut 20 cents, or this [a weaving aspect] is not right cut 10 cents. So my father said, if you listen to me sons, don't ever work with master shop [cooperative].

Although there was considerable time, energy and at times risk involved in being an independent weaver, this group were keen to continue as one. Tarani who was 60 years old had suffered severe injuries at one time while traveling early in the morning to the market. The thieves had stopped him in the dark, hit him and robbed him of his sarees. His collar bone had broken and had to be operated. This affected his ability to weave continuously for long periods. Despite such hazards, he wanted to continue working independently. He explained, ‘This [weaving] is the Bhulia man's karma.’ Narayan stated, ‘If the Meher's don't weave what else will they do?’ Or as my research assistant explained, ‘All people have different duties like the barber has to cut hair, like that this is caste duty. That is why they don't want to leave it.’ Making *ikat* was an integral part of the Bhulia life, and the consequent identity they derived out of it; it was considered almost a duty to weave the fabric.

iii) Emotional value

Emotional value (rather the lack of) was one of the reasons why artisans in this group preferred not to work with the cooperative. They felt it negatively affected their pride and sense of independence. Tarani expressed this when he said:

It is hand work, sometimes it gets damaged also. We can reduce the rate and sell it in the market. If we work with the Bastralaya [cooperative] and sometimes if it gets damaged, then there they will take out a lot of the faults.

At another time he emphatically stated, ‘They will take out a lot of order, this is not right, this won't do, take this back. So I don't like all these things.’ He also talked about the tension that he felt when creating new designs. He said, ‘In making new, new designs, mind becomes very hot.’ Sanju too didn't particularly enjoy the challenges that were associated with making new designs. He said, ‘Whenever I try a new design, I won't know everything about it. Slowly, slowly the experience increases. So till the time I get experience, it doesn't feel good.’ Thus unlike the cooperative weaver who was motivated to create new designs and derived an emotional value out of it, both Sanju and Tarani found creating new designs to be a demanding task that yielded them less satisfaction and at times positively stressed them.

Narayan however, did derive affective benefits from his work. His sensitivity to the look and feel of the designs was reflected when he said, '[If] the colour doesn't penetrate [the yarn] enough, it doesn't look good.' He had also made several designs throughout his career and prided himself on having taught many weavers how to make tie-dye.

iv) Epistemic value

Concerning epistemic value the artisans in this category were primarily self taught and self motivated. The group had one of the highest instances of epistemic value statements (see Table 6.4) due to their constant effort to find new ways to be efficient and cost effective.

Epistemic high value statements

Narayan made his own designs. When I asked him where he had learnt to make these new designs, he said, 'My own idea. We used to only do small, small flower designs in tie-dye. So I showed the *Khutpali* designs to my mother and tried to work out how to make these along with what was being made already.' On another occasion he stated that he had himself thought of making *Box* design and *Lavang* design. Some such as Sanju were not so successful in making new designs. He said he tried to make new designs but didn't succeed. Nevertheless he had attempted to learn about and create new designs.

Both Narayan and Tarani had found ways to reduce their costs while making an affordable saree for the market. They mixed 80 and 100 count yarn in their sarees. The 80 count was used for the body of the textile whereas 100 or 120 count yarn was used for the *anchal*. They could thus have simpler designs on the body and more intricate designs on the *anchal*. Further they purchased ready tie-dyed yarn for the *anchal* from the market and infused it with their design. Thus artisans in this group were always experimenting with ways to create better and cheaper designs through a process of mixing and matching their own tie-dye designs with those bought directly from the market.

Epistemic low value statements

Low epistemic value statements mainly reflected the artisans' reluctance to create new or larger designs. For example, Tarani stated, 'This works, then why should we make a new design?' Sanju similarly explained he didn't want to make larger, new designs because he didn't find them profitable. This low motivation to create new, larger designs however, was compensated by their innovative ability to produce the same design more efficiently and at an affordable market price.

v) Conditional value

For artisans in this group, utility value superseded epistemic value. While explaining why he did not attend any tie-dye training to further his skills, Sanju remarked, 'See you get a daily wage to attend the training. If we go for daily wage we won't benefit. Because they give \$2 per day, we will take the \$2. It won't benefit.' In other words he was saying that the training must compensate equally or more to their current daily earnings, for them to be away from their loom.

Often a career change was caused by or withheld due to family reasons. In Narayan's case, the pride of being an independent weaver had to be put away when he lost his son of two years. He had to give up his enterprise and find employment as a contract weaver to regain his mental stability and earn a living. All the three weavers in this group aspired to be master weavers. For Narayan and Tarani it was a case of not having sufficient financial capital to move to the next level. For Sanju however, it was a constraint of human capital that prevented him from becoming a master weaver. His sons were too young to help out with the family business.

6.5 Comparison of preference values amongst the three artisan groups

In this concluding section, I compare the relative preference values of the three groups of artisans (see *Figure 6.1*). I highlight how at times the concept of a particular value was perceived differently by different artisans.

i) Utility value

Amongst all the three groups of artisans utility value was unarguably the most important value and formed the rationale for day-to-day decision-making. For the contract weaver, saving time was the chief concern, whether by working with a machine-fitted yarn or a nearby service provider, it was seen as a chief way for improving financial gains. For the cooperative weaver working with the locally situated cooperative helped to save time and money and saved them the unpredictability of markets located farther away to their village. They were also keen to get the right amount of money for the effort and time spent. For the independent weaver utility value was expressed as a constant endeavour to save money and find more efficient ways of production, through buying bulk of ready tie-dyed yarn or purchase of cheaper raw materials. The calculation of profitability varied between groups of artisans. Thus while the cooperative weaver felt that making a simpler patterned saree takes as much time as making a more complex one, and therefore preferred to make the latter which fetched higher income; the

contract weaver felt the opposite, that is there was more work in making complex patterns and less profit.

ii) Social value

Concerning social value, the contract weavers derived little social value from being in the current service system. In different ways this group expressed their social status as one of dependence than independence. The cooperative weaver enjoyed the social recognition that he received from the cooperative for creating new, original designs. He also leveraged the social network of the cooperative when required to collectively demand for higher income. Amongst the groups this value was most preferred by the independent weaver, who perceived his ‘independent’ social identity as vital and fundamental to being a Bhulia weaver. The social value derived out of this identity at times superseded utilitarian considerations of risks and unpredictability that were associated with running an independent enterprise.

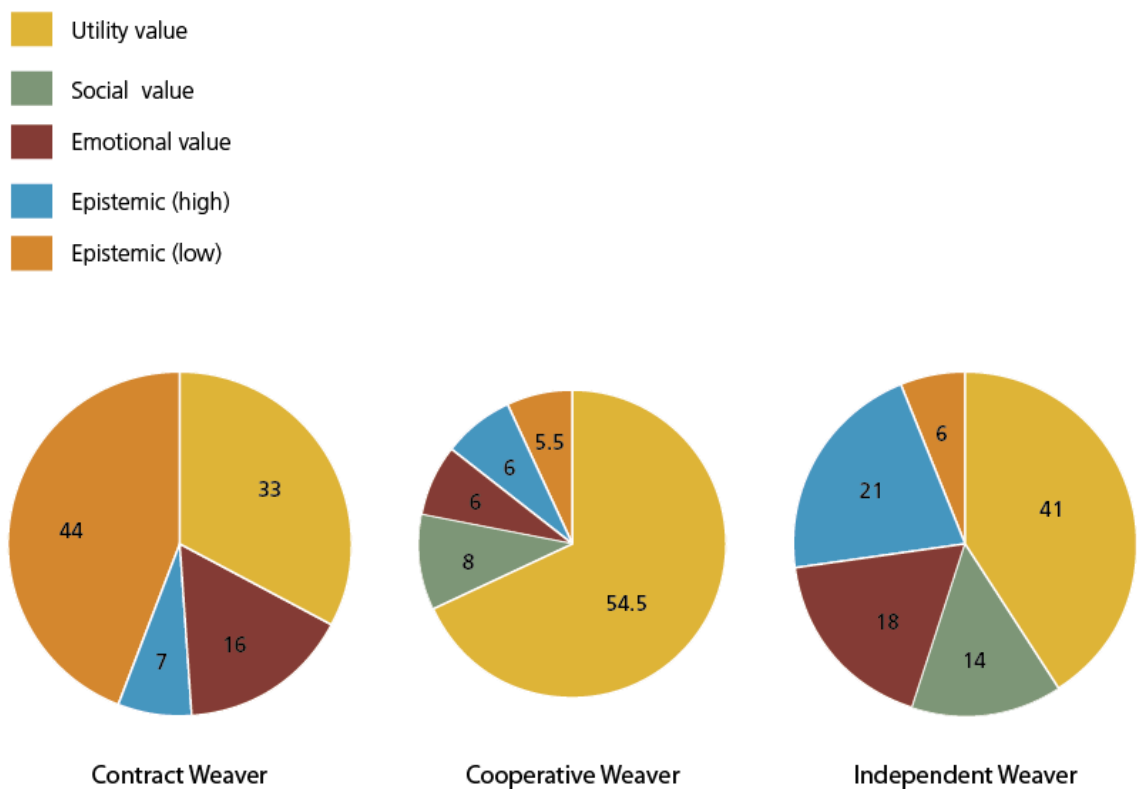


Figure 6.1: Relative preference values of contract, cooperative and independent artisans

iii) Emotional value

Emotional value or the affective benefits from weaving were closely linked to utility value in case of the contract weaver. In other words if the finished product was not up to the mark or didn't look good, their earnings would be reduced. By contrast the cooperative weaver

appeared to derive an almost intrinsic value from creating new, original designs and finishing them to perfection. This group had the highest instances (see *Figure 6.1*) of mentioning affective words such as 'look', 'feel', 'touch' and so on. In case of the independent weaver the emotions associated with creating new designs, were more of tension and stress than joy, although one of the weavers in the group enjoyed making new designs.

iv) Epistemic value

Epistemic high value statements

The cooperative weavers were motivated to seek epistemic value by demonstrating a constant pursuit to further their skills and knowledge. They loved creating new colour swatches and designs and mastering the technique of double *ikat* weaving. The independent weaver pursued a different kind of epistemic value, one that aligned with understanding market trends and customer choice. They found ingenious ways of blending different yarn counts and design motifs (blending simple patterns with more intricate patterns in the saree border or *anchal* areas) to create affordable sarees that were neither too cheap or too expensive but that could satisfy the desires of the more discerning customers.

Epistemic low value statements

Low epistemic value was reflected when artisans quoted instances of not being able to learn new techniques and skills or not having the desire to learn them. These instances were most reported by the contract weavers. Nearly 44 percent of the value statements made by the them indicated that through a combination of past and present circumstances, aptitude and choice, they had been unable to acquire higher level skills. In case of the cooperative weavers low epistemic value was indicated when they stated that they typically tended to make one design in different colours as long as they could, but that this was largely because they could not afford the time and money to experiment. The independent weaver also showed relatively fewer instances of low epistemic value and this was mainly reflected in their desire to create fewer new or more complex designs, as they felt the corresponding returns were not worth the time and effort invested.

v) Conditional value

A significant aspect observed amongst all the three groups of artisans was, that if all human, financial and social constraints were taken away, each of them would prefer to ultimately become a master weaver and have his own business that employed other weavers. Failing that, they would at least like to be an independent weaver. Only the last and least desirable option

was to work as a contract weaver. Nearly all the artisans interviewed for in depth interviews had worked with different service providers as contract, cooperative or independent weavers. This showed that the situation is dynamic and constantly evolving. The operating value of the artisans changed according to their personal circumstances, skill level and what they considered might work best for them at a particular time.

6.6 Conclusion

In this chapter I considered the preference values of artisans. Using content analysis and interview quotes from artisans, I attempted to uncover the utility, social, emotional, epistemic and conditional values that underpinned artisan decision making, and their choice of service providers. The chapter showed that while utility value was a primary preference value amongst all three groups of artisans, other values such as social, epistemic and emotional also guided their craft making process and choice of service systems to work in. Particularly the independent artisans, who perceived weaving as a duty, a moral obligation to uphold an ancestral occupation and way of life. The implications of these preference values for policy and practice are discussed in Chapter Eight. In the next chapter I articulate how the 'way of design' has guided the process of sense making of artisan services.

CHAPTER SEVEN

Design as Process: Sense making through design

There are no optimal solutions to design problems but rather a whole range of acceptable solutions each likely to prove more or less satisfactory in different ways to different clients or users.

(LAWSON, 2006:12)

One of the essential characters of design is its nature of sense making. In this chapter I consider how the elements from design as process outlined in Chapter Two, have helped to understand artisan lives and their struggle for livelihoods. I appraise how it has helped to understand problems and consequently affect the view about possible solutions. In this chapter I answer the question of ‘what types of services are likely to enable artisans to improve their livelihoods?’ The chapter consists of three sections. In the first section I examine how visualisation has helped to connect the dots in understanding artisan services. In the second section, I use the concept of ‘matching problem-solution pair’ to view what problems existed and how artisans matched solutions to these problems. In the final section, I use the concept of fitness and adaptive solutions to draw together the evidence from the previous chapters to assess ‘what types of services are likely to enable artisans to improve their livelihoods.’

7.1 Visualising data to generate insights

Visualisation is the staple of the ‘way of design’. As sketched in Chapter Two, visualisation in design is used as a means for self reflection and generating insights, not only during the process but also after, when the final form as Dilnot (2003) suggested is put on the table and re-examined. The ‘final form’ in this study were the service patterns in the form of Artisan Network Map and Artisan Journey Map, presented in Chapter Five. In this section I reflect on the process of visualising used during the study and the insights that it helped to create during and after the process. While Chapter Five showed how the concept of tracing patterns of the

artisan networks and journeys helped to give shape to visual representations, in this chapter, I reflect on the process behind creating those representations and the insights it helped to generate.

7.1.1 Using visualisation to guide planning efforts

‘There are right ways and wrong ways to show data; there are displays that reveal truth and displays that do not’ (Tufte, 1997:45). During this study, I experienced the truth of Tufte’s saying as I embarked on field work. After narrowing down on Bandhpali village as the village for study, the first step was to conduct a survey of all the Meher⁷⁶ weavers in the village in order to map the service ecosystem. The village with an approximate population of 4000 (Block Development Office, 2010) comprised weaver as well as non-weaver communities. My aim was to focus on the Meher weavers who wove *ikat*. To begin with we (me and my research assistants from the village) secured a copy of the Voters List from the Block Office in Barpali (approximately 7 kms from the village). The Voter list is a government document in India that lists all registered voters in a particular village, town or city. As such it is meant to be one of the most comprehensive sources of data about the people residing in a particular location. The Bandhpali Voter List which was secured after great difficulty⁷⁷ ran into 71 pages, with voter names in Oriya. It listed 14 wards under the Bandhpali *panchayat*⁷⁸. The wards 11 to 14 that came under Jhulopali and Patrapali villages had been clubbed together with Bandhpali village to form the Bandhpali panchayat.

This would have been an ideal basis on which to conduct the survey, as it would have ensured that every Meher household was interviewed. However, as we sat down to examine the Voter List and plan the research, we realized the many problems it posed. At the outset, (i) The boundaries of the ward as recognised by the official data did not match the boundaries of the village as recognised and used by the local people. The local division was based on the concept of *pada*⁷⁹ (a small hamlet). (ii) The house numbers given did not match any particular layout order. (iii) Members of the same family at times came under different wards. (iv) Some of the people on the list no longer lived in the village or held property there. (v) Some members on the list were deceased. (vi) Last but not the least the Voter List used formal names of the

⁷⁶ Bhulia weavers all have the same last name- Meher.

⁷⁷ The Block Office in Barpali had only one copy of the Voter List with no photocopying facilities. It took a fair bit of convincing to let the officials part with the document to be taken for photocopying outside in the market.

⁷⁸ A panchayat is the smallest administrative division in India. Sometimes the smaller villages are clubbed together to form a panchayat. The Bandhpali panchayat comprised the villages of Bandhpali, Jhulopali and Patrapali.

⁷⁹ In Bandhpali the *padas* consisted of same caste residents as well as different caste residents.

residents as against their popular names used by the village people, making it difficult to identify people for the survey.

Even if one were to overlook points (iii) to (vi) as errors in data collection or representation, points (i) and (ii) still posed a serious challenge in working out a sensible survey strategy. Pirolli and Card (cited in Ware, 2004:351) draw an analogy between how people seek information and animals seek food. They state that animals minimise energy expenditure to get the required gain in sustenance whereas humans minimise effort to get the necessary gain in information. We were like the humans Pirolli and Card (ibid) mention, keen to find efficient and accurate ways of surveying the Meher weavers. After a brainstorming session, we decided to conduct the survey on the basis of the *pada* (hamlet) as recognised by the local people and manageable by the researchers. At the end of the session one of my research assistants, the son of a carpenter, sketched a colour map of the village (see *Figure 7.1*) that showed the layout of all the 16 *padas* (see Appendix I), the main roads, smaller access paths as well as major landmarks such as schools, temples, markets and even telephone towers! Once this map was made, we were able to see that five of the 16 hamlets did not have any Bhulia weavers.

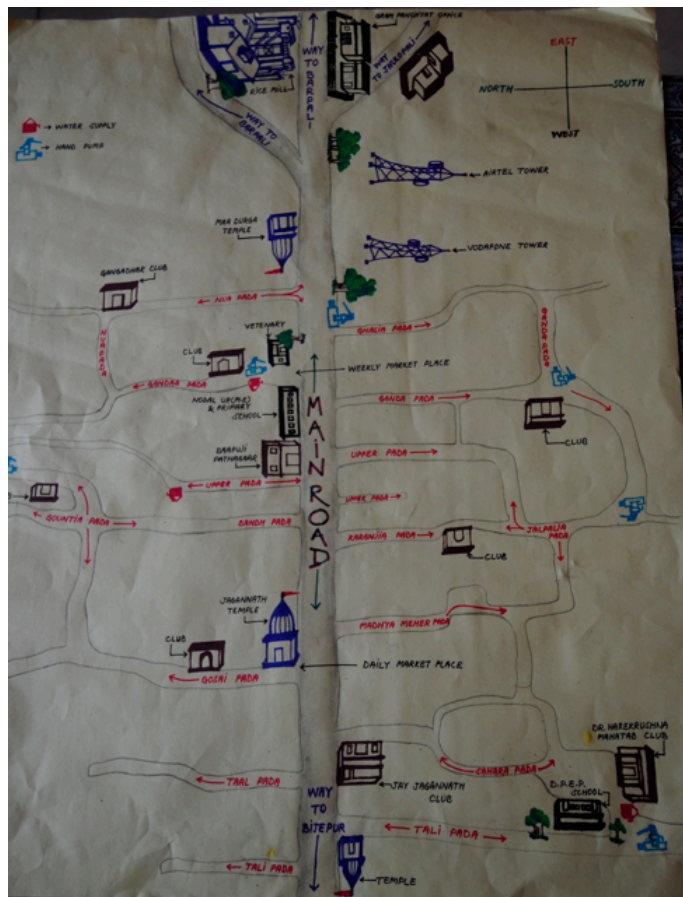


Figure 7.1: Map of Bandhpali village by Radhe

That left us with 11 hamlets in which to do the survey. These were divided amongst three teams consisting of three researchers each. This route planning avoided overlap, saved researchers' time and energy and helped us to finish a survey of 309 households in five days.

In the study of vision and perception, Ware (2004:303) stated that diagrams are good to express spatial and structural relationships between entities and provide a quick grasp of the situation, while words are good to express non-spatial, abstract or procedural information. Our experience of planning the village survey certainly showed this to be the case. Whilst the government Voter List was an important official document, it did not provide an outsider or for that matter even insiders, a way to navigate through their surroundings.

7.1.2 Understanding network effects

In this section I describe the process of visualising the Artisan Network Map (presented in Chapter Five) and the insights it helped to generate during the map making. The initial purpose of mapping the network was to locate the artisans and service providers in the village and trace their interlinkages. It was intended to be a snapshot or 'zoom out' view of the weaving enterprise. What was not anticipated at the time however, was how the process of creating the visualisation itself could be of value and act as a source for potential theories and policy planning efforts. Below I describe some of these insights that furthered the understanding and interpretation of patterns in the service ecosystem.

i) Spread of similar weaving tendencies

The process of creating the service ecosystem map revealed a clustering tendency of weaver profiles. For example Jalpalia hamlet showed the highest number of master weavers within a geographic area residing in close proximity to each other. Elsewhere, the handful of cooperative weavers resided in pairs next to each other. Christakis and Fowler (2011) have called such effects as 'dyadic' or 'hyperdyadic spreads'. A 'dyadic spread' is the tendency of effects to spread from one person to their direct social ties, whereas a 'hyperdyadic spread' is the tendency of effects to spread from person to person to person (outside a person's direct social ties). The flow of fashions across these social ties has been termed 'contagion'. While further research is needed to understand the cause and extent of such contagion effects in artisan communities, the Artisan Network Map provides a starting block on which these could be built.

ii) Transcending geographic boundaries

The Artisan Network Mapping also helped to expose the spatial boundaries of relationships. It showed that the artisans who worked on contract with the master weavers often resided in close proximity to them. Exceptions were when the two were related, in which case the social tie at times gained precedence over distance. Most independent weavers operated in a highly local setting as indicated by the line of relationship between them and the service providers. In other words they tended to buy yarn and other raw materials within the village itself. In contrast, the network of master weavers and other service providers such as yarn traders often extended beyond the village boundaries to nearby towns and villages. Few artisans in the village had the capacity or resources to transcend their immediate geographic boundaries. The ability to transcend these local boundaries entails higher volatility, risks and complexity (unpredictability, unreliability) as compared to the relatively simple and stable conditions experienced within a small geography (Whitesides, 2010). This spatial revelation was supported by the in depth interviews with artisans and service providers (master weavers and yarn suppliers). In the next chapter I talk about how the ability to take risks and transcend local boundaries by master weavers and service providers has not been sufficiently acknowledged in the artisan literature, and the policy implications arising thereof.

iii) Embedded actors in the network

The Artisan Network Map also showed the *embedded* actors in the network. The term *embedded* denotes the degree to which a person is connected in a network (Christakis and Fowler, 2011). The map showed yarn trader Rahita Meher and marketing platform Balijuri Haat emerging as two of the most significant actors, due to the sheer density of connecting lines passing through them. Other embedded actors included master weavers who had many weavers attached to them. These *embedded* actors catered to the needs of a range of weavers, entrepreneurs and traders. While the survey focused on the *node*⁸⁰, that is the individual artisans, their education status, socio economic background and weaving profile; the map focused on the *line*, that is the relationship between the *nodes*. The nature of communication in case of the latter was spatial than temporal⁸¹, which helped comprehension at a glance. Christakis (ibid) proposed that it is the relationship between the *nodes* that needs to be strengthened much more than the *nodes* themselves.

⁸⁰ Christakis and Fowler (2011) used the term *node* to indicate person.

⁸¹ Ware (2004:301) argued that language is essentially dynamic and temporal which is absorbed serially. That is it can take a few seconds to hear or read a short sentence. 'In contrast static pictures and diagrams can be understood in parallel where complex visual structures can be comprehended in a fraction of a second, based on a single glance.'

7.1.3 Understanding spatial nature of artisan activities through journey mapping

The process of building the artisan journey map (see Chapter Five) demanded a careful consideration of the artisanal activity. The spatial arrangement of data, according to (Klanten, 2008:98) imposes flow, direction, context and order. The making of the journey map involved several iterative cycles, as each cycle revealed gaps in information and aspects that required further investigation. The issue of dealing with local language terminologies further created its own set of challenges as it was often difficult to triangulate artisan accounts with textbook sources that used technical language. The weaving activity was also spread out across different spaces in the house, across different members of the family and over several days of the week. The informal and varied nature of the activities made it difficult to pinpoint the exact sequence of steps. In the face of these challenges visual language became a key route to creating a shared understanding of the artisan's weaving journey. Triangulating between the photographs taken by me with those taken by the artisans, along with hand drawn sketches made by the local artisan-designer⁸², the sequence of weaving activities slowly started to take shape. This was further supported by the artisan interviews and on site observation. The initial prototype of the journey map illustrating the sequence of activities, people and objects⁸³ was then reconfirmed by the local artisan-designer.

The photographic journey map revealed the interior and architectural aspects of weaving. For example it showed that the warping activity required considerable length of space and was usually carried out outside the house. This space was vital to do counting, tying, sizing and starching activities. Without this space it was not possible to carry out the tie-dye making activity, that was a key aspect of making *ikat*. To illustrate, Binod, one of the contract weavers used machine-fitted yarn due to lack of space. A closer examination of the pictures showed a blurring of boundaries between working space and living space that was symbolic of the larger blurring in the artisans' lives between work and leisure, individual and enterprise. It highlighted the collective and familial nature of the *ikat* weaving enterprise. It revealed the gendered division of labour in the weaving activities carried out by different members of the family. For example, the task of yarn winding was almost exclusively done by women. Tying and untying of weft was also mostly carried out by women. The task of marking, counting,

⁸² I took extensive help of the local artisan-designer Bharat Meher who helped to visually articulate the weaving activity.

⁸³ The journey map also formed the basis of a 1.05 minute film titled 'Making *ikat*: a family ritual' that was exhibited at the Power of Making exhibition at the Victoria and Albert Museum, London in September 2011

weaving and marketing was mainly done by the men. The activity of dyeing was frequently a collaborative enterprise.

Making the journey map also underlined the rhythmic and cyclical nature of the weaving activity that was symbolic of the character of artisans' lives, where activities, seasons and festivals; birth, life and death all merged into one long continuum. The depiction of the various stages of weaving showed that bulk of the weaving activities were at the preparatory stage and not at the actual weaving or marketing stage. What however, proved to be a challenge was capturing the temporal aspects of the artisans' activities, many of which overlapped and involved different members of the family. The time taken also varied depending on the skill level of the artisan, the pattern under making and the household activities that were pursued on the side.

7.2 Viewing problem-solution pairs

In this section I use the concept of 'matching problem-solution pair' outlined in Chapter Two to view the problems faced by the artisans and the solutions they have adopted for them. In viewing these problem-solution pairs together, I examine how this concept helps to interpret the nature of artisan problems.

i) Increasing family size to overcome the problem of low income

One of the striking cases I came across during the course of my study was that of Binod. Binod lived in a modest house that was only partially constructed and marked in its sparseness and lack of furniture. The front room of the house had two looms placed close to each other with only a narrow passage separating them. During the interview I learnt that Binod had six children. When I asked him why he had not opted for a smaller family his reply was insightful. Below I present an excerpt from my conversation with him:

PR: How many children do you have?

BI: I have six children.

PR: You never thought of having a smaller family?

BI: No, a small family is not good for this Meher work. Better if there is bigger family. If there is one child in the family, then we marry him off, then he or she is gone. If there are four to six people at least one person will stay.

PR: But you have to take care of all these people as well. That is expensive, isn't it?

BI: Yes you have to. That's ok, but then you earn more as well.



Figure 7.2: Binod Meher and family

What this showed was that Binod's solution of having many children was not because he lacked family planning alternatives, but because he lacked the means to be productive. With a smaller family size he could not earn a living wage. This is not to suggest that his decision to have more children was purely driven by economic considerations, but that, it formed an important part of his consideration in decision making.

Likewise Sunder, a master weaver had to downsize his business when his sister left the house after getting married. He could only take it further once his son grew up and could help him run the business. He stated:

It [weaving] is according to the members of the family. However many people are there in the family, only so much work can happen. So sister got married and went away, so there was no one to do her work ... There is a lot of work. This warping, sizing and so on, it takes a lot of time. You can't do it alone. You need people, so I did weaving on my own... It takes time. That's how it happens. Otherwise it doesn't.

This suggests that family size was crucial to the earnings of an *ikat* weaver, and some such as Binod Meher saw having more children as a way of augmenting their family income.

ii) Low technology adaptation despite productivity problems

Despite issues of productivity, few artisans owned or used modern machines. One of the reasons for this was the lack of financial capital. As Jadhava stated, 'If I get a loan I will buy a yarn winding machine.' At another time during the interview he emphasised how his productivity would be doubled if he had the yarn winding machine which cost \$70. When I probed further as to why he didn't purchase it, his response was, 'There are people [at home]

right now, so I am not getting it.’ Similarly Gajendra stated that machine is only required if there is more work. For one to two sarees they preferred to ‘do it by hand’.



Figure 7.3: Bhagbati and Juhi Meher with yarn winding machine

While weavers who wove one to two sarees a week may not have felt a compelling need to switch to ‘modern’ technology, despite their acknowledgement that it would enhance productivity, there were other reasons besides finance for their reluctance to switch. The main reason for low technology adaptation amongst the artisans interviewed, was their inability to see tangible benefits of such an investment. As Ramesh, a master weaver commented that, ‘The amount of people you need to do this work, you will need the same amount for the machine. Only advantage is it is slightly quicker. But still [it] engages the same amount of people.’ Similarly Bhagbati and her daughter who were given yarn winding machine by their contractors stated that they were planning to return the machine. They found it occupied too much space in their one room house and needed two people to operate. Thus weavers continued to address the problem of productivity through manual means.

iii) Tackling efficiency and profitability through design, colour and yarn counts

During the interviews with artisans when I questioned how many saree designs they were making at the time, their response would usually be the same. Nearly all artisans interviewed wove one saree design for several months and sometimes years. The same design would be repeated in three or four different colours. It seemed puzzling that the artisans should stick to one design, considering that they were capable of generating their own designs; as many of the designs witnessed over the interviews were created by them. After repeatedly witnessing this pattern, it struck me that this variation on theme was their strategy to be efficient. By pairing

repetition of design with efficiency it became clear that the real problem was not that the artisans lacked creativity to come up with new designs, but rather they needed to be free of their daily compulsions in order to make the space and time to create new designs.

Viewing solutions in light of problems can also help to go beyond just interpreting the problem. At times it can serve to highlight the creativity and richness of imagination of people easily labeled as 'poor'. It can reveal the resilience and adaptive capacities of people when they are faced with adverse and challenging circumstances. To illustrate, when Narayan was faced with customers who did not like his *anchal* pattern on an 80 yarn count saree, he substituted this section of the saree by buying ready tie-dyed design in 120 yarn count. The increase in cost price was marginal, but he was able to achieve a better design and consequently better price, as the 120 count yarn made it possible to have more intricate patterns on the *anchal*. Similarly Tarani too decided to save time and effort by buying ready tie-dyed yarn in 100 count yarn for the saree border and *anchal*. Other weavers such as Balmukund switched to finer count yarn as it was less effort to weave. At the same time it also saved the cost of dyes, since the finer count sarees required lesser amount of dyes than the heavier count ones.

To conclude, a survey as the one conducted in this research and a focus on the 'nodes', may have only depicted the artisans as 'poor', based on their reported incomes. However, trying to identify matching problem-solution pairs casts a new light on the real nature of problems and how the artisans have overcome them through creativity and adaptation.

7.3 Using the concept of fitness to evaluate artisan services

In this concluding section, I draw together the strands from Design as Pattern, Purpose and Process to consider 'what types of services are likely to enable artisans to improve their livelihood'. I use the principles of fitness and adaptiveness presented in Chapter Two to indicate how these help to make sense of the complex and at times contradictory realities of artisans' lives and their struggle for livelihoods. In the first section I talk about how the artisans constantly adapted themselves to their changing environment, using the three case studies of Bideshee, Bhagbati and Sanju. In the second section I draw comparisons between the three artisan systems, before making my argument as to what types of services are likely to enable artisans to improve their livelihoods.

7.3.1 What is 'fit' at one time is not fit at another

As complex systems adapt to the changing environment and shape their behaviour within a 'fitness landscape', so too the artisans in this study were found adapting to their ever-changing circumstances. Below, I present three life stories of Bhagbati, Bideshee and Sanju that show how they moved from one system to the other throughout their weaving career in order to fit their choices to their circumstances. The life stories have been summarised from the interviews along with the notes from my research diary kept during field work.



Bideshee Meher

Bideshee was 60 years old. He lived in a small house in Bandhpali with his wife, two daughters, son, daughter-in-law and grandson. Bideshee started weaving at the age of twelve, when his father passed away. He left school and went to his maternal uncle's house where he learnt to weave.

At first, he learnt how to do *pajni* (starching the yarn). After learning this basic step, he learnt how to do *tanasara* (warp sizing) and then weave in different yarn counts. While he gathered the basic skills of weaving, he did not learn the art of making tie-dye. This knowledge was usually passed on by the family at an early age. However, since Bideshee's father passed away there was no one within the family who could teach him this skill. He admitted that his uncle didn't try to teach him and

he didn't try to learn either. He worked as an apprentice with his uncle who at the time worked with the cooperative. He stayed there for five years.

After that he came back to his village Diksira and started working as an independent weaver. He sold his sarees each week at the Dungsripali market. He continued in this manner for ten years. He then thought that going to the market resulted in a loss of time. So he started weaving on contract in the village. He got married at the age of 35 and started working with the cooperative in Budhapali which was located 30 km. from his village. After five years of working at the cooperative he decided to leave as it was too far for him to commute. He was the only person in the family apart from his wife and children (one boy, four girls and three who had died) and found it difficult to commute. Therefore, despite the fact that the cooperative paid him well, he left and went back to working on contract.

Then in 1982 a flood washed away his entire house in Diksira. The only thing he managed to save was the wood to rebuild the house. And the loom. After that he and his family moved to Bandhpali village. Today he mostly weaves on contract and occasionally makes his own sarees. For his own production he buys ready tie-dyed yarn from the market as he is not able to make it himself. Since the last two years he has learnt to weave *milan* sarees while working with master weaver Ramesh Meher.

Figure 7.4: Story of Bideshee Meher



Bhagbati Meher

Bhagbati Meher's tear-filled eyes are hard to forget. Aged somewhere around 45 she looked much, much older. Frail but elegant, she had stopped smiling. She could not see very well since her husband's death. When I asked if she had shown her eyes to the doctor, her daughter Juhi replied that her mother's eyes were damaged due to non-stop crying after her father passed away.

Once a well off, beautiful and talented woman, Bhagbati had been reduced to wearing faded Sambalpuri sarees with no jewelry and confined to the yarn-winding machine. The significance of the loss one can have by losing a family member hit hard. The body as the most

important asset, without which the poor cannot work. Bhagbati sold off all her land to get her two daughters married off and now lived in a one-room house with no electricity (the transformer had blown off since fifteen days). The one room was the kitchen, bedroom and workplace, which housed a machine that supposedly sped up some of the preparatory work.

Bhagbati could not tie-dye as she used to, because her eyesight was poor and the dyeing gave her rashes from the caustic soda. It seems that people don't have the leisure to advance: if they want to improve their skill or innovate (make a new design), they can't afford to invest their time as regular work will suffer and there will be no food on the table.

On a parting note I remember asking Juhi what happened to her teeth (she was so ashamed of them when I took pictures that she consciously kept her mouth shut even when she wanted to laugh). She said that her father died when she was only two and her mother did not care about having her milk teeth removed. As a result she had permanent teeth on top of her milk teeth. Juhi expressed an interest in learning tie-dye, but how could she afford to take time off? If she did, who would look after her mother?

They have nothing to lose, but themselves.

Figure 7.5: Story of Bhagbati Meher



Sanju Meher

Sanju was an independent weaver aged around 40. He lived in Bandhpali with his mother, wife and two sons. His younger brother Ranju and his family also lived in the same house. They had built their own pucca house, parts of which were still under construction.

Both Sanju and Ranju had worked on contract with different master weavers until Sanju got married. It was only when Kamala, Sanju's wife came into the family, that they were able to make their own sarees. Kamala

brought with her the knowledge of tie-dye making which she had learnt in her maternal home in Barpali. They started making tie-dyed sarees and sold them in the local Balijuri market. Ranju however, switched to working with the cooperative located in the village. He felt that it added to his skills and knowledge. He also saved bits of yarn (that was left after weaving) given by the cooperative to make his own sarees.

Sanju's aspiration was to become a master weaver and employ other weavers in his enterprise. Sanju was waiting for his two sons to grow up so they could help with the family business. Ranju said he will join his brother when he becomes a master weaver. He will stop working with the cooperative and join his brother as he will be able to weave good quality sarees for his brother. He said that since Sanju was his brother he will pay him well. His high quality sarees will also fetch a higher price in the market.

Ranju said that Sanju's son was not that good at studies and they didn't have much savings to send him to college. There would be too many expenses if they educated him. They didn't have additional land either. He said however, that when Sanju's son would have children he would be able to educate them, as at that time there won't be a need to build a house. Whatever he [Sanju's son] saves he will be able to keep for himself.

Figure 7.6: Story of Sanju Meher

The stories of Bideshee, Bhagbati and Sanju show how professional transitions are often marked by natural and personal circumstances, such as a flood in the case of Bideshee, death in the case of Bhagbati and marriage in the case of Sanju. The labels of ‘contract’, ‘cooperative’ and ‘independent’ are only transient as the artisans move from one system to the other with their changing needs, circumstances and capabilities. This poses a challenge to practitioners and policy makers to design services for artisans, which I will discuss in the next chapter.

7.3.2 Considering adaptive rather than optimal solutions

In this section I balance the ‘objective’ data on the different forms of capital enabled by the service providers (Chapter Five) with the ‘subjective’ value preferences of the artisans (Chapter Six) to answer the question of what types of service designs are likely to enable artisans to improve their livelihoods. In doing this, I am guided by the concepts of ‘fitness’ and ‘adaptiveness’ that are inherent characteristics of evaluation during the design process.

i) Contract system

One of the significant aspects about this system was the profile of the artisans who chose to be in this system. The artisans in this system were deficient in or significantly lacking in one capability or the other. The deficiencies ranged from a lack of skill, knowledge, manpower to finances (as seen in Chapters Five and Six). The very nature of *ikat* production required the entire household to be involved, as different activities were carried out by different members of the family. Being single or widowed was as much a handicap as not having the knowledge of tie-dye. The artisans in this group were focused on utility value which underpinned their choice of which service provider to work with. They were keen to expend the least amount of effort, time or expenditure in order to earn the maximum amount of income.

The master weaver or service provider in their case matched the areas they were deficient in, whether by way of providing ready tie-dyed yarn for those who did not have this skill or machine-fitted yarn for those who did not have the space for warping activities or knowledge of how to weave double *ikat*. The artisans also received micro loans from the master weavers when needed, purely on the basis of informal agreements. Often the artisans passed through this system before choosing to work with the cooperative or become an independent weaver. The study thus shows that for those artisans lacking the means to secure human or financial capital, the contract system offered a key means of securing livelihood.

ii) Cooperative system

The artisans associated with the cooperative system were the most skilled⁸⁴ in *ikat* weaving amongst the three groups of artisans. They had good knowledge of tie-dye making and the ability to arrive at unusual colour combinations. As higher skill in weaving corresponded to higher incomes, the artisans in this group perhaps stood the best chance of all to secure a sustainable livelihood.

They chose the cooperative over other systems as the proximity of the cooperative office saved them the time and money of going to the weekly market. They also preferred the stability of the cooperative system along with a range of benefits that they received, to the unpredictable markets, even though at times the latter could fetch them higher incomes for their sarees. The artisans in this group derived social and emotional value from connecting the dots of the warp and weft in a near precise manner to create new, original designs. Their value orientation thus matched that of the cooperative who sought high quality craftsmanship. However, as seen in the previous chapters, while the high standards of the cooperative and the corresponding high payment attracted the artisans in this group, it acted as a major deterrent for lesser skilled artisans or those that were too proud to join the cooperative. Only five percent of the artisans in Bandhpali chose the cooperative system.

iii) Independent artisan system

In this third system the artisans used services of multiple providers. The providers ranged from local yarn traders to larger merchants in town. The artisans marketed their products themselves in the weekly marketing platform provided by the government. The availability of this market infrastructure encouraged many weavers to bear the risks associated with carrying out their own enterprise. Over half the surveyed artisans in the village functioned as independent weavers.

One of the significant characteristics of this group was their relentless ability to innovate. They constantly sought faster, cheaper, easier techniques to minimise time and effort and remain competitive in the market. Whilst their knowledge of tie-dye technique was not as high as that of the cooperative weavers, it was nevertheless sufficient to allow them to be independent. The artisans in this group gained self as well as social esteem by the virtue of being independent and being in a position to choose from a range of service providers, saree designs and production pace. The emotional value for these artisans strongly centred around the weaving

⁸⁴ The skill level was determined on the saree designs produced by the artisans in all three groups and the corresponding price they received for their craftsmanship.

activity itself, which was seen as a duty, a moral obligation, an ancestral craft that must be continued without dependence on external agencies.

In answering the question therefore, of what types of services are likely to enable artisans to improve their livelihoods, I argue that each of the service systems helped to serve the artisans in one way or the other. While the cooperative system encouraged high quality designs and craftsmanship, the master weaver system provided employment to those less skilled. The independent weaver was able to maintain his independence and social identity thanks to the marketing platform that was made available to him by the government. Using an 'adaptive' rather than an 'optimal' lens, this study avoids employing a fixed criteria to assess services. Instead it has focused on showing how each of the services enable the contract, cooperative and independent artisans. It raises awareness that design for flexibility is not a choice but a necessity. Lives and people are constantly in a state of flux. Systems and policies seldom account for it by employing a 'fixed' rather than 'flexible' criteria for evaluation. Investing most of the resources in one 'optimal' path may be tempting, especially from a delivery perspective, but may not be the best path if the end goal is to enhance livelihoods of all weavers, especially the poorest of them.

7.4 Conclusion

In this chapter, I have drawn attention to how the epistemological character of design helps to make sense of the complexities of artisans' lives and their struggle for livelihood. I have shown how visualisation helped to generate insights and identify possibilities for future planning efforts. I used the concept of matching 'problem-solution pair' to view artisan solutions and survival strategies in tandem, thereby drawing out the real nature of problems. I showed how it further helps to cast the artisan agency in a new light, to highlight their resilience and resourcefulness. I illustrated, how using 'flexible' and 'adaptive' criteria for evaluation enables one to see the many paths to improving artisan livelihoods, instead of focusing options on the 'optimal' path. In the next chapter I examine the implications arising out of this view and discuss them in light of current policies and literature on artisan livelihoods.

CHAPTER EIGHT

The ‘way of design’ in reframing policy, practice and research

Father Brown laid down his cigar and said carefully, ‘It isn’t that they can’t see the solution. It is that they can’t see the problem.’

G. K. CHESTERTON (DUNLEAVY, 2003)

In this Chapter, I consider how the ‘way of design’ can help to inform policy, practice and research in the context of artisan services. I weave together the insights from Chapters Five, Six and Seven and show how the ‘way of design’ helps to reframe problems and prospects of artisan livelihoods. I review the findings from the study in light of existing literature and policies on artisans and handwoven textiles. The policies and literature whilst in relation to the specific context of artisans in Orissa, also draw upon the wider context of artisans in India. As indicated in Chapter Three while there are particularities with respect to artisans in Orissa such as their skill sets, the types of products they weave, and their social identity; they have much in common with artisans in other parts of the country with regard to the organisation of the handloom industry. Below I outline the eight main findings arising out of this study that run across the threads of policy, practice and research; and consider the implications and propositions arising thereof.

8.1 Viewing the artisan as ‘customer’ and ‘entrepreneur’

One of the primary contributions of the design approach has been in shifting the lens on how artisans were perceived in the study. The view of the artisans within literature and policies on handwoven textiles has predominantly been that of *producers* of craft objects or *beneficiaries* of government aid. In the quest for ‘solving’ problems, such framings have seldom been reassessed, with most effort directed in identifying ‘solutions’. This study has shown however, that the ‘way of design’, which is essentially human-centred and focused on creating value for

the end customer, has prompted an evaluation of services through the eyes of the artisan. By viewing artisans as *customers* of services, the research has shown that far from being a hapless victim or surviving on government aid, the artisan is an independent agent actively evaluating service offerings, and making conscious decisions to fit his capabilities and circumstances. Viewing artisans as beneficiaries not only disempowers them and discredits their resourcefulness and survival skills, but also perpetuates the view of the handloom industry as predominantly a *welfare* rather than a *productive* industry. As the National Textile Policy (2000) suggests:

The growth of handlooms in the country has been in the warm confines of protection and support. As competitive market economy takes over and walls of international trade barrier crumble, the sector has to find ways and means of standing on its own. It is not to say that protection and support is not required. Protection is required because the heritage of the country needs to be protected and support is required to offset the inherent cost handicap of the sector. However, in the days to come, the support should not be in the form of crutches for the sector but as a stimulant to make the sector vibrant, self-reliant and sprinting. The support systems must provide for preservation of the exclusiveness and the magic of handwoven intricate designs of handloom fabrics. The focus of the policy and support system for handlooms, therefore, should be to enable the weaver to stand up on his own and face the competition in the domestic and international market and improve export prospects.

Further contemporary studies⁸⁵ and policies with respect to artisans reflect a bias in their predominant focus on economic value. The analysis, interpretation and recommendations in such studies are underpinned by economic exchanges and value; with growth and success measured in economic terms. The focus on economic value is underlined by the assumption that the poor artisans are primarily utilitarian in their considerations and choices because of the nature of their circumstances. Patnaik and Mishra (1997) argue that the independent weavers in Orissa face a high cost of production, as they have to go through a number of traders to get raw materials, with most having to make a weekly trip to nearby town for purchases. Similarly Roy (1993) argued that more handloom weavers were giving up being entrepreneurs to enter into contracts with large traders who gave the yarn and bought cloth in return.

This study however showed that while utility value featured prominently in artisan decision making, the majority of the artisans preferred to work as independent weavers despite the above mentioned 'inconveniences' and 'risks'. The study highlighted that the artisans perceived the very act of weaving as giving them their identity as Bhulia Mehers, the makers of *ikat* sarees. Further, nearly 65 percent weavers in Bandhpali preferred to work as independent weavers, without the aid of external agencies such as cooperatives. This statistic closely mirrors

⁸⁵ See Bagchi (2004), Guha (1989) and Roy (2002), Wolcott (1991), Subrahmanyam (1998), Leadbeater (1992)

the national level data where close to 61 percent weavers work independently (NCAER., 2010).

This prompts the need to reconsider the artisan industry as essentially a *productive* rather than a *welfare* industry, much as in ancient India when textiles occupied a foremost place in the economy because of the revenue it generated from taxes (Thapar, 2000:411) and weavers were prized by nobility for their craftsmanship and invited to settle in new provinces to promote commerce (Roy, 2006:199). The question of how artisans went from being valued craftspersons contributing to the economy to beneficiaries in need of government aid is an unanswered one in the history of Indian textiles. Haynes and Roy (1999) highlighted how switching to other professions constituted a last resort for weavers who preferred instead to migrate to other areas to continue with their traditional profession. Only those with limited skills considered a switch to general labour or semi skilled professions. This study suggests the need to identify ways to better support weavers as ‘entrepreneurs’ rather than viewing them as needing ‘protection and support’.

8.2 Boundaries of risk: the need to emphasise local markets

Marketing handloom products has been one of the main concerns of government policy as reflected in the various schemes and incentives⁸⁶ created to promote handwoven textiles. The markets for handwoven textiles comprise: local markets that are close to artisans, urban or domestic markets, and export markets. The government outlook on marketing emphasises export promotion. While promotion of handloom export has been a chief concern at the national level, the Orissa government too has emphasised niche domestic and international markets. Specifically the Orissa government vision is to:

[P]opularize Orissa handloom fabrics in foreign market and exploring export market, it is necessary to participate in different international marketing events and reserve space in different events in the foreign countries for displaying Orissa Handloom fabrics for publicity as well as sale. Orissa State Handloom WCS [Weaver Cooperative Society] Ltd. the leading handloom organization of the State will be the implementing agency of this component (Department of Textiles and Handloom, 2010)

Exports have traditionally constituted only 10 percent of the overall handloom sales in India, with the majority of handwoven textiles being consumed within the country (Planning Commission, 2007). Additionally in the context of Orissa, Panda (1994a) argued that there are major constraints for export. These include: (i) the diversity of handlooms, which make it

⁸⁶ See Planning Commission (2007) and Department of Textiles and Handloom (2010)

difficult to organise bulk production for exports. (ii) transportation of textiles (as many weavers reside in the hinterland) and (iii) creating awareness of products for export customers.

The spatial Artisan Network Map in Chapter Five and subsequent analysis in Chapter Seven showed that the artisans of Bandhpali village predominantly operated within a 25 km radius in marketing their products. Their closeness to the market allowed weavers to vary their production levels according to peak and off peak seasons. It further allowed them to rapidly adapt to the market trends and customer feedback. This was demonstrated in the case of independent weavers who changed the design of the border or *anchal* if it was not well received by the market. Proximity to the local market allowed the majority of artisans to be independent, and have greater control and stability over their production and marketing; than if they were attached to export markets, which would necessitate a chain of intermediaries and risks characteristic of export markets. As this study has revealed higher risk can only be borne by a few actors, such as the master weavers. In addition artisans producing one to two sarees a week did not have the financial capacity to cope with export orders, unless sufficient advance was forwarded to them.

While the position taken in this thesis is not one of anti exports, it prompts a rethink on the undue emphasis of catering to export markets. As the study has shown, many local artisans have evolved their own designs over the years. They have the skills and capabilities to produce new designs, but sometimes lack the time and resources to develop them. A switch to export markets may necessitate a change of design and hiring professionally trained designers from outside the region, which the government is presently doing⁸⁷. However, there is a need to question the privileging of ‘professional’ knowledge over the ‘tacit’ knowledge and skills of the artisans. In addition, the study showed that artisans were the masters of adaptation in creating affordable products for the market, not all of which could be judged as ‘high quality’ but which nevertheless served local (and regional) markets. High quality, polished designs and high export may not necessarily mean better livelihoods for artisans, particularly if one takes into account local markets, local skills and designs, and issues of ‘resilience and stability provided in the geographic boundaries of a small network’ Whitesides (2010).

Furthermore, contrary to the plight of many artisans around the country⁸⁸, the artisans interviewed in this study were struggling to meet the demands generated through their local

⁸⁷ The government has a project involving leading fashion designers in India to develop high quality designs for export market (The Business Line, 2010)

⁸⁸ The number of handloom weavers has been on a steady decline and the industry is routinely reported as being in ‘crisis’. See Planning Commission (2001), NCAER (2010)

market. While this did not necessarily fetch them high incomes, it nevertheless enabled them to sustain their livelihoods in an independent manner, whilst maintaining their caste identity. This shows that sometimes all that may be needed to create a vibrant artisan economy is an enabling platform, which the government has provided in this case. The Balijuri market is a fine example of providing such a platform for weavers to purchase yarn, weaving accessories, and market their sarees. The market whilst situated in a small town is also a regional level market, as it attracts buyers from the neighbouring states. The success of the local market platform in Orissa can also serve as an inspiration for other state governments concerned with promoting artisan livelihoods.

8.3 Recognising the 'collective' and strengths of a 'decentralised' system

The study began by considering the assumptions on artisans and the handloom industry as stated in the extant literature and specifically the artisan as the 'individual'. As outlined in Chapter Three the literature classified weavers under the differing labels of 'contract', 'individual' and 'cooperative'. The concept of the 'individual' weaver however, has been brought under scrutiny in this research. Mapping the artisan journey has shown the deep involvement of all members of the family in the making of *ikat*. Its functioning is like that of a synchronised orchestra—albeit an Indian orchestra⁸⁹, where the performers adjust their style and pace with one another to suit the mood⁹⁰ and setting. Every member of the orchestra is vital as the journey map revealed; each step was carried out by a designated member of the family. If any member left the orchestra, whether by marriage or death, or as a result of finding employment elsewhere, the impact on the performance was immediate. This led to downsizing of family enterprise, or to a close of weaving activity altogether and a shift to working on contract (Chapter Seven). Recognising the importance of each member of the family in the weaving enterprise, this study indicates the need to revisit the notion of the 'individual' artisan and give consideration to the 'collective' as a unit of analysis and target of government programmes.

Related to the concept of the 'collective' is the concept of the 'family firm'. Throughout pre-colonial, colonial and postcolonial periods in the history of Indian handwoven textiles, the artisan 'firm' mode of production has been a dominant one (Swallow, 1982:131). Concerted

⁸⁹ Unlike the Western orchestra where the conductor is supreme and directs the ensemble, there is no 'conductor' in the Indian orchestra. There is a lead musician and together with the orchestra they improvise as they stage the performance, which can never be replicated.

⁹⁰ The mood in this case is the seasons, festivals, family occasions.

efforts⁹¹ at centralisation started during the colonial period, when the European companies needed to organise large scale production and export. The rise of weaver capitalism also gave rise to the phenomenon of the *karkhanas*⁹² though these were more successful and prevalent in urban than rural areas (Haynes and Roy, 1999).

In the rural areas such as the one in this study, attempts to centralise weavers have mainly been in the form of government supported artisan cooperatives. However, as Chaudhuri (2006) pointed out, the European model of centralisation, based on ideas of efficiency, scale and central authority did not significantly alter the fundamental 'fragmented' nature of organisation of the Indian handloom industry. The organisation of the handloom industry has been a recurrent subject of discussion in artisan literature⁹³ and government policy-making, where its 'fragmented' character has been perceived as a chief 'handicap' and inhibitor of growth of the industry. The National Textile Policy (Textile Ministry., 2000:93) reflects this belief:

The weaving activity as predominantly concentrated in the decentralised sector and thus suffers from attendant disadvantages and handicaps in terms of low quality and technology, limited ability to absorb technology upgradation etc., normally suffered by any activity carried out in the decentralised sector. The two reasons for concentration of weaving activity in the decentralised sector are: (a) past government policies restricting the capacities of organized industry in the pre-liberalisation era and fiscal policies prescribed by the government and (b) somewhat inward looking policies of the organised industry.

The scheme for technology upgrading similarly states that the 'handloom sector is highly decentralised and dispersed and therefore suffers from cost disadvantages, technological obsolescence and marketing handicaps in comparison to power loom and mill sectors' (Department of Textiles and Handloom, 2010).

Some such as Panda (1994a) have argued for weavers to be organised as cooperatives to ensure production of 'quality goods' as per 'specified delivery schedule'. While centralisation may offer advantages of scale and economic efficiency, these are not clear in the case of artisan cooperatives; the majority of whom including the one in this study are perennially in need of government aid and subsidy⁹⁴. This weakens the economic argument for centralisation. This study highlights instead the strengths of a decentralised way of working. The visual depiction

⁹¹ The centralized or partly centralized mode of production also existed in 4th century BC in the form of artisan guilds (Dhamija and Jain, 1989:34)

⁹² These are small factories or workshops located in small towns or urban areas.

⁹³ See Subramanyam (1998), Swallow (1982), Chaudhuri (2006), Roy (1993)

⁹⁴ Interviews with artisans and the Sambalpuri Bastralya Cooperative revealed that the cooperative society had received government assistance to wipe off previous debt due to malpractices.

of the sequence of activities in Chapter Five show how the tools, spaces and people required for the different stages of weaving were tightly held under a single roof within the artisan family. It served to highlight how the women in the family seamlessly blended household chores with tending children, in between spinning yarn and tying weft.

It would be unwise to call such ways of working as 'backward' or 'disadvantaged'. New cultures of work around the world are moving towards precisely such 'flexible and networked ways of working' (Myerson and Bichard, 2010) from the comforts of one's home. Further, the financial crisis of 2008 sparked a discussion on whether 'adaptive' trumps 'efficient' in global banking systems and whether the global financial system should be treated as a 'complex adaptive system' (Cookson et al., 2009). In talking about the 'balance of nature', ecology studies had believed the rich web of interactions to be the most stable. Subsequent analysis has however shown that the most robust systems can be 'decoupled into discrete components without collapsing' (ibid). This study bears evidence to the resilience of these 'discrete components' in the form of artisan 'family firms'.

8.4 The need to consider multiple channels to artisan livelihoods development

One of the tendencies in mainstream policy and literature on promoting artisan livelihoods has been to advocate 'single narratives'⁹⁵. This is most evident in government policy of supporting weavers' cooperatives. There is a strong belief that, 'Of the three different modes of production, the cooperative system of production is undoubtedly beneficial for the weavers and also for the survival of this traditional industry in a poor state like Orissa

(Planning Commission, 2001). The Planning Commission (ibid) further states that there are:

practical difficulties in bringing all the weavers under the fold of cooperatives and retain their efficiencies at the same time, due to physical inaccessibility, illiteracy and ignorance of the weavers and the control over the management of primary societies by the vested groups such as master weavers and merchant capitalists.

Despite numerous benefits such as medical insurance and assistance for looms and creating worksheds, only 5 percent of the artisans in Bandhpali were part of the cooperative system. This was despite the fact that the Sambalpuri Bastralaya Cooperative with whom the artisans in this study were associated with was one of the largest cooperatives in Orissa, with over 6000 members and an annual turnover of close to \$5 million. The cooperative weavers in this study

⁹⁵ Nigerian author Chimimanda Adichie (2009) spoke of the dangers of thinking in 'single narratives' in describing other people and countries, as something that risks critical misunderstanding.

also earned higher incomes as compared to the independent weavers or those working on contract. At the national level too only 5 percent of the artisans preferred to join cooperatives (NCAER., 2010).

Despite the small number of artisans attached to the cooperatives, the government continues to invest large amount of resources in clearing debts of weaver cooperative societies, subsidising their marketing, providing them with working capital and disbursing weaver welfare schemes through them. The government acknowledgement in the Xth Five Year Plan about the decline of cooperative societies, and the subsequent adoption of the 'cluster development approach'⁹⁶, has not prevented it from continuing to allocate large amount of resources to the cooperatives. For the budget 2011-12, the government announced a 'loan waiver package' of \$600 million to waive off the debts of 15,000 weaver cooperative societies who were unable to repay their loans. Mines (1984:121) argued that historically governments have actively promoted cooperatives as a way of channeling benefits to large number of artisans and providing them with production, marketing and finance support. They have supported cooperatives under the belief that, the small and unorganised weavers have limited financial and bargaining power; they become indebted to the intermediaries who provide them with production finance. This results in widespread poverty of the handloom weavers (ibid).

This study has established the need to question these assumptions and step outside the 'one policy fits all'. As shown in Chapter Seven, the differing circumstances, capabilities and aspirations of the artisans; along with their labels of independent, cooperative, contract, are constantly in flux and require flexible and adaptive solutions. Advocating one type of weaver or system can only be at the cost of marginalising other types of weavers or systems. The study showed how each system and service provider served a purpose in helping artisans with services to secure their livelihood. As the 'way of design' suggested in Chapter Two, there are no optimal solutions. What might be possible as Pye (1978) said is to 'temporarily determine the best practice between opposing requirements'. The 'way of design' thus enables one to see the many constraints and solutions in a given situation concurrently. It encourages an approach that is open to multiple paths and strategies. Tracing the entire journey as opposed to focusing only on the end nodes provides a more balanced and holistic view of complex, non-linear social realities.

⁹⁶ A handloom cluster is defined as a place with large concentration of handlooms (note looms not weavers!). Each cluster is restricted to 300-500 looms. There are 20 clusters in India which were started during the Xth Plan in 2007-08

8.5 A focus on micro patterns and interactions

Tracing the underlying pattern of artisan services has contributed at different levels. At the outset it helped to sketch the description of the various steps involved in making double *ikat*. Whilst this was not the foremost aim of journey mapping, which was primarily employed as a means to understand service inputs and gain access to the value orientation of artisans; it nevertheless helped to produce a description of the *ikat* making process of artisans in Orissa. The explication of the tacit knowledge of artisans through visual and oral means is itself a contribution to the literature on *ikat* making. To elaborate most studies⁹⁷ on *ikat* have focused mainly on the pattern of the fabric along with its symbolic and cultural meanings. The technique of *ikat* has received less attention with only an overview being provided by these studies. Exception to this were the unpublished reports of a government department⁹⁸ and the Sambalpuri Bastralaya Cooperative. The latter had mapped the process of *ikat* using technical language and specifications that was better suited for the understanding of a qualified textile expert than a layperson aiming to understand the complexities of *ikat* making.

In addition to producing a description of the *ikat* process, the deconstruction of the informal and tacit artisanal process lay bare the many objects, inputs and services required by the artisans and how these were sourced from the various service providers (Chapter Five). The mapping made visible the possible areas of intervention to improve artisan services. To illustrate, it showed how bulk of the activities were centred around the pre-weaving, rather than the actual weaving or post-weaving stage. It showed the tools and processes that were used by the artisans as well as those that were not in use, and through this highlighted why artisans were reluctant to switch to ‘modern’ machines. The image of the artisan as stuck in the technological dark ages is a persistent one. As the ‘Capacity Building Handloom Sector Through Training and Technology Intervention’ scheme of Government of Orissa laments:

The weavers are mostly conversant on adopting the traditional method in weaving of handloom cloth resulting low productivity and market value and having little or no scope for product diversification as per present market trend (Department of Textiles and Handloom, 2010).

⁹⁷ See Gittinger (1982), Desai (1989), Crill and Sutra (2006), Coepr and Willow (1996), Dhamija et al.(1995), Fischer et al. (1973), Gillow and Barnard (1993), Buhler and Fischer (1979), Guy (1998), Murphy and Crill (1991), Mohanty (1980), Chisti et al. (2000)

⁹⁸ Diagnostic study of Bargarh cluster Boyanika (2006), Diagnostic study of Barpali cluster UNIDO (2008), Technical report on tie-dye weaving by Tosh (2009)

Consequently they propose that:

[It is] essential for up-grading the skill and knowledge of weavers and technical staff and simultaneously coherent presentation of the skill, craftsmanship qualities of weavers through a diversified range of products as per market trend.

While there is little doubt that the *ikat* weavers in Bandhpali and weavers elsewhere could benefit from improved technology at the preparatory stages, the preference value analysis in Chapter Six showed why weavers were often reluctant to embrace technology. While lack of finance was one of the visible constraints, the real reason lay in the fact that artisans were not sufficiently convinced of the trade-offs of their potential investment. Specifically, they perceived that the machines that were available to them only marginally aided their manual work. The artisans' choice was to work manually since the machines required two people to operate. The condition for switching as they described would be if the machine was 'fully automatic'.

This brings me to the point on the near absence of 'objects' and 'tools' in the literature on artisans and livelihoods. As indicated in Chapter Three a number of studies⁹⁹ pertaining to artisans in the handwoven industry have focused on analysing the macro pattern of the industry. In other words they have focused on issues related to growth and decline of the handloom industry, the nature of its organisation and markets. When the studies¹⁰⁰ have focused on micro analyses of artisan situations on the ground, they have tended to focus on micro-social patterns using abstract concepts of power, class, dependence to analyse and explain the relationship between artisans and service providers. Margolin (2002) pointed out that social scientists have paid little attention to the product milieu or how people acquire and organise the products with which they live their lives. 'Their focus is on consumption rather

⁹⁹ See Mishra (1993) for an analysis of textile policies and India's decline in the world market share of textiles. Leadbeater (1992) for discussion of mill versus the handloom sector in India. Subrahmanyam (1998) for centralised versus fragmented nature of European and India markets respectively. Mukund and Sundari (2001) for an explanation of competitiveness of the handloom sector. Roy (1993) for artisans and industrialisation. Swallow (1982) for reasons of failure of centralization in the handloom industry. Wolcott (1991) on a quantitative study on the interwar growth of the Indian textile industry.

¹⁰⁰ See Mines (1984) for a discussion of relationship between weavers and merchants in South India using concepts such as power, fear, dependence, control, indebtedness, exploitation and economic exchanges. See Hossain (1988) on a study of relationship of Bengal weavers and East India company in the 18th century. Hossain's (ibid) argument centers around 'dependence'. Other studies that discuss micro-social patterns include Parthasarathi (2001), Haynes & Roy ((1999), Bayly (1992), Patnaik & Mishra (1997), Patnaik & Mohanty (1988), Fraser (1968), Dharmaraju (2006), Ramaswamy (2006)

than with issues of use.’ In contrast, objects and artefacts feature prominently in a design approach, especially in understanding how they influence human activity and behaviour¹⁰¹.

8.6 Process centred and human centred measure of success

While the design approach considers objects and artefacts involved in a service exchange, it also considers ‘purpose’, that is the values and desires of the end customer to fulfil. In this study this has taken the form of identifying which needs and values are important to the different groups of artisans and understanding what forms of value the present services help to create. Success of service is thus viewed through the eyes of the artisan.

In contrast, much of the literature and policies have paid less attention to the tangible aspects involved in the artisan processes, their end measure of success has usually been the ‘product’¹⁰². To elaborate ‘success’ in the handloom industry is frequently measured in terms of metres of cloth produced or amount of goods exported. Government vision and target statements are phrased in terms of ‘increase in productivity’ and cloth ‘output’ that are more easily measurable than the increase in artisan welfare or the quality of service delivery. The prime objective of the Indian National Textile Policy 2000 is articulated as:

[To] facilitate the Textile Industry to attain and sustain a pre-eminent global standing in the manufacture and export of clothing. Equip the industry to withstand pressures of import penetration and maintain a dominant presence in the domestic market (Textile Ministry., 2000).

The handloom strategy of Orissa government (Department of Textiles and Handloom., 2011) similarly lists ‘product-centred’ goals. Three of its five key objectives include: (i) To boost production and sale of goods (ii) Promote exports of handloom products (iii) Product and craft development. The other two objectives include: (i) To strengthen cooperative societies and (ii) To disburse government welfare schemes such as health and life insurance to weavers.

This shows that the view of the artisan is very much *production* centred than *service* centred, and the measure of success in the literature is focused on *outcomes* or *end products* rather than on *interlinkages* and *process of development*. However, the human centred design approach taken in this research views success not merely in terms of output of cloth or budget outlays or export value of products; rather it considers it from the point of view of the artisan and his

¹⁰¹ Design uses frameworks such as Actor Network Theory (ANT) that consider ‘objects’ to have the same ‘agency’ as humans (Law, 2007).

¹⁰² See Bagchi (2004) data on handloom output and production. See Roy (2002) on measuring decline or growth of the handloom industry by measuring the output of cloth produced.

wellbeing. Increase in output of cloth or export value does not automatically lead to increase in artisan's well being or income to the artisans. As one eminent craft expert¹⁰³ in India once commented: 'The price of the saree has increased over the last two decades because of higher cost of inputs and transportation but the artisan still makes the same 50 cents.' The 'way of design' has highlighted alternative measures of success that focus on the process of service delivery and forms of capital enabled by the service providers (Chapter Five); while measuring outcomes in terms of the enabling service value perceived by the artisans (Chapter Six).

8.7 Using visual methods and considering artisans as 'subjects' and 'collaborators' of research.

The perspective on what is to be measured also affects the research methodologies employed. Artisan studies¹⁰⁴ frequently tend to employ quantitative methods such as survey and statistical analysis. However, as shown in this study, surveys convey only part of the story. At times they even distort the story. The survey of 309 artisans conducted in this study revealed that the artisans routinely underreported their income for the fear of being taxed by the government, and not being eligible for the various welfare schemes. The average monthly income reported by weavers was \$60 to \$70. Yet detailed interviews showed that this was often twice as much¹⁰⁵.

There are studies that have taken a more qualitative or ethnographic approach¹⁰⁶. These studies however, like the studies that used survey have tended to view artisans as the *object* of research. Data are gathered on the socio-economic conditions of the artisans, or the cultural significance of textiles in the artisan community. Significantly however, the artisan voices are missing. The stories of artisan lives, their ways of navigating daily challenges, their hopes, dreams and aspirations are drowned beneath their craft and participation as *objects* of research.

Human centred design approach in contrast is primarily collaborative in nature. The artisans in this study were considered as *objects* of study, but also *subjects*. Their life stories, perspectives

¹⁰³ Conversation with Laila Tyabji, Chair Person, Dastkar, a society to promote crafts and artisan livelihoods in India

¹⁰⁴ See Narasaih and Thandava (1999) for study on handloom weavers in Andhra Pradesh using household data and interviews. Kakade (1947) for socio-economic study of weavers in Maharashtra surveying close to 10,000 families on their income, health, education and living conditions.

¹⁰⁵ This income is the combined earning of all members of the family, usually three to five people.

¹⁰⁶ See Desai (1989), Crill (1998), Bagchi (2004), Narasaiah and Thandava (1999), Mukund & Sundari (2001), Mohanty (2003), Patnaik and Mohanty (1988), Dharmaraju (2006)

and aspirations constituted the key focus of the study. Significantly, they also participated in creation of the story. The method of artisan ‘self documentation’ used in the study was inspired by the ‘way of design’. The philosophy of this approach is to give tools to the research participants so that they could themselves consider what and how to represent. While participation may have an intrinsic value attached to it, the method also demonstrated the benefits of capturing ‘process related’ data by the artisans themselves as shown in Chapter Seven.

A primary element of the design approach is the use of visualisation. Visual methods not only help to succinctly represent artisanal network and processes, but can also be a way to generate insights. They can help to connect the dots between the nodes (artisan and service provider) rather than a focus only on the nodes. By making visible the underlying pattern of the relationship between the artisan and service providers, the study has helped to prepare the grounds for how these links may be strengthened. Extending the survey and ethnographic research data in visual compositions further highlighted the possibilities for intervention. The Artisan Network Map in Chapter Seven helped to draw attention to the ‘network effects’, where similar artisan profiles were found in clusters, living close to each other. This finding could be used to target specific groups of weavers while introducing new schemes and measures related to finance, technology or other weaving related aspects. The journey map similarly breaks down the sequence of steps taken by the artisan, to map the possible areas for intervention.

8.8 Considering ‘embedded’ actors in the weaving ecosystem

One of the key aspects that the artisan journey map (Chapter Five) helped to highlight was the breadth of exchange between the contract weaver and the master weaver. Traditionally this relationship has largely been viewed through a socio-economic lens where the master weavers have frequently been considered as ‘exploitative’¹⁰⁷. However, the detailed journey mapping of the contract artisans in Bandhpali showed the crucial forms of capital they lacked. These included lack of human capital from having smaller families (mainly widows or unmarried people) or the lack of skills of making tie-dye, which restricted them only to the weaving aspect of making *ikat*. The contract artisans also lacked the financial and physical capital in

¹⁰⁷ See Uchikawa (1998:94) talking about the difficulty for weavers to ‘free themselves from the control of master weavers’. Also see Mines (1984:137), Hossain (1988). The study on Integrated Handloom Development scheme asserts that the middleman entrepreneur dominates the market and that primary producers have no direct access to markets or market information.

terms of money to buy ready tie-dyed yarn, and sufficient work space to carry out the tie-dye stage of the *ikat* process. For such artisans the service provided by the master weavers was crucial in earning a livelihood. As seen in Chapter Five the master weavers also helped to enhance the skill level of contract artisans from weaving single to double *ikat*, thereby enabling them to earn higher incomes.

The Artisan Network Map and interviews with master weavers further revealed the investments made by them and the risks they took in transcending local boundaries. In characterising master weavers as villainous and exploitative, the literature and policies disregard the risks and investments borne by them. The map also revealed the extent to which the master weavers were embedded in the system. Often five to ten weavers or more would be attached to a master weaver, which showed their embedded nature in the weaving ecosystem. Policy efforts need to pay greater attention to these embedded actors who are responsible for livelihoods of some of the poorest artisans. While most policy efforts are directed towards ‘weak actors’¹⁰⁸, there is a need to consider whether a corresponding focus on ‘embedded actors’ might also be a route to strengthening the weaving ecosystem, and with that the livelihoods of the poorest artisans. This finding is consistent with the one outlined at the beginning of this chapter, about the need to view the artisan industry as primarily a ‘productive’ rather than a ‘welfare’ industry.

8.9 Conclusion

In this Chapter, I have established how the ‘way of design’ helps to fundamentally reassess and reframe problems of artisan livelihoods. I have shown how viewing artisans as ‘customers’ and ‘entrepreneurs’ instead of ‘producers’ and ‘beneficiaries’, highlights their agency, resilience and adaptive capacities. In questioning the underlying assumptions of policies and literature on artisan livelihoods, the study has shown the value of shifting attention from a *mechanised, production* and *product centred* view of livelihoods for the poor, to a *human, process* and *service centred* view. It has drawn attention to the ‘collective’ rather than the ‘individual’ nature of the weaving enterprise and shown how discrete family ‘firms’ operate and can sustain themselves within local market networks. It has also emphasised the need to consider multiple channels to artisan development, by focusing on embedded actors such as master weavers who provide livelihood to some of the weakest artisans. It has shown how visual methods can help to spot patterns and reveal opportunities for further interventions. A focus on artisan preference values

¹⁰⁸ ‘Weak’ actors are those that are not densely connected in the network, in contrast to master weavers and yarn traders that are densely connected with other actors in the weaving ecosystem.

highlighted the reasons behind their poor uptake of ‘technologies’, and how viewing them as ‘subjects’ and ‘collaborators’ can help researchers to better understand and present their life realities. This chapter has thus highlighted the value of the ‘way of design’ in connecting the dots of policy, practice and research.

CHAPTER NINE

Conclusion: Redesigning design, reframing problems

Many years ago, Charles Eames was asked: 'What are the boundaries of design?'

His infamous response was: 'What are the boundaries of problems?'

In the introduction to this thesis I drew attention to the scale of challenges with regard to service delivery for the poor. I highlighted how governments and international agencies were concerned with achieving the Millennium Development Goals, a key goal being that of poverty reduction. While there is considerable amount of data¹⁰⁹ available on the state of essential services around the world, there is relatively little research in terms of *how* services unfold in the last mile (Manor, 2006). In other words there has been less research around the 'process' of service delivery as compared to its 'outcomes'. Explanations for the persistent problem of delivering services to the poor have largely been considered through political and economic lenses, as outlined in the introduction. However design is moving into this territory, and 'design thinking' is being promoted as a tool to tackle social challenges.

The introduction highlighted the lack of consensus around the term 'design thinking', what it means and how it differs from other forms of thinking; I proposed to examine this question in the study. I also highlighted that there were limited number of studies that had examined the role design thinking has, or could play, in resource-poor settings. The research inquiry was thus located on the fringes of two gaps: a gap in our understanding of how services unfold in the last mile in resource-poor contexts; and a gap in how design (and its thinking) can contribute in such settings.

In answering this question I used the case study of artisan services in India. In Chapter Three I highlighted the fact that, while the literature on artisans and handwoven textiles had focused on the artisan sector and macro policies, there were few case studies that had considered the

¹⁰⁹ See United Nations Millennium Development Report (2011), World Bank World Development Indicators (2011)

micro realities of artisan livelihoods. To address this, I proposed to study the case of *ikat* weavers of Orissa who, while creating distinct textiles, had much in common with the other 6 million artisans in India, in their access to services from public and private service providers. Specifically I explored how a design approach could help to understand ‘what types of services are likely to enable artisans to improve their livelihoods?’

9.1 Key results and original contribution

In this section I outline the two main contributions made by this study. I begin by stating the original contribution made by this study to the literature and debate on ‘design thinking’. I highlight the re-articulation of the ‘way of design’, and how the study has brought to fore the transdisciplinary character of design. I then draw attention to the original contribution made by this study in evidencing the role that design can play in resource-poor contexts. I review the key findings from the study that showed how the ‘way of design’ illuminated artisan services in the last mile, and reframed problems and prospects of artisan livelihoods.

9.1.1 Redesigning design thinking

In Chapter Two of this thesis, I began by considering the ‘dual knowledge’ versus ‘integrated knowledge’ view of design thinking. I discussed how the ‘dual knowledge’ view of design thinking was based along institutional, rather than intellectually justified claims and how this view drew a distinction between design thinking as intuitive and imaginative, and scientific thinking as rigorous and structured; failing to consider the ‘unscientific’ (Friedman, 2000) nature of some of the scientific discoveries. I drew attention to the recent shift towards a more ‘integrated’ view of design thinking, one that combined imagination and insight with scientific rigour. I further stated that design thinking had become synonymous with design methods, especially as designers emphasized their human-centred methods of problem solving that put users and customers at the forefront of design activities. I argued that equating design thinking with design methods was shortsighted, considering that no two designers used the same method in the same way. As Dorst (2008) pointed out, many professional designers have confessed that they don’t always follow methods, relying on ‘know-how’ rather than ‘know-what’ in arriving at their design solutions.

Given this backdrop to ‘design thinking’, and some of the inherent flaws and contradictions in the argument, I proposed instead to consider the ‘essential’ nature of design (doing, being and thinking). In Chapter Four, I outlined how this quest was aided by the ‘axis of tension’ of being a disciplinary insider and an outsider, and how I used this as my special vantage point.

In surveying the literature on design and design thinking, I drew out the ontological, teleological and epistemological expressions of design and designing. To encapsulate these intrinsic qualities, I proposed to re-articulate design thinking as the 'way of design'. More than the term 'thinking', the 'way' embodied the essence of knowledge, tradition, ethic and aesthetics of design. It provided a metaframe from which to consider the patterns (in this context the underlying structure of the service system), purposes (creating utility, social, emotional and epistemic value) and processes (visualisation, matching problem-solution pairs, evaluating in light of a fitness criteria) of design. The 'way' addressed the issue of heterogeneity in the way designers went about their distinctive practices, whilst still being part of a larger tradition and community of design practitioners and thinkers. In re-articulating design, the study has helped to extend the discussion on design thinking beyond 'toolkits' and 'methods', to consider what Buchanan (2001) called the 'first principles' of design.

In redesigning design, the study demonstrated the transdisciplinary character of design and the boundaries of problems it can engage with. Jonas (2007) stated that design has the potential to become a practice of transdisciplinarity, solving problems that overlap multiple disciplinary boundaries and fusing knowledge from different disciplines in the process. The research provides evidence to support this nature of design, its form like that of an empty vessel capable of holding and accommodating many disciplinary ideas and methods. The study made visible the ability of design to borrow from other disciplines: from complexity theory in considering the 'fitness' and 'adaptiveness' of solutions (Friedman, 2000:6); from management studies in the case of 'journey mapping' (origins of which can be found in Shostack's (1982) article on service blueprinting); to social sciences in emphasizing 'user collaboration', that can be traced back to Chambers' (1997) participatory methods. In the spirit of the transdisciplinary nature of design, this study has also benefitted from using concepts of 'consumer value' (Sheth et al., 1991) originating from management studies, and 'forms of capital' (Scoones, 1998) from social sciences, along with 'oral history' (Denzin and Lincoln, 2011) methods from anthropology. Much like the artisans in the study, or a designer engaged in solving problems, this research employed bricoleur (Lévi-Strauss, 1966) techniques and mixed methods (Creswell and Plano Clark, 2011) to guide analysis and synthesis. In crossing disciplinary boundaries design has also helped to cross the boundaries of knowledge, linking policy to practice and practice to research. While design (and especially design practice) is primarily engaged in 'looking forward' rather than 'looking back', in this study the strategy employed was 'look back-look forward'. Therefore the inquiry, as well as the resulting knowledge, is one of hybridity, where implications and propositions are created, while looking back to survey the literature and policy landscape.

9.1.2 Reframing problems and illuminating the last mile of artisan services

In this section I outline the contribution made by this study in showing how design can help to understand and inform services for the poor, using the case of artisans. I gather the key strands from Chapters Five, Six, Seven and Eight and state how the ‘way of design’ has helped to inform policy, practice and research on artisan livelihoods, and how this in turn has contributed to addressing the gap in micro level case studies on artisan livelihoods (Chapter Three). In other words the ‘way of design’ and the ‘artisan case study’ have each helped to illuminate the other.

In considering how the ‘way of design’ has helped to understand and inform artisan services, I begin by stating that just as the artisans in this study created patterns on threads by marking, tying and dying, design helped to *make visible* the pattern of the artisan’s journey of making *ikat*. The journey, which is often invisible in the ‘glamour’ of the product and the ‘poverty’ of the artisan, has benefitted from the visual vocabulary of design which materialized the tacit knowledge of artisans and their creative processes. It has helped to showcase the people, objects, activities and processes that are part of the journey of making *ikat*, that provide livelihood to artisan families. By focusing on the interactions and exchanges within the artisan community, a design approach has helped to illuminate the micro patterns and associations in the last mile where services actually take place. The Artisan Network Map in Chapter Five further depicted the underlying pattern of the weaving ecosystem and highlighted the ‘embedded’ (Christakis and Fowler, 2011) actors in the network. Design as pattern showed how *making visible* can help to highlight possibilities and touchpoints for artisan interventions.

In Chapter Six, I considered how the ‘way of design’ prompted the assessment of value, not just utility value but other forms of value such as social, emotional and epistemic value. This chapter systematically explored the preference values amongst the three groups of artisans. In understanding the values preferred by the artisans, the study also highlighted the value that the service providers helped to create. Conditional values further revealed the circumstances under which artisans would prefer to work with a particular service system or provider. The study thus employed a ‘subjective’ measure of service success as perceived by the artisans, instead of the more ‘objective’ measures that focused on measuring output of cloth or increase in export earnings (Chapter Eight). The ‘way of design’ also brought to the fore the emotional and social values within the artisan community, demonstrating that for the artisans, making *ikat* was not just a means to live but a way of life.

In Chapter Seven, I described how the study was guided by the epistemology of design and its way of sense making, how visualisation helped to spot the patterns in data that were obscured by the survey, and how it aided research planning efforts. I showed how ‘matching problem-solution pairs’ highlighted the artisans’ resilience and imagination and not just their poverty. Furthermore, the ‘way of design’ illustrated how a focus on the *journey* or *process* rather than its *outcomes* helps to highlight the complexities of artisan decision making. It showed how viewing things in tandem can help to perceive the numerous shades of grey as opposed to black and white realities. In this Chapter I used the concept of ‘fitness’ and ‘adaptiveness’ to evaluate ‘what types of services were likely to enable artisans to improve their livelihoods?’. I argued the benefits of considering ‘flexible’ rather than ‘fixed’ criteria, as it enabled one to see the many choices and solutions for policy and practice. The study thus avoided proposing an ‘optimal’ solution, instead outlining the ‘acceptable’ and ‘adaptive’ options, and showing the ways in which they enabled artisans to sustain their livelihoods. Depending on the fitness criteria privileged, policy makers and practitioners may choose their route to promote artisan livelihoods.

While design as pattern, purpose and process illuminated how artisan services unfolded in the last mile, and how interactions with artisans and service providers took place, Chapter Eight demonstrated the value of a design approach in fundamentally reframing problems and questioning the underlying assumptions of current policies and literature on artisans and livelihoods. It showed how viewing artisans as *customers* and *entrepreneurs* instead of *producers* and *beneficiaries* helped to cast a new light on their agency and question the privileging of ‘professional’ knowledge over the ‘tacit’ knowledge of artisans. The Chapter demonstrated a need to reconsider the undue emphasis on exports, highlighting instead the advantages of working within a small geographic boundary. It emphasized the collective nature of *ikat* making and argued that decentralized and discrete artisan systems such as the artisan ‘family firm’ were capable of flourishing; instead of only centralised ones promoted by the government, that at times failed to achieve economic efficiencies despite their scale.

This study has thus contributed to highlighting the potential a design approach to engage in resource poor contexts. It has shown how design can truly engage with ‘third and fourth order designs’ (Buchanan, 1998) by helping to reframe problems and illuminate that which is valued and meaningful. As Einstein remarked, ‘The mere formulation of a problem is far more essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle

requires creative imagination'. The contribution of this study has been in illustrating how the 'way of design' helps to connect the dots: the dots between the artisans and the service providers, the dots between policy and practice, and the dots between disciplines.

9.2 Implications of the study

In this section I discuss the two main implications arising out of this study. Specifically I consider: (i) the trend in design practice and research towards 'scienticising' and measuring 'social impact' (ii) the limitations of the 'way of design' in influencing policy and outcomes.

(i) The problem of 'scienticising' design

In their quest to engage with increasingly higher order problems, designers and design firms have sought to 'codify' their process as a way of solving intractable business and social problems. A recent article on design thinking however, by one of its earlier proponents Nussbaum (2011) was titled 'Failed design thinking'. The article highlighted how companies that had started using design thinking expected a high success rate while refusing to cope with the messiness and ambiguity that is an inherent part of the design process. Similarly the move towards social sector projects, and the consequent alliances with funding organizations, mark a new trend in design for the 'measurement' of social outcomes¹¹⁰.

While 'outcomes' as opposed to 'process quality' still form the primary basis for policy making (Paul et al., 2004), it is important for designers to note that policies and problems created as a result of decades or centuries of 'thinking' cannot be miraculously transformed by design thinking. Design thinking is not 'fairy dust' (Walters, 2011) or 'panacea' (ibid) and it should cease to promote itself as such, particularly as what constitutes meaningful 'impact' and 'outcomes', and the ability to affect them vary from person to person (as seen in the case of artisans in this study who had differing capabilities and aspirations). This thesis has presented one way in which design can play a valuable role in the area of social development. The role of design here has been that of modeling problems to highlight the complexities and dynamic realities of the last mile of service delivery; reassessing underlying assumptions that have guided policy and research; and generating 'insights' and 'propositions' rather than 'certainties' and 'outcomes'. There is a need, therefore, to consider whether the problem solving ability of design (and designers) is best utilised in measuring outcomes rather than in understanding and building what Manzini (2007:6) called 'enabling solutions', those that help agents to achieve

¹¹⁰ See The Rockefeller Foundation (2008)

meaningful change according to their capabilities and aspirations. This study evidenced the benefits of such an enabling platform, as provided by the government in the form of a marketing space for artisans (Chapter Five). As Mcallister (2011) cautioned, ‘designers should embrace ‘scientificism’ at their own peril’. While it may help them to gain acceptance in the short term, it ‘ultimately cheapens the most important dimension of their work: the human dimension, including things like judgement, taste, and creativity’ (ibid).

(ii) Politics and the ‘way of design’

Another implication arising out of the study is that, by reframing problems and creating new understanding of the last mile of services for the poor, the ‘way of design’ can ultimately help to improve policies and outcomes in resource poor settings - somehow sidestepping or being immune to political realities in creating better understanding and outcomes. There is a tendency of optimism in design practice. A tendency to believe that user insights and co-creation can somehow miraculously lead to positive outcomes, that design can disregard the political (Singleton, 2010), that participation can lead to better ‘user-centred’ design. The belief that problems of poverty and delivering services to the poor can be fixed by ‘post-it notes’ (Fabricant, 2010) can only be deemed naive.

A case to illustrate this point is the large sum of money provided by the government to wipe off the cooperative debt (in Chapter Eight). Despite the fact that few artisans were attached to cooperatives, and few cooperatives delivered economic efficiency, the government pledged significant financial support to the cooperative. To a designer embarking on reframing problems and creating ‘social good’, the detail that the government strategy was essentially a political strategy (to win upcoming elections) may be lost. There is a need for greater reflexivity in design practice, and greater acknowledgment of the limitations of the ‘good’ design can deliver in resource-poor settings. Having stated that, what design can offer is a way of assisting genuinely interested governments and organisations in seeing the ‘wicked’ problem of delivering services to the poor in a new light.

9. 3 Limitations, further research and reflection

This study is not without its limitations. Design in the social sector is a rapidly evolving field, with new debates, literature, and conferences emerging each day. While the study has made an attempt to consider these dynamic shifts to the extent possible, it may not have given full consideration to all recent developments. In addition, while this study explored the role design can play in informing services in resource-poor contexts, it was limited to exploring artisan

services in India and particularly focused on Bandhpali village in Orissa, comprising 309 artisan households. The study did not aim to discuss or demonstrate how design can help to carry out prototypes or come up with novel solutions to existing problems. The boundaries of this study were drawn to focus on the first step that leads to those results: the step of problem framing and gaining understanding of the context.

This research would no doubt benefit from further explorations, and below I outline some of the threads that could be picked up by design researchers and practitioners. To begin with, the 'way of design' is only an initial framing. While this framing was informally reviewed¹¹¹, it may be better articulated and improved upon by the community of design practitioners and researchers¹¹². It may be further evidenced by its application in other resource-poor contexts and in cases such as health, education, sanitation and so on. Furthermore the concepts of capital and value, used in this study to deepen service design and user understanding, may be considered in other service design contexts where much current literature focuses on transactional and experiential analyses. Interview methods such as oral history could be tested in other design contexts, to assess whether they can help uncover underlying factors that shape decision-making, rather than documenting only what 'people said and felt about a service' (Chase, 2004). The study also highlighted the need to develop new methods of mapping informal services, as extant methods and literature focus on formal services.

Having outlined opportunities for other researchers to use the findings of this thesis as a basis for further exploration, I would like to conclude by reflecting on my own personal journey and how this study has helped me to connect the dots of my previous professional practice in India; to confront my values as a researcher, as a practitioner and as an agent navigating the fluid structures of life. In reflecting on my personal journey, I have been able to understand the puzzle of why the farmers and poor people I worked with in India seemingly made 'non-utility' choices. I have learnt the value of emotional design and the importance of looking beyond utilitarian design solutions that are often proposed for the poor, despite their own sense of aesthetics being supremely high in the face of their material poverty. The study has helped me to understand that there are no right or wrong solutions, there are only right or wrongly identified problems, that are framed through 'disciplinary' lenses. It has helped me to understand the importance of problem framing and given me the skills to consider a problem from many different angles and view points. It has shown me the importance and value of left

¹¹¹ The informal review was primarily amongst Design Associates at Northumbria University, and Tim Brown from IDEO.

¹¹² There is plans to develop the 'Way of Design' into a research publication.

brain thinking as well as right brain thinking and the importance of the imaginative leap, without which all analysis and synthesis remains mere data and statistics.

It has further developed my skills of visual representation and my ability to 'think visually'. I now journey map extensively! Whether while planning holidays or making a conference presentation, I am aware of the many touchpoints that I need to consider, which can be enhanced in little ways and in big ways. I have learnt the need to maintain an optimistic stance whilst stepping back to reflect and critique. Immersing myself in the dynamic realities of artisans' lives has heightened my awareness of the many contradictions, and the realisation of the imperfection of what one considers as 'truth'. Like the many patterns of an *ikat* saree truth has many shades, of which one can see and understand only a few. The real value of this research activity has been in teaching me to maintain the stance that: 'Things are not what they appear to be; nor are they otherwise' (Ancient Buddhist proverb).

Glossary

<i>Bandha</i>	tie-dye
<i>Phool doobby</i>	a tool for extra weft on the saree border
<i>Pania</i>	instrument used to separate thread
<i>ikat</i>	tie-dye
<i>anchal</i>	the decorative part/ face of the saree
<i>milan</i>	double ikat
<i>panchayat</i>	revenue village
<i>pada</i>	hamlet
<i>jhola</i>	cloth bag
<i>rumaal</i>	handkerchiefs
<i>gamcha</i>	a small towel
<i>lungis</i>	wrap around for men
<i>balloon</i>	machine-fitted yarn
<i>dungi</i>	a tool that stores weft yarn while weaving
<i>nail</i>	an instrument used to keep cloth tight while weaving
<i>Khadi</i>	handspun and handwoven fabric
<i>Swadeshi'</i>	ones own country

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APPENDIX

Appendix I: List of padas (hamlets) of Bandhpali village

Padas with Bhulia weaver residents

1. Mamchantikra
2. Rawangudatikra
3. Nua pada
4. Gand pada
5. Madhya Meher pada
6. Kanja pada
7. Jalpalia pada
8. Sahara pada
9. Tali pada
10. Bandh pada
11. Uper pada

Padas with no Bhulia weaver residents

1. Ghasia pada
2. Gauntiya pada
3. Ganda pada
4. Gosai pada
5. Taal pada

Appendix II: Research Flow Map

Research step	Activity	Sub activities	Tasks (T) & Objectives (O)	Theories/strategic link	
Survey entire village	Questionnaire design	Draft format	Cover all variables T Coding T Code book T Researcher instruction T		
		Feedback	Collect feedback T		
		Translation	Identify translator T Certify translation T		
		Print out	Printing machine (O)		
	Data collection	Pilot	Identify & interview researchers T Train Researchers T		
		Redesign questionnaire	Translation T Typesetting T Printing T		
		Full scale	Work out schedule T Files O Pen, pad, waterproof bags O		
		Photo documentation	Wide angle shots of village, weaver homes T		
	Data Analysis	Data Analysis format	Design format T Software excel/ SPSS O		
		Data entry	Do it yourself each day T Cross check and back up T		
		Data Analysis Report	Data Analysis format T Complete record of each step of analysis T Narrowing variables strategy T		
	Data Presentation	Service ecology map	Make rough maps and visual representations T	<i>Visualisation is important. Mapping connections, not just activities.</i>	
	Case study research	Case study sampling	Sampling strategy & Justification	Systematic theoretical sampling T	
		Data collection	service providers	Structured interview/ scaling? T Map the service chain (ask SP's to plot the sequence) T Information about organization structure etc T What are they providing? T Markets and constraints T Sustainability T In-depth interviews T Storyboard (space and time) T Analyse forms of capital T Blueprint (vertical and horizontal integrations) T Quality control method T Loyalty T Audio recorder, camera O	<i>Who, what, how of service.</i> <i>What are the market and artisan constraints?</i> <i>What makes business sense?</i> <i>The value of looking at design and not just politics.</i>

Research step	Activity	Sub activities	Tasks (T) & Objectives (O)	Theories/strategic link
		Artisans	<p>Which attributes are important, why? T</p> <p>Inconvenience analysis (issues and their causes) T</p> <p>Touchpoints (people, artefacts, time, activities, connections) T</p> <p>Shadowing T</p> <p>Analyse from values framework T</p> <p>Why not another system T</p> <p>Penalties for cheating T</p> <p>Five why's T</p> <p>What are the enablers? What is the value behind what is considered enabling? T</p> <p>What matters and why? T</p> <p>social benefits T</p> <p>What is needed to move up? T</p> <p>Theory of learning, skill development T</p> <p>Risk & Vulnerability T</p> <p>Physical setting, facilities T</p> <p>Choice or circumstance? T</p> <p>The health hazards T</p> <p>How does service help to build capabilities, reduce vulnerability, have efficiency and time saving? T</p> <p>Observe tangibles: loom, dye, yarn, product, household condition, time taken to weave, family</p> <p>Relationship purely professional, personal? T</p> <p>Priority matrix (what are important service attributes, plotted by artisans) T</p> <p>Power analysis T</p> <p>Loyalty T</p>	<p><i>To what extent current service design literature suitable to analyse services, especially when provided by public/ not for profit organisations</i></p> <p><i>Enablers and not experiences</i></p> <p><i>Capabilities not just income</i></p> <p><i>Values and not expectation/ gap perception</i></p> <p><i>Are certain types of artisans likely to be in certain systems</i></p> <p><i>Is the logic of being in the system rational or irrational?</i></p>
	Case analysis	Inter case analysis	<p>Map the gap in artisan/service provider understanding T</p> <p>Tensions, trade offs, constraints T</p> <p>Qualitative data analysis software O</p> <p>Codebook O</p> <p>Insight matrix (what is known, what needs to be known) T</p> <p>Motivation matrix (mapping synergies and conflicts amongst stakeholders) T</p>	<p><i>What is a good measure of 'success' in this case?</i></p> <p><i>Complexity, constraints, trade offs as design lens</i></p> <p><i>How to decide which system is good</i></p>
		Across case analysis	<p>What was considered enabling, important? T</p> <p>Variation of service offering T</p> <p>Strengths/weaknesses of each system T</p>	<p><i>Which service attributes important?</i></p> <p><i>What are the enablers?</i></p>
	Case write up/ Theory generation	Causal relationships	Fishbone diagram T	

Research step	Activity	Sub activities	Tasks (T) & Objectives (O)	Theories/strategic link
Overview facts	Expert interviews	Academics, government, older artisans, local banks		
	Maps	Village map, location map		
	Other stats	Village socio economic status, weaving in Bargarh, other blocks, spinning, markets, supply chain		
	Current policy landscape	An analysis vis a vis all stakeholders	Assumptions on which current policies are based T	
	Historical analysis	Background of service, Expert artisan interviews, Mehers, local customs, Sambalpur, Bastralay, American friends society		<i>What is the use of design lens? What are the implications? How does this compare with existing research, practice and policy?</i>
	Document Analysis	Government reports, formal, informal studies, newspaper, vernacular literature, annual reports		
	Sustainability perspective	Amount of water, pollutants, chemicals, child labour, health effects		
	Justification of choice of Orissa and Western Orissa			
Justification of choice of the village	Data to show how typical the village is in Bargarh (homogeneity)			

Appendix III: Sample Survey Form

ପଠକ ନଂ- 4
Poda Name- 180
Survey of Bandhpali village ବନ୍ଧପାଳି ଗ୍ରାମ ର ସର୍ବେକ୍ଷଣ
Beechhapada

Are you currently engaged in weaving?
 ଆପଣ ବର୍ତ୍ତମାନ ବୁଣାବୁଣା କରୁଛନ୍ତି କି ?
 Yes ହଁ No ନା

Researcher name:
 ଅନୁସନ୍ଧାନକାରୀ କ ନାମ: Siva Chatur
 Date:
 ତାରିଖ: 2/9/9
 Time:
 ସମୟ: 3.45 p.m.
 Artisan code:
 ବୁଣାକାର କୋଡ୍: 180

I. Personal Data / ବ୍ୟକ୍ତିଗତ ସୂଚନା.

1. What is your full name :
 ଆପଣଙ୍କ ପୂରା ନାମ Mr. Gajendra Gouranga Meher

2. What is your age :ଆପଣଙ୍କ ବୟସ 31 years 09937081305

3. What is your Educational qualification :ଆପଣଙ୍କ ଶିକ୍ଷାଗତ ଯୋଗ୍ୟତା କେତେ

Below Class V ପଞ୍ଚମ ଶ୍ରେଣୀ ରୁ କମ୍	<input type="checkbox"/> 131
Class V to IX ପଞ୍ଚମ ଶ୍ରେଣୀ ରୁ ନବମ	<input type="checkbox"/> 132
Class X and above ଦଶମ ଶ୍ରେଣୀ ରୁ ଉର୍ଦ୍ଧ୍ୱ	<input checked="" type="checkbox"/> 133
Graduate and above ଗ୍ରାଜୁଏଟ କିମ୍ବା ତା ଠାରୁ ଉର୍ଦ୍ଧ୍ୱ	<input type="checkbox"/> 134
Unable to read / write ଅକ୍ଷରକ୍ଷମ	<input type="checkbox"/> 135

4. Which caste do you belong to:ଆପଣଙ୍କ ର ଜାତି :

Bhuiya ଭୂଇଆ	<input checked="" type="checkbox"/> 141
SC/ST	<input type="checkbox"/> 142
OBC	<input type="checkbox"/> 143
Other ଅନ୍ୟ	<input type="checkbox"/> 144

II Family and Household/ ପରିବାରିକ ସୂଚନା

1. What is the total number of members in your family
 ଆପଣଙ୍କ ପରିବାର ମୋଟ ସଦସ୍ୟ ସଂଖ୍ୟା କେତେ ? 2

2. What is the total number of working adults in your family:
 ଆପଣଙ୍କ ପରିବାରରକାର୍ଯ୍ୟ କରୁଥିବା ବୟସ୍କ ସଦସ୍ୟଙ୍କ ସଂଖ୍ୟା କେତେ ? Adult- 2

Occupation Profile of Adult:
 ବୟସ୍କ ବ୍ୟକ୍ତିଙ୍କ ବୃତ୍ତି /

Weaving related ବୁଣାକାର ସମ୍ବନ୍ଧୀୟ	<input checked="" type="checkbox"/> 231
Daily wage work ଦୈନିକ ମଜୁରିଆ	<input type="checkbox"/> 232
Government job ସରକାରୀ ଚାକିରି	<input type="checkbox"/> 233
Other ଅନ୍ୟାନ୍ୟ	<input type="checkbox"/> 234
Ownership ନିଜସ୍ୱ	<input checked="" type="checkbox"/> 241
Lease କର	<input type="checkbox"/> 242
Landless ଭୂମିହୀନ	<input type="checkbox"/> 243

4 Land / ଜମି 1- Acre

III. Weaving / ବୟନ

1. Profile / ପରିଚୟ

1. How many years have you been in the weaving profession
 ଆପଣ କେତେ ବର୍ଷ ହେଲା ବୟନ ଶିଳ୍ପରେ ସଂପୂର୍ଣ୍ଣ ଅଛନ୍ତି ? 20 years

1

2. How would you best describe yourself currently (choose one)

ଆପଣ ନିଜର ପରିଚୟ କିପରି ଦେବେ

Independent Weaver 3121

ସ୍ୱାଧୀନ ବୁଣାକାର

Weaver working with Cooperative 3122

ସହାୟକ ସୋସାଇଟି ର ବୁଣାକାର

Name of Cooperative

ସହାୟକ ସୋସାଇଟି ନାମ

Koutaatha Acharya Bastakaya
Bardhapali

Weaver working with Master weaver

ମୁଖ୍ୟ ବୁଣାକାର ର ସହାୟକ ବୁଣାକାର 3123

Name of Master weaver

ମୁଖ୍ୟ ବୁଣାକାରଙ୍କ ନାମ

Master weaver 3124

ମୁଖ୍ୟ ବୁଣାକାର

Other ଅନ୍ୟାନ୍ୟ 3125

3. How many years have you been working in the above role

ଉପରୋକ୍ତ ପ୍ରଣାଳୀ ରେ ଆପଣ କେତେ ବର୍ଷ ହେଲା କାମ କରି ଆସୁଛନ୍ତି ?

10 years

4. Do you sometimes work with different agencies during off season and peak season

ଆପଣ କେବେ କେବେ ବଜାର ମୁଲ୍ୟ ହ୍ରାସ କିମ୍ବା ବୃଦ୍ଧି ଅନୁସାରେ ଅଲଗା ଅଲଗା ବ୍ୟକ୍ତି କିମ୍ବା

ସଂସ୍ଥା ସହିତ କାମ କରନ୍ତି କି ?

Yes ହଁ 3141

No ନା 3142

5. Which was the last agency/ person you worked with

ଏହା ପୂର୍ବ ରୁ ଆପଣ କେଉଁ କେଉଁ ସଂସ୍ଥା କିମ୍ବା ବ୍ୟକ୍ତି ସାଙ୍ଗକାମ କରୁଥିଲେ ?

Independent weaver

ସ୍ୱାଧୀନ ବୁଣାକାର

Cooperative

ସୋସାଇଟି

Name of Cooperative

ସହାୟକ ସୋସାଇଟି ର ନାମ

Master weaver

ମୁଖ୍ୟ ବୁଣାକାର

Name of Master weaver

ମୁଖ୍ୟ ବୁଣାକାର କ ନାମ

Koutaatha Acharya Bardhapali
Bastakaya at Bardhapali

2) Services (କର୍ମଗତ ସୁଚନା)

1. Who do you procure your yarn from
ସେ କିଏ ଅଟନ୍ତି , ଯାହାଙ୍କ ଠାରୁ ଆପଣ ସୂତା କିଣନ୍ତି ?

- Cooperative
Kousotha Achaya Sarmabapuri ସୋସାଇଟି 3211
- Master weaver
Bastalaya Bandhyaji ମୁଖ୍ୟ ବୁଣାକାରଙ୍କ ଠାରୁ 3212
- Village trader
ଗ୍ରାମର ଦୋକାନୀ ଠାରୁ 3213
- Merchant in Bargarh/Barpali
ବରଗଡ଼ / ବରପାଲିର ବଣିକ ଠାରୁ 3214
- Merchant outside Bargarh
ବରଗଡ଼ ଠାରୁ ବାହାରର ବଣିକ ଠାରୁ 3215

2. Who do you get design /tie and dye from ?

ଆପଣ ଡିଜାଇନ କିମ୍ବା ବାନ୍ଧ କାହା ଠାରୁ ଅଣନ୍ତି ?

- Dyer in the village
ଗ୍ରାମର ରଙ୍ଗ ବିକ୍ରେତା କ'ଣ ଠାରୁ 3221
- Self
ନିଜସ୍ୱ 3222
- Cooperative
ସୋସାଇଟି 3223
- Master weaver
ମୁଖ୍ୟ ବୁଣାକାରଙ୍କ ଠାରୁ 3224

3. If doing tie & dye yourself who do you procure dye from
ଯଦି ଆପଣ ନିଜେ ବାନ୍ଧ ତିଆରି କରୁଛନ୍ତି, ତେବେ ଆପଣ ନିମ୍ନଲିଖିତ କାହାଠାରୁ ରଙ୍ଗ କିଣନ୍ତି ?

- Cooper itive
ସୋସାଇଟି 3231
- Master Weaver
ମୁଖ୍ୟ ସହାୟକ କ'ଣ ଠାରୁ 3232
- Village Trader
ଗ୍ରାମର ଦୋକାନୀ କ'ଣ ଠାରୁ 3233
- Merchant in Bargarh/Barpali
ବରଗଡ଼ / ବରପାଲିର ବଣିକଙ୍କ ଠାରୁ 3234
- Merchant outside Bargarh
ବରଗଡ଼ ବାହାରର ବଣିକ କ'ଣ ଠାରୁ 3235

4. Where do you market finished products

ନିଜର ଉତ୍ପାଦିତ ଦ୍ରବ୍ୟ ଆପଣ କେଉଁଠାରେ ବିକ୍ରି କରନ୍ତି

- From home / in Village
ନିଜର ଘରେ / ଗ୍ରାମରେ 3241
- Haat / in town
ହାଟ / ସହରରେ 3242
- Master weaver
ମୁଖ୍ୟ ବୁଣାକାର କ'ଠାରେ 3243
- Cooperative
ସୋସାଇଟି 3244

3) Skill & Income (ନିପୁଣତା ଏବଂ ଆୟ)

1. Which type of product (s) do you weave

ଆପଣ କେଉଁ ପ୍ରକାରର ଦ୍ରବ୍ୟ ଉତ୍ପାଦନ କରନ୍ତି

- Saree
ଶାଢ଼ୀ 3311
- Running Material
ଥାନ 3312
- Bedcover
ଚାଦର 3313
- Other(plain cloth/silk)
ଅନ୍ୟାନ୍ୟ (ସାଧା ବସ୍ତ୍ର / ଶିଳକ) 3314

2. Which type of ikat do you weave

ଆପଣ କେଉଁ ପ୍ରକାରର ଶାଢ଼ୀ ବୁଣନ୍ତି ?

- Single Ikat
ବୁଣା ବାନ୍ଧ 3321
- Double Ikat
ମିଳନ ବାନ୍ଧ 3322

3. Income (ଆୟ)

For independent and contract weavers କେବଳ ସ୍ୱାଧୀନ ଓ ଠିକା ବୁଣାକାର କ'ଠା ପାଇଁ

Is your average monthly income from weaving

ଆପଣଙ୍କ ମାସିକ ହାରାହାରି ଆୟ (ବୟନ ଶିଳ୍ପ)

- below Rs.3500
ଟ. ୩୫୦୦ ରୁ କମ୍ 3331
- Rs.3500 to Rs.5000
ଟ. ୩୫୦୦ ରୁ ଟ. ୫୦୦୦ ମଧ୍ୟରେ 3332
- Rs.5000 to 10,000
ଟ. ୫୦୦୦ ଏବଂ ୧୦୦୦୦ 3333
- above 10,000
୧୦୦୦୦ ରୁ ଉର୍ଦ୍ଧ୍ୱ 3334

For Master weaver ମୁଖ୍ୟ ବୁଣାକାର କ'ଠା ପାଇଁ

Is your average monthly turnover from weaving

ବୟନ ଶିଳ୍ପ ରୁ ଆପଣଙ୍କ ହାରାହାରି ମାସିକ ବିକ୍ରି:

- Below Rs.25,000
ଟ ୨୫,୦୦୦ ରୁ କମ୍ 3335
- Rs.25,000 to 50,000
ଟ. ୨୫,୦୦୦ ରୁ ୫୦,୦୦୦ ମଧ୍ୟରେ 3336
- Rs.50,000 to 100,000
ଟ. ୫୦,୦୦୦ ରୁ ୧୦୦,୦୦୦ ମଧ୍ୟରେ 3337

4. Have you ever undergone any training or exposure visit either through government or private organisation

ଆପଣ କେବେ କୌଣସି ସରକାରୀ କିମ୍ବା ବେସରକାରୀ ସଂସ୍ଥା ଠାରୁ କୌଣସି ତାଲିମ ପାଇଛନ୍ତି କି ?

Yes ହଁ

3341

No ନାଁ

3342

Any other comments / observations

ଅନ୍ୟାନ୍ୟ ମନ୍ତବ୍ୟ / ଲକ୍ଷ୍ୟ

Mr. Gajendra Gouraga Meher କହିଲେ ଯେ 'Government' ଉତ୍ପାଦନ କରୁଥିବା Meher Astarat Coat Weaving Centre ରେ ଏକ ଡି ମୋଡ୍ ଫେଜିଙ୍ଗ୍ କରିଥିଲେ ଛାତ୍ରୀର ନାମ ଥିଲା -
 Jaquard Weaving : କାଢ଼ା ଉପରେ Jacquard ଫେଜିଙ୍ଗ୍ ପ୍ରୋଗ୍ରାମ୍ ଲାଞ୍ଚ କରିଥିଲେ ।

ଠିକ୍ ସମୟରେ ଉପରା ପାଠ୍ୟ ପଢ଼ିବା ପରେ ଉତ୍ପାଦନ କରୁଥିବା ଉତ୍ପାଦନ କେନ୍ଦ୍ରରେ ଏକ ଡି ମୋଡ୍ ଫେଜିଙ୍ଗ୍ ଲାଞ୍ଚ କରିଥିଲେ । ଉତ୍ପାଦନ କରୁଥିବା ଉତ୍ପାଦନ କେନ୍ଦ୍ରରେ 'Cooperative' ର ଶାଢ଼ୀ ଉତ୍ପାଦନ କରିଥିଲେ ।

8/4/19
 Researcher Sign
 ଅନୁସନ୍ଧାନକାରୀଙ୍କ ଦସ୍ତଖତ

Appendix IV: Field Manual for Pilot Survey Researchers

Pilot Survey guidelines

A pilot survey is carried out to test the questionnaire design for its suitability, validity and reliability.

Please follow the steps below while conducting a pilot survey

1. Introduce yourself

Introductory script.

Namaste. My name is so and so. I am part of a research team led by a student from UK university. We are conducting a survey of weavers from Bandhpali village. Would you be willing to participate in a short survey that will take approximately 15 minutes. Your response to the survey questionnaire will be treated with confidentiality.

If yes, proceed for interview. If no, ask whether you can come back when the person is less busy. Take an appointment and make note of it in your diary. If the person still says no, please make a note of their full name and their pada name in the survey form

2. Read each question clearly and carefully. Do not read out the answers. If the answer they give is present in the form, please tick the correct answer. In case the answer is not included in the survey form, please make a note of the answer given.

3. At the end of each interview, please ask the respondents feedback on the questionnaire on the following:

- i) If the meaning of each question was clear.
- ii) If they found any questions confusing or difficult to answer.
- iii) If the sequence and timing of questions was appropriate

Please record the respondent comments as it is. Do not add your own comments or impressions.

4. Please thank the respondent for their time.

How to conduct the survey (do's and donts)

1. Ask only one question at a time.
2. Ask questions in a clear, standardized and concise manner.
3. Please keep the survey form carefully. Do not bend, fold or wet the form.
4. Please write in clear, legible handwriting.
5. Please tick only one option for each of the questions.

Interviewer skills

6. Be a good listener. Talk less.
7. Build rapport with the interviewee. Guide them through the questionnaire. Record answers carefully.
8. Dress in clean simple clothes.
9. Always carry pen, pad, file and waterproof folder.
10. Keep your phone switched off or in silent mode. Do not answer your phone in the middle of an interview.

Appendix V: List of Artisans Surveyed in Bandhpali Village

Survey code no.	Artisan name	Pada name
001	Yogeshwar Panika Meher	Mamchan Tikra
002	Baikuntha Duryodhan Meher	Nua Pada
003	Harakrushna Dula Meher	Mamchan Tikra
004	Ramesh Makardhwaj Meher	Mamchan Tikra
005	Harihara Babaji Meher	Mamchan Tikra
006	Radheshyam Nilambar Meher	Mamchan Tikra
007	Jogeshwar Dhabar Meher	Mamchan Tikra
008	JKishor Sashi Meher	Mamchan Tikra
009	Dukhasana Meher	Nua Pada
010	Jayakrushna Duryodhan Meher	Nua Pada
011	Mayadhar Mitrabhanu Meher	Mamchan Tikra
012	Laxman Banka Meher	Tali Pada
013	Linga Mitu Meher	Nua Pada
014	Jitendriya Rameshwar Meher	Tali Pada
015	Madhaba Kshymanidhi Meher	Rawanguda Tikra
016	Maharagi Meher	Madhya Meher Pada
017	Lambodara Karunakara Meher	Nua Pada
018	Bideshee Kartika Meher	Mamchan Tikra
019	Jashobanta Ramadhana Meher	Nua Pada
020	Arjun Tikeshwar Meher	Mamchan Tikra
021	Jitendra Meher	Mamchan Tikra
022	Tejaraja Thabira Meher	Mamchan Tikra
023	Subhashchandra Meher	Nua Pada
024	Loknath Meher	Mamchan Tikra
025	Murali Kunjbehari Meher	Mamchan Tikra
026	Sushila Meher	Mamchan Tikra
027	Satyanarayana Mohan Meher	Mamchan Tikra
028	Phakira Meher	Mamchan Tikra
029	Bhageerath Ramadhana Meher	Mamchan Tikra
030	Madhu Meher	Mamchan Tikra
031	Khemasagar Meher	Mamchan Tikra
032	Chandramani Meher	Mamchan Tikra
033	Damodar Meher	Nua Pada
034	Karunakara Meher	Nua Pada
035	Goutam Meher	Mamchan Tikra
036	Debendra Meher	Mamchan Tikra
037	Benju Meher	Mamchan Tikra
038	Basudeva Meher	Mamchan Tikra
039	Sahadev Meher	Mamchan Tikra
040	Sheshadev Meher	Mamchan Tikra
041	Bhagyaban Meher	Mamchan Tikra
042	Gananath Meher	Mamchan Tikra
043	Chaitanya Meher	Nua Pada
044	Kamal Kangalu Meher	Nua Pada

Survey code no.	Artisan name	Pada name
045	Tulsiram Kshymanidhi Meher	Rawanguda Tikra
046	Baisnaba Dala Meher	Rawanguda Tikra
047	Jogeshwar Khyamanidhi Meher	Rawanguda Tikra
048	Hiradhar Meher	Nua Pada
049	Dhaneshwar Kartika Meher	Rawanguda Tikra
050	Baisnaba Trivanu Meher	Rawanguda Tikra
051	Indra Trivanu Meher	Rawanguda Tikra
052	Biranchi Indra Meher	Rawanguda Tikra
053	Jaidev Premraj Meher	Rawanguda Tikra
054	Madhusudhan Premraj Meher	Rawanguda Tikra
055	Birabanu Jana Meher	Rawanguda Tikra
056	Durjodhan Meher	Nua Pada
057	Bipin Tankadar Meher	Nua Pada
058	Tankadar Rameshwar Meher	Nua Pada
059	Jogeshwar Bichitra Meher	Mamchan Tikra
060	Hrushikesh Bichitra Meher	Mamchan Tikra
061	Chaitanya Pabitra Meher	Rawanguda Tikra
062	Mohan Pabitra Meher	Mamchan Tikra
063	Ghanaswam Bibisan Meher	Mamchan Tikra
064	Ramesh Bibisan Meher	Mamchan Tikra
065	Abhimanyu Kailas Meher	Mamchan Tikra
066	Naren Kailas Meher	Mamchan Tikra
067	Digambar Indrajit Meher	Mamchan Tikra
068	Gananatha Indrajit Meher	Mamchan Tikra
069	Dharmaraj Indrajit Meher	Mamchan Tikra
070	Sreebacha Umakanta Meher	Mamchan Tikra
071	Nrupa Meher	Mamchan Tikra
072	Gopal Meher	Mamchan Tikra
073	Kirtan Meher	Mamchan Tikra
074	Manaranjan Meher	Mamchan Tikra
075	Trilochan Meher	Mamchan Tikra
076	Loknath Meher	Mamchan Tikra
077	Pushkara Meher	Rawanguda Tikra
078	Gajapati Meher	Rawanguda Tikra
079	Rekha Chand Meher	Rawanguda Tikra
080	Durbala Meher	Rawanguda Tikra
081	Ghanshyam Meher	Rawanguda Tikra
082	Chatura Meher	Rawanguda Tikra
083	Hare Krushna Meher	Mamchan Tikra
084	Gunanidhi Meher	Rawanguda Tikra
085	Gunanga Meher	Rawanguda Tikra
086	Mangam Meher	Nua Pada
087	Dolamani Meher	Nua Pada
088	Ramesh meher	Nua Pada
089	Sanju Meher	Nua Pada
090	Kamala Meher	Nua Pada
091	Jhosketan meher	Nua Pada

Survey code no.	Artisan name	Pada name
092	Gangaram meher	Mamchan Tikra
093	Balsita Bhima Meher	Nua Pada
094	Bhakadareem Nrupa Meher	Mamchan Tikra
095	Chabila Nrupa Meher	Mamchan Tikra
096	Tikeshwar Panika Meher	Mamchan Tikra
097	Dinabandhu Mangan Meher	Nua Pada
098	Taleswar Meher	Mamchan Tikra
099	Kalia Meher	Nua Pada
100	Chandra Meher	Nua Pada
101	Kailash Meher	Mamchan Tikra
102	Tarani Meher	Mamchan Tikra
103	Rudra Pratap Meher	Nua Pada
104	Tesaraj Meher	Mamchan Tikra
105	Subhash Meher	Nua Pada
106	Laba Haribala Meher	Madhya Meher Pada
107	Chaturbhuj Sara Meher	Madhya Meher Pada
108	Balaram Bhibisan Meher	Madhya Meher Pada
109	Nilakara Bhibisan Meher	Madhya Meher Pada
110	Binod Rama Meher	Madhya Meher Pada
111	Gopal Kalakanhu Meher	Madhya Meher Pada
112	Rohita Tankadhar Meher	Madhya Meher Pada
113	Purnachandra Tankadhar Meher	Madhya Meher Pada
114	Radheshyam Tankadhar Meher	Madhya Meher Pada
115	Debaraja Tankadara Meher	Kanja Pada
116	Jayaram Dingar Meher	Uper Pada
117	Basanta Parsuram Meher	Jalpalia Pada
118	Gourahari Mangan Meher	Uper Pada
119	Yudhisthir Khirodra Meher	Uper Pada
120	Jayadratha Hemsagar Meher	Jalpalia Pada
121	Rabindra Hemsagar Meher	Jalpalia Pada
122	Khageshwar Mangan Meher	Uper Pada
123	Tulsiram Khetri Meher	Madhya Meher Pada
124	Pramod Meher	Nua Pada
125	Dhananjaya Meher	Uper Pada
126	Premananda Meher	Uper Pada
127	Jhosketan Meher	Uper Pada
128	Numjaya Meher	Uper Pada
129	Lakshmi Prasad Meher	Uper Pada
130	Chandrumani Meher	Kanja Pada
131	Sundar Meher	Jalpalia Pada
132	Bishnu Meher	Madhya Meher Pada
133	Aniruddha Meher	Jalpalia Pada
134	Ramesh Kumar Meher	Jalpalia Pada
135	Kshetri Meher	Madhya Meher Pada
136	Krushnachandra Meher	Madhya Meher Pada
137	Gyanasindhu Meher	Madhya Meher Pada

Survey code no.	Artisan name	Pada name
138	Bhagbati Meher	Madhya Meher Pada
139	Jayakumar Meher	Madhya Meher Pada
140	Lalit Meher	Madhya Meher Pada
141	Kishor Meher	Madhya Meher Pada
142	Raju Meher	Madhya Meher Pada
143	Sundarmani Meher	Madhya Meher Pada
144	Akhya Meher	Madhya Meher Pada
145	Kartika Meher	Uper Pada
146	Pankaja Meher	Uper Pada
147	Pradeep Meher	Kanja Pada
148	Nabin Kumar Meher	Jalpalia Pada
149	Jayadev Meher	Kanja Pada
150	Dayanidhi Meher	Madhya Meher Pada
151	Trilochan Meher	Madhya Meher Pada
152	Bhika Meher	Madhya Meher Pada
153	Sahadev Meher	Uper Pada
154	Madhusudhan Meher	Madhya Meher Pada
155	Fakira Shankaru Meher	Tali Pada
156	Baram Manuram Meher	Tali Pada
157	Dhuba Chola Meher	Tali Pada
158	Nata Bastam Meher	Tali Pada
159	Ghanshyam Manuram Meher	Tali Pada
160	Kuber Lamodara Meher	Tali Pada
161	Ghasia Chala Meher	Tali Pada
162	Hadu Dolamani Meher	Tali Pada
163	Tosabanta Jageshwar Meher	Tali Pada
164	Maluram Hogeshwar Meher	Tali Pada
165	Sudeshi Jogeshwar Meher	Tali Pada
166	Ganesh Markanda Meher	Tali Pada
167	Baram Maluram Meher	Tali Pada
168	Jhasketan Duba Meher	Tali Pada
169	Debarcharan Dhuba Meher	Tali Pada
170	Kuber Khema Meher	Tali Pada
171	Rajendra Kirtan Meher	Tali Pada
172	Andharu Purna Meher	Tali Pada
173	Padmalochan Sankar Meher	Tali Pada
174	Lokanath Umakanta Meher	Tali Pada
175	Raghumani Kritan Meher	Tali Pada
176	Baikuntha Pumakanta Meher	Tali Pada
177	Ramesh Duba Meher	Tali Pada
178	Adhikari Ranjet Meher	Sahara Pada
179	Bhakta Andharu Meher	Bandhpada
180	Gajendra Meher	Bandhpada
181	Loknath Meher	Bandhpada
182	Balmukund Kunjbehari Meher	Bandhpada
183	Dependra Bhibisan Meher	Bandhpada
184	Narayana Kartika Meher	Bandhpada

Survey code no.	Artisan name	Pada name
185	Subhash Narayana Meher	Bandhpada
186	Manohar Gopal Meher	Bandhpada
187	Punadhar Ramdhar Meher	Bandhpada
188	Soharam Murti Meher	Bandhpada
189	Kaila Bhibisan Meher	Bandhpada
190	Narahari Khymanidhi Meher	Bandhpada
191	Parmeshwar Kartika Meher	Bandhpada
192	Ranjit Daitari Meher	Bandhpada
193	Dhana Ghansi Meher	Bandhpada
194	Tulsiram Meher	Bandhpada
195	Giridhari Gouranga Meher	Bandhpada
196	Sarjan Bhagbana Meher	Gaur Pada
197	Dactor Meher	Gaur Pada
198	Purusottam Dolamani Meher	Gaur Pada
199	Sudham Dharmu Meher	Gand Pada
200	Pitavasa Haribula Meher	Gand Pada
201	Brundhbana Dhanu Meher	Gand Pada
202	Pandava Umakanta Meher	Gand Pada
203	Manoranjan Fakira Meher	Gand Pada
204	Miniketan Dhingra Meher	Gand pada
205	Abhimanyu Cheleram Meher	Uper Pada
206	Bhedeshwar Cheleram Meher	Uper Pada
207	Gautam Cheleram Meher	Uper Pada
208	Raghunath Dileshwar Meher	Uper Pada
209	Dasrath Meher	Uper Pada
210	Arabinda Meher	Uper Pada
211	Ramesh Chandra Meher	Uper Pada
212	Radhakanta eher	Uper Pada
213	Dibakara Meher	Uper Pada
214	Judhisthir Meher	Uper Pada
215	Gulabati Meher	Uper Pada
216	Ramakanta Meher	Uper Pada
217	Dambaru Meher	Uper Pada
218	Ramakanta Meher	Uper Pada
219	Dambaru Meher	Uper Pada
220	Pitambara Meher	Madhya Meher Pada
221	Bhubaneshwar Meher	Madhya Meher Pada
222	Chaitanya Meher	Madhya Meher Pada
223	Purna Meher	Madhya Meher Pada
224	Rama Meher	Madhya Meher Pada
225	Rajkumari Meher	Madhya Meher Pada
226	Antaryami Meher	Uper Pada
227	Tekara Meher	Kanja Pada
228	Judhisthir Meher	Gand Pada
229	Krushna Chandra Meher	Uper Pada
230	Parameshwar Meher	Uper Pada
231	Shatrughan Nepal Meher	Uper Pada

Survey code no.	Artisan name	Pada name
232	Dhaneshwar Haldhar Meher	Uper Pada
233	Gunamanj Mahasan Meher	Uper Pada
234	Gurudev Haldhar Meher	Uper Pada
235	Bharat Nepal Meher	Uper Pada
236	Baidya Parameshwar Meher	Uper Pada
237	Pitambar Dingar Meher	Uper Pada
238	Jairath Dileshwar Meher	Uper Pada
239	Jaykrushna Ganda Meher	Uper Pada
240	Keshaba Manu Meher	Madhya Meher Pada
241	Chakradhar Arsan Meher	Uper Pada
242	Saroj Jay Krushna Meher	Uper Pada
243	Gopal Tulsiram Meher	Uper Pada
244	Jayakishore Tulsiram Mher	Uper Pada
245	Motilal Ganda Meher	Uper Pada
246	Kedarnath Kulamani Meher	Madhya Meher Pada
247	Chitrasen Meher	Jalpalia Pada
248	Kanhu Meher	Madhya Meher Pada
249	Baidyanath Rama Meher	Madhya Meher Pada
250	Tengu Rama Meher	Madhya Meher Pada
251	Bijaya Santosh Meher	Madhya Meher Pada
252	Siba Samaru Meher	Madhya Meher Pada
253	Surendra Khunchu Meher	Madhya Meher Pada
254	Ninketan Samitri Meher	Madhya Meher Pada
255	Ambika Manu Meher	Madhya Meher Pada
256	Yudhisthir Mahabir Meher	Madhya Meher Pada
257	Ramesh Bhimasen Meher	Madhya Meher Pada
258	Sukru Dukala Meher	Madhya Meher Pada
259	Surubabu Dukala Meher	Madhya Meher Pada
260	Birendra Dhananjaya Meher	Madhya Meher Pada
261	Rankamani Fakira Meher	Madhya Meher Pada
262	Ghanshyam Duryodhan meher	Madhya Meher Pada
263	Baidehi Meher	Nua Pada
264	Rusubha Balaram Meher	Ganda Pada
265	Jibardhan Nata Meher	Tali Pada
266	Sriram Dambodara Meher	Nua Pada
267	Madhu Dola Meher	Nua Pada
268	Bina Dataram Meher	Nua Pada
269	Ankit Sitaram Meher	Jalpalia Pada
270	Shankar Budha Sahu	Tali Pada
271	Lakshapati Ganda Meher	Tali Pada
272	Narayana Dayanidhi Meher	Nua Pada
273	Ramakrushna Dambaru Meher	Nua Pada
274	Gopala Debiri Meher	Tali Pada
275	Madhabee Sananda Meher	Jalpalia Pada
276	Mituram Narayana Meher	Nua Pada
277	Bidesi Jogeshwar Meher	Tali Pada
278	Goutam Arkhit Meher	Tali Pada

Survey code no.	Artisan name	Pada name
279	Subhas Goutam Meher	Tali Pada
280	Chakradhara Lambodhar Meher	Tali Pada
281	Fakira Karunakara Meher	Tali Pada
282	Sesadev Kirtan Meher	Nua Pada
283	Niranjan Samtu Meher	Nua Pada
284	Manoranjan Dananjaya Meher	Nua Pada
285	Purna Dula Meher	Nua Pada
286	Hemsagar Santu Meher	Nua Pada
287	Gairisankar Mahajan Meher	Nua Pada
288	Santos Sankara Meher	Nua Pada
289	Ghanaswam Karunakar Meher	Nua Pada
290	Baisakhu Gurbaria Meher	Nua Pada
291	Radheswam Rusba Meher	Nua Pada
292	Harihara Barja Meher	Nua Pada
293	Dolamani Meher	Nua Pada
294	Sundar Meher	Nua Pada
295	Ajit Meher	Nua Pada
296	Laxmikanta Meher	Nua Pada
297	Jadhava Meher	Nua Pada
298	Anu Meher	Nua Pada
299	Manu meher	Nua Pada
300	Sahadev Meher	Nua Pada
301	Laba Meher	Nua Pada
302	Ghana Soumitri Meher	Madhya Meher Pada
303	Lokanath Dolamani Meher	Madhya Meher Pada
304	Chudamani Makardhwaj Meher	Madhya Meher Pada
305	Himadri Makardhwaja Meher	Madhya Meher Pada
306	Kalakanda Vastaba Meher	Madhya Meher Pada
307	Bipin Kabira Meher	Madhya Meher Pada
308	Tumesh Pitambar Meher	Madhya Meher Pada
309	Pradeep Meher	Kanja Pada

Appendix VI: Qualitative Questionnaires for Oral History interviews

A. Questionnaire for Contract Weavers

Introduce yourself. Take permission to record & consent to use the information for research purposes.

1. *Personal*

When and how long ago did they start weaving?
Who did they learn from? Who were their various teachers? Any snapshot of personal recollection or inspiration?

2. *Map touchpoints*

Mapping the touchpoints (people, artefact, activities and time taken)
Who does what in the house? How many hours are spent on each act?
What materials are needed and where are they procured from?

3. *Quality of materials working with and physical infrastructure*

What type of yarn and dye do you use?
Forms of capital: natural (water, wood) where do you get this from?
physical (phone, transport, shelter, weaving technology)
how has technology helped (for example mobile phone) Have you used any new weaving technology?
Have you had to make any innovations or adaptations?

4. *Design skills*

Do you design yourself?
Tell us more about the saree you are weaving, what is special about it?
How often do you make a new design?
How many motifs are you familiar with?
Where did you learn to make double *ikat*?

5. *Service provider*

Who do you work with? How long ago have you been working with them?
Why have you chosen to work in this particular fashion or with this particular person?
What is it like to work with them? How do you communicate and meet? Do you get any additional rewards if you do well? What type of disincentives do you face for non-compliance? Tell us some typical scenarios of interactions.
How reliable and responsive are the service providers? For example do they provide consistent type of raw material in timely fashion or does it tend to vary?
How many days in a year do you get employment from this person or agency?
How do you get paid? Do you get any other type of financial assistance ?
Did you work with anyone else previously? Why did you stop working with them? Have you ever consider working with someone else or in another system?

6. *Finance*

What investments have you had to make so far? What investments do you routinely have to make?

7. *Risks and vulnerability*

What type of risks are involved in your work?

8. *Market and networks*

Do you know where your products are marketed?

What type of markets have you been to?

Do you interact with other weavers? Are you member of any group or organization?

9. *Aspiration and future*

How has the status of the weaver changed in the last few years?

What is your idea of a successful weaver. What contributes to this?

What would you like to be able to be or do in the future? What are some of the main constraints in taking this next step?

Given a choice would you prefer to be a weaver or do something else?

What profession would you like your children to take up?

Do you have any questions for me?

Observe: Behaviour, belief, knowledge, attitudes and attributes

B. Questionnaire for Cooperative Weavers

Introduce yourself. Take permission to record & consent to use the information for research purposes.

1. *Personal*

When and how long ago did they start weaving?

Who did they learn from? Who were their various teachers? Any snapshot of personal recollection or inspiration?

2. *Map touchpoints*

Mapping the touchpoints (people, artefact, activities and time taken)

Who does what in the house? How many hours are spent on each act?

What materials are needed and where are they procured from?

3. *Quality of materials working with and physical infrastructure*

What type of yarn and dye do you use?

Forms of capital: natural (water, wood) where do you get this from?

physical (phone, transport, shelter, weaving technology)

how has technology helped (for example mobile phone) Have you used any new weaving technology?

Have you had to make any innovations or adaptations?

4. *Design skills*

Do you design yourself?

Tell us more about the saree you are weaving, what is special about it?

How often do you make a new design?

How many motifs are you familiar with?

Where did you learn to make double *ikat*?

5. *Service provider*

Who do you work with? How long ago have you been working with them?

Why have you chosen to work in this particular fashion or with this particular person?

What is it like to work with them? How do you communicate and meet? Do you get any additional rewards if you do well? What type of disincentives do you face for non-compliance? Tell us some typical scenarios of interactions.

How reliable and responsive are the service providers? For example do they provide consistent type of raw material in timely fashion or does it tend to vary?

How many days in a year do you get employment from this person or agency?

How do you get paid? Do you get any other type of financial assistance ?

Did you work with anyone else previously? Why did you stop working with them? Have you ever consider working with someone else or in another system?

6. *Finance*

What investments have you had to make so far? What investments do you routinely have to make?

7. *Risks and vulnerability*

What type of risks are involved in your work?

8. *Market and networks*

Do you know where your products are marketed?

What type of markets have you been to?

Do you interact with other weavers? Are you member of any group or organization?

9. *Aspiration and future*

How has the status of the weaver changed in the last few years?

What is your idea of a successful weaver. What contributes to this?

What would you like to be able to be or do in the future? What are some of the main constraints in taking this next step?

Given a choice would you prefer to be a weaver or do something else?

What profession would you like your children to take up?

Do you have any questions for me?

Observe: Behaviour, belief, knowledge, attitudes and attributes

C. Questionnaire for Independent Weavers

Introduce yourself. Take permission to record & consent to use the information for research purposes.

1. Personal

When and how long ago did you start weaving?

Who did you learn from? Who were your various teachers?

What did your father do? How many brothers and sisters do you have? When did you start your own work?

2. Inventory and finance

Where do you buy your raw material (yarn, dye) from? Why do you buy from this particular supplier and?

How often do you buy?

What is the typical quantity you procure at a time?

What are the terms of purchase (discount, credit)

How do you finance your operation?

3. Design and production

What happens once you get the yarn? Describe the step by step activities.

Who does what? What is done at home and what is outsourced?

What type of sarees do you make?

Do you get the design from someone or do you make your own design?

How many designs has you made so far? How often do you change the design?

Apart from manufacturing do you also directly purchase sarees made by the weaver?

What kind of quality control measures do you have?

Do you know about new weaving technologies? Have you ever have or thought of experimenting with these? How have things changed since the mobile phone?

4. Markets

What kind of people usually buy your products? Where are they located?

What kind of products do they prefer to buy?

Is it a retail or wholesale sale? Do you know where and at what price it is marketed further?

Do you have more of a regular clientele or do you get new clientele each time?

How do you commute/communicate and contact?

How do you cope with competition?

What are some of the typical problems you face when you are marketing? (describe some incident/scenarios)

What is the maximum amount of stock you have ever have to keep or can keep & for how long?

What kind of risks does he feel are associated with the business?

How do you feel the market has changed since the time you started working?

Has recession had any impact on his business?

6. Networks

Have you ever been to any formal/ informal training? What other markets, places have you visited?

Are you a member of any group/ network?

Do you ever visit or meet with any government officers?

7. Aspiration and future

What would you like to be able to be/do in the future? What are some of the main constraints in taking this next step.

Given a choice would you prefer to be a weaver or do something else?

What profession would you like your children to take up?

D. Questionnaire for Master Weavers

Introduce yourself. Take permission to record & consent to use the information for research purposes.

1. Personal

When and how long ago did you start weaving?

Who did you learn from? Who were your various teachers?

What did your father do? How many brothers and sisters do you have? When did you start your own work?

2. Inventory and finance

Where do you buy your raw material (yarn, dye) from? Why do you buy from this particular supplier and?

How often do you buy?

What is the typical quantity you procure at a time?

What are the terms of purchase (discount, credit)

How do you finance your operation?

3. Design and production

What happens once you get the yarn? Describe the step by step activities.

Who does what? What is done at home and what is outsourced?

What type of sarees do you make?

Does he get the design from someone or does he make his own design?

Do weavers sometimes make their own design or does he always give them a design?

How many designs has he made so far? How often do you change the design?

Apart from manufacturing do you also directly purchase sarees made by the weaver?

What kind of quality control measures do you have?

Do you know about new weaving technologies? Have you ever have or thought of experimenting with these? How have things changed since the mobile phone?

4. Weavers

How many people do you provide employment to?

What is your criteria to employ them?

How do you ensure loyalty?

What are some of the most common problems you face with them?

On what basis would you stop working with them?

Are the weaver wages uniform regardless of the market conditions?

How do you determine the wages of a particular saree (forward or backward)?

Do you pay the weaver before or after the sale?

Do you think the weavers get a fair price for their work? Do you think this can be improved and how?

5. Markets

What kind of people usually buy your products? Where are they located?

What kind of products do they prefer to buy?

Is it a retail or wholesale sale? Do you know where and at what price it is marketed further?

Do you have more of a regular clientele or do you get new clientele each time?

How do you commute/communicate and contact?

How do you cope with competition?

What are some of the typical problems you face when you are marketing? (describe some incident/scenarios)
What is the maximum amount of stock you have ever have to keep or can keep and for how long?
What kind of risks does he feel are associated with the business?
How do you feel the market has changed since the time you started working?
Has recession had any impact on his business?

6. Networks

Have you ever been to any formal/ informal training? What other markets, places have you visited?
Is he a member of any group/ network?
Does he ever visit or meet with any government officers?

7. Aspiration and future

What would you like to be able to be/do in the future? What are some of the main constraints in taking this next step.
Given a choice would you prefer to be a weaver or do something else?
What profession would you like your children to take up?

E. Questionnaire for Cooperative Manager

Introduce yourself. Take permission to record & consent to use the information for research purposes.

1. Personal

How long have you been working with the Bastralaya?
How did you join?
Did you ever weave? Where did you learn?

2. About the office

When was this office established?
Who established it?
How was it established?
How many villages/members does this office cater to?
How many people work in this office?
How many such other offices are there?
What is your precise role?
How often do you go to the head office?
Who do you report to? How frequently does your boss visit?

3. Members

How many members were there at the time of establishment?
How many members are there now?
How many are active?
How does one become a member?
How many new members have you made in the last 1-3 years?
What are the benefits of being a member?
Why do you think there are not more active members?

4. Weaver interactions

What is the process of yarn delivery to the office and from the office?
Do you also provide dye/coloured yarn?
What about design?
What are some of the typical problems you face with the weavers?
How do you resolve them?
What do you do when a weaver asks for a loan?

Market

How often does the market trend change?
How does it affect weaving?
Have you ever seen any markets outside?
How does the external environment impact them? (government policies)

Observation of records

Newspaper clippings and articles
Other weaver records
Photographs
Meetings register
Annual reports
Notices

F. Questionnaire for Yarn Traders

1. *Personal*

How long have they been residing in this village? Is this their ancestral village?
What did their father do?
Do they remember any stories from that time about their ancestors?

2. *Yarn history*

Considering Orissa is not a cotton producing state, how do they think the weaving industry started here?
Where did people get yarn in the earlier days?
how and why do they think the yarn count got finer?
How and why did the saree length, designs change?

3. *Their occupation*

How and when did they first start this business?
What else was in the market at the time? How did they position themselves?
What initial difficulties did they face when they started the business?
What was their core value proposition?
How were they different to the Marwaris?
What did they do earlier?

4. *Yarn procurement*

What types of yarns do they buy?
Where do they buy from? Traders, mills?
Which are some of the best and worst mills according to them?
Do they buy anything from the spinning mills in Orissa?
How did they find out about these suppliers?
How often do they purchase?
What is the volume they purchase at a time?
Has the quantity of yarn purchased by them increased/decreased over a period of time.
Why?
What is the mode or terms of purchase?
How is it shipped?
What do they do once they receive it? What quality control measures do they have?

4. *Relationship with weavers*

How many villages do they cater to?
How many weavers do they cater to?
What proportion are regular customers?
Do weavers ask for particular yarn companies or quality or they buy whatever is recommended by them?
What terms do they offer?
If they give credit? For how long? What is the repayment rate? Any credit rate (how do they finance their operations)
Do they keep uniform prices or change with the market ups and downs?
What are some of the other typical problems they face on the supplier and customer end?
What is their exchange or return policy?

5. Policy interventions and future

What have been some of the critical government policies, events to date that have affected them majorly in positive or negative manner?

Who is their current competition (for example government yarn banks)? How do they deal with competition?

What kind of policy measures would help them and weavers?

Any other thoughts or comments

Appendix VII: Contact Summary Sheet

Interview code: BM06
Contact name: Balmukund Kujbehar Meher
Pada name: Bandhpada

Site: Home
Date: 30.9.09
Time: 3.30pm

Name and description of family members

Balmukund is almost 60 years old and has been working with the Bastralaya cooperative for almost 30 years. He has 5 sons. His eldest son is married. He has 2 looms. The 4 sons work on 2 looms and he along with one more son does the *bandha* and other preparatory work.

1. What were the main issues or themes that struck you in this contact?

There are quite a few advantages of weaving with the cooperative:

One has to save compulsorily and when one needs a loan, one can withdraw from one's savings instead of taking a loan from someone else.

Balmukund's skills seemed to have been enhanced as a result of working with the cooperative. For example he mentioned the fact that initially he was not able to make the *bandha* for the cooperative design, but when he made the Annapurna saree, he started making the *bandha*, after which he made it for all the subsequent sarees. The design also seems to change every one or two years unlike say with the independent weaver. He had not been to any training or exposure through the cooperative. He does not make his own design, but gets it from the Bastralaya

The cooperative members had also received other weaving materials such as *phool doobby*, *pania* etc. The bonus or commission upon doing a certain amount of work each year (above Rs. 40,000) for example is also an added attraction.

According to Balmukund as he was the only man in the house when his kids were very young, if he ran around to buy raw material or sell sarees, his time away from the loom cost him dearly. With the cooperative one can go and deposit the saree immediately and get wages. There is no need to run around to do other things and one can concentrate on weaving.

That with finer count you can tie and dye for many sarees at once. It is less physically tiring than weaving with 40/60 or 80 count. It takes more time to weave, one can make more intricate design and earn more. That over time people changed their taste from heavier to lighter sarees.

2. Summarize the information you got (or failed to get) on each of the target questions you had for this contact.

Bastralaya introduced designs in this region.

3. Anything else that struck you as salient, interesting, illuminating or important in this contact?

Balmukund was a bit hard of hearing, despite which he spoke for nearly 1.5 hours.

He desperately tried to hunt for his first passbook, perhaps indicates that he was still deeply attached.

4. What new (or remaining) target questions do you have in considering the next contact with this site?

Need to check his production from the cooperative record. He said he made one saree on one loom in eight days.

How much yarn does he get from the cooperative? How frequently?

Photograph of sarees, passbook etc.

Meet with grandson of Kruthartha acharya. When and how did the Bastralaya become government co-owned, managed.

Where do they presently get colour from? When did this change? Is there any difference in the colour?

What happens when there is non-compliance? How often has it happened to him?

When and how did he learn double *ikat*?

When did he get his second loom and how much did he have to invest? Where did he get the money from? Who does he go to for repairs?

Names of family members. Whether they are weaving out of choice or in the absence of other opportunities.

Do his other sons know how to tie-dye?

Appendix VIII: Transcription Style Guide

	Information	Style
Metadata	Setup	Top of page 1. Bold, centred (Name of interviewee, interviewed by, date, duration, transcript code)
	Paging	Repeat transcript code on each page. Header left
	Interviewer	Initials (ID)
	Interviewee	IP
Layout	Page no.	Footer 'page x of y'
	Font	Times New Roman 12
	Margin	Left 2
		Right 5
	Text justification	Align left
	Line spacing	Single spacing within speaker's turn. Double spacing between speakers
End of recording	Mark as end of recording	
Transcribing spoken word	Hesitation/ cough/ unnecessary word repetition	Omit
	Spelling	Conventional
	Interpunctuation	Conventional
	Pauses	'...' no space before. Space at the end before next letter. Lower case for continuation of words. Upper case for new sentence
		Inaudible recording
	Interruptions	' – ' (dash)
	Laughter	(laughs)
	Interviewer observation/ comments	[]
	Numbers and dates	Upto ten written in full. After ten written in figures
	Money	Figures (\$)
Age	'62	

Appendix IX: Sample of Transcript

Jadhava Meher
Interviewed by: Priti Rao
25 September 2009
Duration: 80 min 29 sec
Transcript code: JM04

PR: If you share...

JM: Nothing will happen

PR: If you like we can keep it confidential or if you like we can give you credit on the photo and name. It is up to you. Some people feel shy, some people are ok.

JM: It is ok.

PR: The second thing is since the interview will be long and I can't write so fast, I will be recording. Do you have any objections?

JM: No, no

PR: Ok

So... [Me working the camera]

PR: So, we will start from the beginning. When did you start weaving? How many years ago was it?

JM: Me. It is 18 years.

PR: It is 18 years. So meaning, what did you start doing in the beginning?

JM: Right in the beginning, *pajni*. After *pajni*, *tanasara*, tying the thread.

PR: So when did you weave the first saree?

JM: When I learnt... I was in Class VI–VII

PR: Class VI–VII means?

BM: Meaning 12 years.

PR: When did you make full saree?

JM: After matric.

BM: Meaning 15 years

PR: You passed matric?

JM: Matric did not pass.

PR: But you studied till then? After that you studied with father?

JM: Yes I studied with father

PR: Who else did you learn with? Any body else?

JM: My elder brother. I have two other brothers.

PR: Anyone else, like in the village or any other relatives?

JM: No not with anyone else. At home.

PR: So do you remember anything special when you first started weaving?

JM: Father would scold me, if there was any mistake. Then improve

PR: Any special incident with respect to weaving, you remember? (traffic noise in the background!)

JM: No, don't remember right now

PR: No problem

PR: So we will try and understand the saree process right from the beginning

JM: Beginning? So in the beginning *tana-*

BM: Yarn

JM: Get it from Benu Meher

PR: Not from Bastralaya?

JM: Mine I get from Bastralaya. When I have to buy, I get the yarn from Benu Meher.

PR: What type of yarn do you get?

JM: 120 count

PR: How often do you get?

JM: Once in 2 weeks

PR: What do you do after that?

JM: After getting the yarn, make *tana*.

PR: Can we see?

[Pointing to the yarn frame]

JM: After *bandha*, then colour. After colour, spin in the *charka*

PR: So how much time does it take after each step?

JM: So first you get the yarn and then wash it

BM: This *tana* to spin how much time does it take?

PR: You make two sarees in one time. So how much time does it take?

JM: For yarn spinning?

PR: [Me asking his wife] How much time do you take?

[Long pause]

JM: One and a half days

PR: How many hours do you take?

JM: She also has to do all housework.

PR: So much time does she devote for this?

JM: In a day five hours

PR: So much time does it take for two sarees?

BM: This is part time.

PR: How much time is devoted in one day?

JM: Five hours. After that to make this pointing to the *tana*. This also takes one and a half days. Altogether it takes three days

PR: And does it happen altogether or one after the other. No, no first this happens, then that.

PR: Ok. After that? What is this called.

JM: So after that in our field, taking this make *tana bandha*

C1: Show her

PR: Can we see?

[All go outside]

JM: Each thread is counted. After that we make design and then colour.

PR: Where do you make the design?

JM: Inside

PR: So what are you doing now?

JM: This is to count and divide the yarn.

PR: Outside in the verandah is to count and make bundles?

JM: Yes.

BM: After bunching and counting over here it is taken inside.

JM: Otherwise warp and weft won't match.

PR: How many threads are there in each of the bundle? Since you count you should know.

BM: 1410 and 2820. *Kude* (20)

PR: 2820 for two saree.

JM: Yes

PR: So it is like this 2820 or... How much is it in one bundle?

JM: One bundle is 140.

[Priti counts 1,2,3,4,5,6,7,8... So 20 of these]

PR: What happens if there is one to two threads less?

JM: Then it won't match. The warp and weft won't match

PR: You need strong Maths then?

C1: You need both geometry and Maths.

PR: Does everyone get more marks in Maths?

C1: The person who doesn't do geometry can't do this

PR: Do people get more marks for Maths in school?

JM: If the person doesn't do it in line, it won't happen. If the person doesn't know geometry he cant do.

PR: So where did you learn this?

JM: From my elder brother.

C1: The elder brother doesn't know about this.

PR: So where did you learn?

[Long pause]

BM: When they had gone to grandmothers house. Stayed there for seven days.

PR: Learnt in seven days?

JM: Got an idea and then asked around. Whoever does this work, we ask them and then understand. Everybody helps everybody.

PR: Ok. So what happens after this?

JM: After this we make tie and dye. We colour it.

PR: Who does the colour? How much time does it take to make the long thing outside and count the threads?

JM: It takes two hours.

PR: And to make the tie?

JM: Two hours.

PR: Only two hours you tie from here till there?

C1: This will become double.

BM: They fold it as there is not too much place in the house.

PR: So you will tie together. In two hours?

JM: Yes in two hours. There is only one design.

PR: So the saree you make takes two hours.

JM: First we make the design.

C1: Show the saree.

[Younger brother goes to take the saree]

PR: Oh this is beautiful. You just made this?

C1: This is warp. And this is weft. This takes more time

PR: So what is the name of the saree?

JM: Line box (pronounced as line bux)

PR: Line box why?

JM: The name of this is box. Because there are boxes in this. So when you wear it turns around (modeling the saree, the box pattern goes round and round)

PR: And how is the *anchal*?

JM: *Anchal* also has *bandha*.

PR: Ok. Great. So you make only this design or other designs as well?

JM: No, No only this. Before this different designs.

PR: How long have you been making this design?

JM: Less than 1 year.

PR: So you got this design from Bastralaya?

JM: No, I have made this design. I have also got prize. Got a prize

C1: We have got a prize

PR: What prize?

JM: Some money, a certificate.

PR: So where did you think of this design?

JM: All the designs outside, saw them, got an idea. You won't see this design anywhere.

PR: So what did you do after you got the idea. You made a drawing?

JM: Yes made a drawing. Then made a graph and after that started the work.

PR: And before this? Do you make any other design with this?

JM: No. Only this.

PR: Before this?

JM: Before this made box *patli* design. *Anchal* is different.

C1: Show it show it.

[Pulls out an older saree from the cupboard]

PR: So when did you start designing. Don't you ever get any designs from the Bastralaya?

JM: No we get, we get. But we don't get prize when they give. When we make our own design we get prize.

PR: So you don't make other new designs?

JM: No we do but it takes a month and a half and if we make good design and don't get benefit then what is the point.

PR: So when, how often do you make new design?

JM: Once every two to three years.

PR: Not before?

JM: Made one design and then when we get good wages. Then when it seems less, we stop this and make a new design. If we don't get benefit then what is the point.

PR: So how much wages do you get in this?

JM: Rs. 950. One saree Rs. 950.

PR: And this (pointing to the saree)?

JM: This was made earlier. This is *box patli*

JM: [Demonstrating] If the ladies wear it like, and then move like this then the pleats will fall like this. Then this will be above and this the *anchal*.

[The body is plain and the pleats have the box design and the *anchal*, making it quite an interesting combination]

PR: Wow. This is great idea. Where did you get this idea from?

JM: [chuckles] This was given by the Bastralaya.

PR: You get different designs. So when did you start designing yourself?

JM: First from Bastralaya. When I grew older I started to get ideas

PR: And colour combination etc do you do it yourself or the Bastralaya tells you how to do it?

JM: No, no. sometimes they tell otherwise we make from our idea.

C1: No sometimes a mistake happens.

BM: When they mix, sometimes there is a mistake.

PR: So where did you learn to mix colours?

JM: Colour mixing? The manager of the cooperative tells us.

PR: He tells

JM: Yes, he tells. What to mix with what to get a particular colour.

C1: This is a mixed colour... [Long pause, perhaps doesn't want to share]

[In Oriya, discussion on colour mixing]

PR: So different colours?

JM: Different colours. Same design but different colours. One colour in every four piece. Repeats.

C1: Brown, golden... there are three colours in one.

PR: Who mixes the colour. You?

JM: I do it.

PR: Then you dye the yarn?

JM: Yes.

PR: So what does the yarn from Bastralaya look like?

JM: It looks white.

PR: So how much yarn do you get at a time?

JM: Get yarn worth four pieces. Once every two weeks.

PR: And where do you get the colour?

JM: Colour from Benu Meher.

PR: Not from Bastralaya?

JM: Not from Bastralaya (laughs) Bastralaya colour is not good. They don't keep all types of colours. This colour one won't get from Bastralaya.

PR: I had recently visited the dye house. You don't get colored yarn from Bastralaya.

JM: Buy coloured yarn? They don't have this kind of colour. When we ask, they say we don't have this kind of colour. So we get it from outside shop and dye. If the colour is not good, there is no show.

C1: In the colour is good, then Bastralaya will keep the saree and customers will like it. If the saree does well, then our livelihood will also do well.

PR: So how much money do you spend on the colour?

JM: For one pair... (two sarees) it costs Rs.100.

PR: So how often you get colour?

JM: We get it once a week. We colour for four sarees at once.

PR: So four pieces cost Rs.100 or two?

JM: No, no two pieces.

PR: Ok. So it gets deducted from the wage.

JM: In the wages, the colour expense is ours.

PR: So you have to calculate that as well? So you don't get colour from them.

JM: No, only yarn from there.

PR: So yarn, you get it ok.

JM: Yes ok.

PR: There is always supply?

JM: Yes, there is always supply. They give advance yarn. And then when yarn is bad, colour gets defected, so we complained. After complaint all yarn goes back.

PR: Is it?

JM: Yes. Yes.

PR: What about your time spent/lost?

JM: No, they take the damaged saree. It is their fault not ours.

PR: So they take it back.

PR: So, the defect yarn is sometimes or.

JM: No, no, only by chance.

PR: Otherwise, it is good?

JM: Yes, yes good quality. A quality yarn comes.

PR: So shall we sit again?

JM: Ok come.

PR: This baby. How old.

JM: 5 days.

PR: So how long have you been working with Bastralaya?

JM: In Bastralaya, before me father was working. Never worked with anyone private else. After my father expired, did private for two years. Because Bastralaya, the president that was there,

made the Bastralaya down. He made it in such a way, that no weaver got any support, or good price, that's why people went into private.

PR: Before that Bastralaya? This private means, how long ago did you do this?

JM: Six to seven years before. Did it for two years, then went back to Bastralaya. Now P Babu is the president, then it is doing very well. All the loss, he has brought it back to profit. Our Kruthartha Acharya's grandson. After he came, he became the President. All of us weavers worked and told him, you become President and save our Bastralaya and run it.

PR: Ok. So now it runs ok?

PR: So when you did private for two years, you worked with Bastralaya before as well?

JM: Yes, yes, worked before as well

PR: So the two years that you did private, what was your experience like?

JM: There is no benefit in private, Bastralaya is fine for us.

PR: Why there is no benefit in private? Private means you worked with a master weaver or? You worked for wages or?

JM: No, no not wages, as an independent weaver to the bazaar

PR: So there is no benefit in it?

JM: No benefit. See... we work so hard and make saree, and go to bazaar. There is different tastes in bazaar, some people give good rate... sometimes its not good and we get the saree back... the rate is not good. Sometimes its high, sometimes low and Bastralaya is one rate. You can give any number of sarees, the rate is one, it doesn't ever get cut.

PR: So you think Bastralaya gives good rate? Yes, so what are some of the other benefits of working with the Bastralaya?

JM: There is benefit. Our weaver gets *pania*, you get weaver cottage.

PR: Have you got?

JM: No. But I will get. There is an order. Four people have got. I haven't got yet. My number has not come. It is by serial.

PR: So, when did you get your loom. What did you have to invest behind this? You have only one loom or two?

JM: Two looms.

PR: Are you together or separate?

JM: No separate.

PR: Where did you get loom? Is it old or new? What did you have to invest behind this?

BM: Father used to weave. They had a loom.

PR: Have you changed loom?

JM: Sometimes it gets damaged. If it gets damaged, we call the *mistry*.

PR: Anything else new? Like new machines or anything?

JM: No, I have not.

BM: No. no. They use the same materials from before.

PR: So in the year you sometimes have to do maintenance, there is expenses behind that as well?

JM: Yes there are expenses.

PR: So what about water for dyeing etc?

JM: Yes we get water, there is a tubewell.

PR: This handpump?

JM: Tubewell also and water supply also.

PR: So no problem about water?

JM: No, problem.

PR: Have you done any training anywhere?

JM: No, haven't done training.

PR: Some days ago there was a training programme, but I was not well. So I didn't go. The training was in Barpali. At Meher Arts and Crafts.

BM: Through ADT.

PR: So you didn't go?

JM: No, my circumstances were not good.

PR: And, how many designs you know? Only double ikat.

JM: Yes, only double ikat since eight years

PR: So where did you learn this from?

JM: In the village whoever is doing, I went and asked around and learnt.

PR: So what do you like about double ikat? What is the advantage of doing double ikat?

JM: There are more wages in double ikat.

PR: But it also takes more time.

JM: But despite more time we get more wages. Yes.

PR: Do you make single ikat?

JM: No. We don't make single ikat.

PR: And do you ever go out for example to see designs or to any other markets?

JM: No I don't. Some days ago I had been once. I bought and sold. Buy there and sell. I did this for two or three years and you make profit.

PR: So how many sarees do you make in a week?

JM: In a week, three. With both of us working together. You need two people for double ikat. One person has to hold on one side.

BM: Then the design will be proper. Otherwise there will be no matching. Also one person doing it, will take longer.

PR: Even then you feel the wages are higher?

JM: Yes. It is ok.

PR: So in Bastralaya, who is your contact person?

JM: Now. The manager. Rama Meher.

PR: Do you ever go the head office?

JM: Yes, also go to the head office.

PR: When?

JM: Go to the head office once in a year there is a meeting. We go then.

PR: Don't you ever go in between?

JM: In between, if there is no problem, we don't go. If there is any problem, our manager goes there and does the work for us.

PR: Ok

JM: For example if we need money of a loan, then the manager.

PR: You also get a loan?

JM: Yes, we get a loan. Our money is deposited there. For example 10 percent is deposited. They give us the loan from that.

PR: It is deposited since the beginning? So you get it easily?

JM: Yes, easily. Before this it was a bit difficult. But with the new President, it is fine.

PR: So when in between this happened, you didn't fear when your money was lying there?

JM: No, no fear.

PR: When it was in a less?

JM: No, no fear.

PR: What about bonus?

JM: No bonus. We got commission. Some days earlier. Since two months.

PR: On what basis do you get commission?

JM: Whichever weaver gets how much ever wages. Whatever wages they earn in the year, five percent of that.

PR: Does everyone get this commission?

JM: No not everyone, only those who are regular. Whatever it is, the regular weaver will get. Not the irregular one.

PR: Is there any plan-

JM: There is a meeting.

PR: In the village?

JM: No, in the head office. So, a proposal was put forth. Whatever the weaver makes, whatever he earns, he will get five percent commission on that basis.

C1: This year, the first time.

PR: First you used to get bonus?

JM: Yes, first we used to get bonus, during fathers time. Bonus, then we used to get *pania, dungi, nari*, lots of things we used to get. The President in between ate up all the money.

PR: Even then you think Bastralaya is okay?

JM: Now it is okay.

PR: So did you never think of doing your work? So when you did two years private in between, you didn't like that?

JM: Yes, Bastralaya is ok. Because when it rains, after making the saree, go give it in the office nearby which is open till 5 pm and get the money and come back. Now, in the bazaar, how will one go in the rain? So how will we get the money? Then how will we eat? Our Bastralaya is very good. Very good. If there is any problem, we ask the manager is it possible to get some advance. He gives advance.

PR: So there are so many weavers in the village, but there are such few members in the cooperative.

JM: Whoever thinks the Bastralaya system is ok, it is ok for him. For some people the bazaar is good. This year the bazaar is good, the sale is good, that's why public says the bazaar is good.

PR: So you never thought of trying the market?

JM: No, no, Bastralaya is good.

PR: And loan you get it from there?

JM: Yes, the money we deposit, we get it from there.

PR: What about a bigger loan?

JM: No, we don't get a bigger loan.

PR: But do you need a bigger loan?

JM: No, we do need a bigger loan to do some work. To make our *bunasar* (weavers cottage), if we get it is good.

PR: What will you do with a bigger loan?

JM: I will get a *kampura* machine.

PR: What is the advantage of the *kampura* machine?

JM: This *bandha* work which takes so much time, with the machine it will take much less time.

BM: *Bandhpura*. To do it by hand it takes longer. It takes two days.

JM: Machine will be quicker. It will take two to three hours.

PR: So if you save that time, what will you do it?

JM: We will do *bandha*. There will be time to do other things.

BM: Whoever is doing *bandhapura*, gets time, they will do something else.

PR: Like what? The loom is one.

C1: The loom is one.

BM: After *bandhapura* there is You have to do *tanapura*. If you get time from *tanapura*, will get some more time for housework.

PR: So why don't you get the machine?

JM: How can I buy it myself? If I get some help I can.

PR: How much is it?

JM: Rs.3500 for the Bandhapura.

PR: So why don't you buy it?

JM: No how will I buy it? There are people right now, so I am not getting it.

PR: So if you get machine how many sarees can you make?

JM: I can make one more. So can make four pieces a week.

PR: So you work regularly?

JM: Regular. When there is festival there is holiday.

PR: Never from outside?

JM: No.

PR: So how much income do you make in a year?

JM: In a year...

BM: First calculate for a month.

PR: You make only this saree?

JM: No this saree only.

PR: You never thought of making a new, a higher wage saree?

JM: No, I have thought. But for this it takes a different *phani, pania*. After that there will be a new design, but for a new design, this loom will be shut. It takes 10-15 days for a new design. The loom will be shut for 10-15 days. Then what will we eat?

PR: It takes so much time to make a new design?

JM: Yes, it takes. If it is a new *bandha*, you have to count the thread all over again.

PR: Does Bastralaya give you a new design in between, saying this is doing well, make this.

JM: No, whichever design they like, then they don't say. If there is no demand, if it doesn't sell, then they say stop this, make a new design.

PR: How many designs would you have made so far?

JM: I would have made about 15-16 designs.

PR: 15-16 of your designs or also from them?

JM: No, no altogether.

PR: Then what types of designs do you make?

JM: First, I used to make single. 8-10 years ago, when I learnt to match, I made the *sakta* design, then after that *patli*, line box etc. Line *buti*

PR: What about elephant, horses etc?

JM: No, not this type we don't know.

PR: Have you ever been to any training or market?

JM: No I haven't got a chance yet. If I do I will go

PR: What is your future plan?

JM: If I have more money...

PR: How do you think one can get more money?

JM: See if I get a *bandhapura* machine, a *pania*, a *bunasar*. Having a good environment, one can weave more, then we can improve. The *bunasar*, if it leaks then it is a problem (the *bunasar* has a tin roof)

PR: So how many sarees can you make if you have all these facilities?

JM: Then I can make four to five pieces.

PR: So did you ever think of doing any other work?

JM: Yes, I thought. For example to do a saree business. I thought of buying from other weavers and supplying to Bastralaya or bazaar. But I don't have enough money for this type of work.

PR: So if you get money you will do this type of work?

JM: If I get money or help, I will definitely think about it.

PR: You will leave weaving?

JM: No weaving will continue. One of the brothers will do the outside work. We will stock every two to three days and sell to Bastralaya.

PR: Then you can make new design as well?

GM: Yes then I can make new design as well.

PR: You think of making new designs?

JM: Yes, I think. But I don't have money right now.

PR: So you have designs in your mind?

JM: Yes, I have new, new designs. No time to make. When I have money, then I can. If I get the *bandhpura* then. What takes two days, it will take three hours, then how much time will be saved, then I can do different work.

PR: But in two days you can make only one saree.

JM: Yes one saree in two days.

PR: Then how will you save time?

JM: See it will take less time for *tana* and *bana*.

PR: But doesn't this take two days side by side?

JM: No it can't finish.

PR: So if you take four days to make two sarees, then can't you do preparatory work in that much time?

JM: No it takes more time as there is other work in the house.

BM: It will. See the weaving that they are doing, the preparatory work has already been done. In four days you can prepare for two sarees. But in between you also have to prepare for the next lot. So when you save time from the beginning, then you can use it for the next saree.

PR: But even now it is continuous.

JM: Yes it is continuous, but if there is no time, then it stops. That's why if we have *bandhapura* machine or *tanapura* machine it will help.

PR: Do you want to ask me anything?

JM: Why are you doing all this?

PR: I am asking all this, because I am doing research. I am comparing the three types of weaver's cooperative, independent, master weaver, what are the disadvantages, advantages. And in all the systems what more can be improved. When the research is done, the report will be shared with other people in the industry like the government or designers. Whatever focus is there in the ikat, it is all on the design. It is less on the people who make the design. What problems they have or what is doing well, I am doing my research on this.

JM: All this will go up (to authorities)?

PR: The final report may go up. Don't know how high up. Will definitely try. The thing in this is right now you earn Rs.5000/Rs.10000 this is combined effort of three or four people. The

costing is not worked out properly. You reduce your wages to keep the prices down, then you end up below minimum village. The person working outside as daily wage perhaps earns more. You and brother are separate or together?

JM: We are separate but we work together.

PR: How many people needed in weaving. You both help each other?

JM: Yes. Yes.

PR: Do both looms work together or one?

JM: Currently only one. One is gone for repair to the carpenter.

PR: So in a week you make three sarees with two people?

JM: No with two people you can make four pieces with both looms.

PR: I have still not understood how many people. The form says two people

JM: My family is two people. Brother is separate.

PR: But when you weave together you do it together?

JM: Yes everyone works together. See the sarees are big you cant do it alone. We work together.

PR: So you share the wages?

JM: Yes.

PR: So when your brother gets his loom, you will also help him?

BM: Yes they will both help each other even when they have separate looms. Right now there is one loom so they work together

PR: You were asking me something? You can ask me anything, since I have taken such a long interview of yours.

[weaving sound in the background]

PR: Your phone number?

JM: 9178801698

PR: Sometimes if your sarees get damaged what does Bastralaya do?

JM: Manager allows us. First it goes to office, but when they are not able to sell, then it is returned. Then we sell it into the market at reduced price.

PR: You replace the yarn?

JM: Yes we replace the yarn. We buy the yarn.

PR: The same quality?

JM: Yes the same quality otherwise we find it difficult to work.

PR: What difficulty?

JM: The yarn breaks in between, it won't take good colour. The colour will get damaged if it is not good quality yarn.

PR: So you never use 80 count yarn?

JM: All 120.

PR: You have never used?

JM: Yes in the beginning we did when we were learning. In *Tarathan* saree. That was also double ikat.

PR: What is your monthly income?

JM: All expenses of the family.

PR: No only wages. How much is the wage for one saree?

JM: Rs.950

PR: The colour costs Rs.50?

JM: Yes. Also they cut 10 percent on every piece towards our saving. So after deductions we get about Rs.850

PR: But that gets saved?

JM: Yes that gets saved.

PR: Do you think that it is useful? Do you do any other type of saving?

JM: No we don't.

BM: In the monthly he is earning Rs. 11,400.

BM: See the number of people who are working. Four to five to six people

JM: No see, my family two people. Mother and sister also work four people. My elder brothers family two people. The 11 year old child also helps.

PR: What does the child do?

JM: He does small, small work. He is studying, but does small, small work. See actually the wages are not enough, it is not profitable, but since this is our caste occupation that is why we are working.

PR: Will you leave this if you get another job?

JM: Yes I will. If I get more profit I will leave.

PR: So what kind of job will make you leave?

JM: You know this Bolangir. If I can do like a saree shop job or something then. We have to do something otherwise how will we survive.

PR: Have you ever tried any other job, like the army?

JM: No haven't done training. No haven't tried ever.

PR: You never thought of ever going out and doing something?

JM: No seeing the family conditions didn't go. When I started working earlier in two years my father expired. Then I had to stay home.

PR: But your elder brother was around?

JM: But he has his family. I have my mother, sister and we two [husband wife]

PR: And you want to ask anything?

BM: Will you take photos?

JM: My photo.

PR: Yes. Your photo at work

JM: So will I get some help?

PR: I can't say anything now. But since you have given your time, others may also benefit.

JM: Yeah, yeah

PR: Because until we don't see these aspects, nothing will change. See I was asking you how many people at home work and what do they each do.

Because even customers don't understand sometimes when they say it is very expensive. So when we explain them how much time it takes, they may understand.

[Photo session by Priti. Weaving sound in the background]

PR: Till what time do you work in the night?

JM: Work till 10 pm in night.

BM: There is light problem here mam

JM: Mostly work happens in the night. If there is no light in the night how can one work. How much can one do in the day?

PR: What work do you do in the night?

BM: Most of the weaving work happens in the night.

PR: What do you mean more work?

JM: There is no disturbance in the night. In the day there are other things to do as well. If one works two to three hours here then one works well. Then in January one works more because it is cold. In the hot one can't work so much.

[Pointing to the sister] She works on *tana-bana* on the *bandhpura* machine.

PR: Non stop?

JM: Till 12 noon. Two hours rest. Then again from 2 pm till night 10 pm.

PR: 12 hours of work in the day?

JM: Yes 12 hours.

C1: 12 hours.

BM: From morning 7 am to night 10 pm, 15 hours. 3 hours go in rest. So that is 12 hours.

PR: 3 hours rest. Also in roaming around.

BM: In the evening 1-1.5 hour then after lunch 1-1.5 hour.

PR: It must be at least 4-5 hours

BM: See if one goes for bathing the other person works.

PR: So you need two people to work?

BM: So if this person goes for bath, then other two will adjust.

[Photo session continuing]

C1: Our Meher work, till death one cannot become fully experienced.

PR: Yes, I also can't understand.

C1: You read theory, this is practical. Where does she study?

BM: She is doing PhD on art and design. How we make this work etc.

[Photosession with family outside]

Appendix X: Metadata of Interviews

A. Respondent Metadata

Sr. no	Artisan/ expert Name	Transcript code	Date of interview	Duration of interview	Place of Interview	Designation/ organisation
1	Binod Meher	BM01	01.10.09	36 min 34s	Home, Jalpalia pada	Contract weaver
2	Gunanidhi Meher	GM02	29.09.09	30 min 34s	Home, Rawanguda tikra	Contract weaver
3	Bideshee Meher	BM03	01.10.09	49 min 34s	Home, Mamchantikra	Contract weaver
4	Jadhava Meher	JM04	25.09.09	80 min 29s	Home, Nuapada	Cooperative weaver
5	Gajendra Meher	GM05		100 min 24s; 07 min 45s	Home, Bandhpada	Cooperative weaver
6	Balmukund Meher	BM06	30.09.09	96 min 51s	Home, Bandhpada	Cooperative weaver
7	Narayan Meher	NM07	01.10.09	72 min 02s	Home, Nuapada	Independent weaver
8	Sanju Meher	SM08	28.09.09	92 min 50s	Home, Nuapada	Independent weaver
9	Tarani Meher	TM09	26.09.09	92 min 55s	Home, Mamchantikra	Independent weaver
10	Sundar Meher	SM10	06.10.09	81 min 21s	Home, Jalpalia pada	Master weaver
11	Ramesh Meher	RM11	07.10.09	75 min 31s	Home, Mamchantikra	Master weaver
12	Ghanshyam Meher	GM12	29.09.09	36 min 26s	Home, Rawanguda tikra	Master weaver
13	Rama Meher	RM13	08.10.09	49 min 39s; 03 min 19s; 38 min 37s	Office, Nuapada	Manager, SBC Bandhpali
14	Rahita Meher	RM14	14.10.09	34 min 43s	Shop, Nuapada	Yarn trader

B. Informer Metadata

Name	Designation	Place	Date
<i>Debjit Nandy*</i>	<i>Assistant Director Textiles</i>	<i>Bargarh</i>	<i>11.01.09</i>
Antaryami Meher	Quality Control Officer, SBC	Bargarh	14.10.09
RMC	Regional Marketing Committee	Bargarh	20.9.10
Jugal Kishore	Yarn trader	Bargarh	15.01.09
Durlabh Meher	Machine manufacturer	Bandhpali	10.10.10
<i>Bharat Meher*</i>	<i>Designer, SBC</i>	<i>Bandhpali</i>	<i>19.9.10</i>
Narayan Pruseth	Academic	Bargarh	13.01.09
Padmashri Chaturbhuj Meher	National Awardee Artisan	Sonepur	16.01.09
Narayan Meher	National Awardee Artisan	Bheden	12.01.09
Surender Meher	National Awardee Artisan	Barpali	17.01.09
Bhagban Meher	National Awardee Artisan	Barpali	18.01.09
B.N.Das	Joint Director Textiles	Bhubaneshwar	21.01.09
Pradip Dash	Textiles Officer	Bhubaneshwar	9.07.08
Dilip Rautray	Managing Director, SBC	Bargarh	11.01.09
Bastralaya Secretary	Secretary, SBC	Bargarh	11.01.09
Dr. Patra	Weavers Service Centre	Bhubaneshwar	20.01.09
Khetramohan Meher	National Awardee Designer	Barpali	10.01.09
Sudham Meher	Meher Arts and Crafts Society	Barpali	12.01.09
Manmohan Sahoo	Director of Census Operations	Bhubaneshwar	20.01.09
Samantrai	Tribal Research Institute	Bhubaneshwar	19.01.09
Praful Meher	Marketing Manager	Bargarh	8.10.09
Mr. Tosh	Technical Officer, SBC	Bargarh	21.9.09

* *Key contacts*

SBC: Sambalpuri Bastralaya Cooperative

Appendix XI: Artisan Photo Consent Form

Dear research participant,

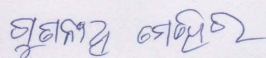
As you are aware you were interviewed for the research project on Orissa ikat weavers undertaken by Priti Rao as part of her doctoral study at School of Design Northumbria University, UK. This form is to seek your consent for the use of photographs taken at your residence in Bandhpali village, Orissa.

Consent for the use of your photograph/video

I hereby grant permission for photographs and videos taken of me and my family by Priti Rao to be used in exhibitions, publications, video productions and internet media; to be used with integrity as representation of the weaving work carried out by me and my family.

Name: Gumanidhi Meher.

Address: At/PO - Bandhpali P.S. - Baspali
Dist - Bargarh ORISSA - 768032.

Signature: 

Date: 25 July 2011

Appendix XII: Sample of Content Analysis (Contract Weavers)

Value	Binod Meher	Bideshee Meher	Gunanidhi Meher
<p>Utility value (Time, money, effort)</p>	<p>In small sarees you have more effort, less income. So with same effort, shouldn't I make bigger sarees, which has more profit. (3)</p> <p>Yes it is less effort, more money and profit. In the other there is more work and less profit. (4)</p> <p>If make tie and dye it will be only two sarees. (4) (time)</p> <p>Small, small children weave, so if a little bit goes wrong, they cut more wages (7)</p> <p>Yes. Often (wages cut) (7)</p> <p>Yes I like. (8)</p> <p>No, a small family is not good for this Meher work. Better if there is bigger family. If there is one child in the family, then we marry him off, then he or she is gone. If there are four to six people at least one person will stay. (11) (income)</p> <p>[Money is the overriding concern for Binod Meher]</p>	<p>Yes, in single ikat the wages was about Rs.100 to Rs.150, but in the double ikat it is about Rs.500 (6) (income)</p> <p>Then I thought, going to the market, resulted in time loss, so I started to get contract work from others. (4)</p> <p>Have to go far from Diksira to Budhapali, so he left and then took up contract work with someone in the village. (5)</p> <p>Yes, it was too far. I was the only person at home and it was difficult to come and go. (5)</p> <p>In single ikat the income is less, that's why he has taken to making double ikat (6)</p> <p>No. He doesn't cut. He gives ok wages. (11)</p> <p>Now it is very expensive times, so one can't survive without more income, so he has taken up this work. (6)</p> <p>In single ikat the income is less, that's why he has taken to making double ikat (6)</p> <p>Because it is expensive these days and it would be more profitable to weave double than single ikat. (7)</p> <p>Because it is too far. (left previous master weaver because it is too far) (7)</p> <p>Don't have money to buy the tie and dye (10)</p> <p>[Distance (Effort) seems to be a crucial factor in decision making in Bideshee's case, but which is closely linked to money and time.]</p>	<p>No I will get income but one person can't do two jobs. (5) (time)</p> <p>You are asking if I feel the wages are less? No its ok. (8)</p> <p>[Time seems to be a major concern for Gunanidhi especially since he is all by himself and needs to make optimal use of his time.]</p>
<p>Social value (attainment of social prestige, construction and maintenance of one's identity)</p>	<p>No statements reflecting this value in coded data</p>	<p>No statements reflecting this value in coded data</p>	<p>No statements reflecting this value in coded data</p>
<p>Emotional value (arouse feelings or affective states)</p>	<p>I think when I will also make such (beautiful) designs. (8)</p>	<p>If the yarn is fine, it is plain, it has polish, it feels nice to touch. The duplicate one, is more rough textured, not plain (8)</p> <p>Yes. It takes time to match (double vs single ikat) (6)</p> <p>Yes, the 120 count yarn is good. (8)</p> <p>That work is also more fine. (11)</p>	<p>Meaning the thread has to go in the middle, then only it will look good, if it comes up, then how can one weave? It won't look good. (6)</p>

Value

Epistemic value (arouse curiosity, provide novelty or satisfy a desire for knowledge)

Binod Meher

Learnt Milan work from Sunder Meher (2)
He **won't** tell me. He **doesn't** give the technique. (9)
No **can't** make these. **Don't** know how to make these. (10)
A little. Only the smaller work. After that when I worked with Ganesh Meher. I **worked on** slightly bigger designs after that with Sunder Meher it is *Milan* work. (3)

Conditional value

If somebody **pays better** than him then he will work with the new person, the work should also be **good**. (8)
No I don't have the finances. If we had the **money**, then the brain will work! Then I can make my own design. (4)
I have interest. If I get **more money** then I can. The world runs on **money**. If I get **more money** then I certainly will. (8)
If I don't have **money**, then how. The yarn, colour is very expensive and the saree rate is less. (8)
No I will, if I have enough **money**. Can't do if I don't have **money**. Where will I get the yarn from? I have six people in the family to look after. How will I manage? (8)
I will make my own saree and sell in the market, then I will make more **money**. (11)
If I make more **money** then I can buy the yarn, make more sarees, tie dye etc and make more **money**. (11)

Bideshee Meher

No I **didn't** learn tie and dye work, only weaving. (2)
They also **didn't** try and he also **didn't** try to learn (2)
Since we **don't** know how to tie and dye, we **can't** make our own saree. Yes because we **haven't** learnt to tie and dye, we **can't** do our own saree at home.
If he **had learnt** then we could make our own saree (5)
No, I **don't know**. (about markets) (7)
It is sold in Bailjuri but I **don't know** how much it is sold for. (8)
The kids are **not educated**, what else can they do but this work? (9)
Learnt myself. Whoever I was working with at the time, used to give tie and dye, so just learnt while working. (5)

If we had **learnt** then we could make our own saree (5)
Yes Bastralaya paid better **wages** than the private entrepreneur. (5)
Yes, it was too **far**. I was the only person at home and it was **difficult** to come and go. (5)
If I weave on my own then I will **buy** the tie and dye and weave (10)
Yes, if I join the Bastralaya through someone, then I will work. (12)

Gunanidhi Meher

No, **not tie and dye**, only weaving (2)
No I **didn't** learn. I **can't** understand. (2)
Milan (2)(value?)
No I just weave. (3)
No, I just sell and come back. (8)
I **never learnt** or try to learn.(5)
He knows how to weave, **not** to make *bandha*.(5)
No I **don't know** dyeing work. I have **not** done it (9)
This I **don't** understand. (the rudrakhya motif) (4)
In the future. (5) learn to tie and dye
I **am interested** and **would** like to go and learn outside, but if I can **learn** well then it is ok, or it will be a waste of time. (9)
I **will do** *bandba* work (8)
No, I have **not**. (never thought of doing own work)

I **am interested** and would like to go and learn outside, but if I **can learn** well then it is ok, or it will be a waste of **time**. (9)
It makes a difference if thread comes up. Rs.100 is deducted (6)
No, it won't do for the future (8)
I **will do** *bandba* work (8)

Codes

Utility Value:

Time Time
Money Money
Effort Effort

Emotion Emotional Value

Epistemic Value:

Positive Positive
Negative Negative

Social Social Value

Appendix XIII: Code Development Cycles

A. Description of Codes (Cycle I)

	Code	Code Description
A	APP-AGE	Age when started apprenticing
	ACT-SEQ	Activity sequence
	ART-IM	Artistic imagination
	AES-JDG	Aesthetic judgement
	ALT-PRACT	Alternative practice
B	BHU-CUL	Bhulia culture
C	CHO-THE	Choice Theory
	CUR-PRACT	Current practice/skill level/ routine
	CRED-SYS	Credit system
	CHD-LBR	Child labour
	COP-RES	Cooperation reason
D	DES-CON	Design Control
	DES-REP	Design Repertoire (design names known/made)
	DES-MET	Design Method
E	EARLY-SKILL	Types of tasks/sarees woven early on
	ENT-EXP	Enterprise expansion (requirements)
	ENT-EXPCOS	Enterprise expansion cost
	EDU-PREF	Education preference
	EDU-STAT	Education status
F	FAM-SIZ	Family size
	FAM-BAC	Family background
	FAM-WEAVHIST	Family weaving history/background
G	GRO-BAR	Growth barrier, constraints
	GOV-SUP	Government support
H	HEL-HAZ	Health Hazards
I	INF-ASY	Information asymmetry
L	LEARN-MOD	Learning model for Trying new skills/ things
	LEARN-SOU	Source of learning
M	MARK-KNOW	Market knowledge
O	OR-HIST	Oral history
	ORG-INV	Organisational Involvement
P	PROF-JUDG	Profitability judgement (linked with value/ choice theory)

Q	QUAL-CON	Quality control
R	ROLE	Who does what
	RES	Resilience
S	SKIL-DEV	Increase in capability/ skill level
	SIGN-EVE	Significant event such as birth/life/death
	SER-PROCONT	How first got in touch with service provider
	SAR-COST	Saree costing
	SCH-DRP	School Drop
	SERV-PRO	Service provided
	SERV-SAT	Service satisfaction
	SWI-CON	Condition for switching (to another service provider)
	SOC-REC	Social Recognition
T	TOCHPT	Touchpoints with service provider
	TECH-AD	Technology adoption
	TRAIN	Training
V	VALUE	Thinking style/ preference
W	WORK-AGE	When started full time weaving
	WEAV-HIST	Career history in weaving
	WEAV-SKILL	Weavers skill/knowledge level of tie and dye etc
	WEAV-PROD	Weaver productivity/production
	WEAV-ANC	Weaving ancillary (activities/ instruments)
	WEAV-PEN	Weaver penalty
	WEAV-MAT	Weaving material
	WEAV-INC	Weaver income
	WEAV-ASP	Weaver aspiration
	WEAV-AFL	Weaver affiliation, memberships etc
	WEAV-CON	Weaver concerns, questions..
	WEAV-AST	Weaving assets
	WEL-STAT	Wellbeing status
	WEAV-AGE	Age of the weaver
	WEAV-INV	Weaver investment
	WEAV-PRI	Weaver pride
	WEAV-PRO	Weaving problem
	WEAV-OPI	Weaver opinion

B. Coding Cycle II

Main Theme	Sub-Theme		Code Description
Service Offering (tangible capital inputs provided) soft skills/ capabilities enabled. Details about touchpoint, interaction- how spread over	Capital	QUAL-CON	Quality control
		ROLE	Who does what
		SER-PROCONT	How first got in touch with service provider
		SAR-COST	Saree costing
		SERV-PRO	Service provided
		TOCHPT	Touchpoints with service provider
		WEAV-ANC	Weaving ancillary (activities/ instruments)
	What/how	WEAV-PEN	Weaver penalty
		WEAV-MAT	Weaving material
	Assets/ Capabilities		ACT-SEQ
		ART-IM	Artistic imagination
		AES-JDG	Aesthetic judgement
		CUR-PRACT	Current practice/skill level/ routine
		CRED-SYS	Credit system
		DES-CON	Design Control
		DES-REP	Design Repertoire (design names known/made)
		EARLY-SKILL	Types of tasks/sarees woven early on
		HEL-HAZ	Health Hazards
		INF-ASY	Information asymmetry
		MARK-KNOW	Market knowledge
		SKIL-DEV	Increase in capability/ skill level
		TRAIN	Training
		WEAV-SKILL	Weavers skill/knowledge level of tie and dye etc
		WEAV-PROD	Weaver productivity/production
		WEAV-INC	Weaver income
		WEAV-AST	Weaving assets
		WEL-STAT	Wellbeing status
Value			COP-RES
		GRO-BAR	Growth barrier, constraints
		PROF-JUDG	Profitability judgement (linked with value/ choice theory)
		SERV-SAT	Service satisfaction
		SWI-CON	Condition for switching (to another service provider)
		SOC-REC	Social Recognition
		VALUE	Thinking style/ preference
		WEAV-ASP	Weaver aspiration

	APP-AGE	Age when started apprenticing
	ALT-PRACT	Alternative practice
	CHO-THE	Choice Theory
	EDU-STAT	Education status
	FAM-SIZ	Family size
	FAM-BAC	Family background
	FAM-WEAVHIST	Family weaving history/background
	SIGN-EVE	Significant event such as birth/life/death
	WORK-AGE	When started full time weaving
	WEAV-HIST	Career history in weaving
	WEAV-AFL	Weaver affiliation, memberships etc
	WEAV-AGE	Age of the weaver
	WEAV-PRI	Weaver pride
Miscellaneous	BHU-CUL	Bhulia culture
	CHD-LBR	Child labour
	DES-MET	Design Method
	ENT-EXP	Enterprise expansion (requirements)
	ENT-EXPCOS	Enterprise expansion cost
	EDU-PREF	Education preference
	GOV-SUP	Government support
	LEARN-MOD	Learning model for Trying new skills/ things
	LEARN-SOU	Source of learning
	OR-HIST	Oral history
	ORG-INV	Organisational Involvement
	RES	Resilience
	SCH-DRP	School Drop
	TECH-AD	Technology adoption
	WEAV-CON	Weaver concerns, questions..
	WEAV-INV	Weaver investment
	WEAV-PRO	Weaving problem
	WEAV-OPI	Weaver opinion

C. Coding Cycle III

CODES COMBINING (11 August, 2010)

SERVICE PROVIDED

ROLE has been merged with ACT-SEQ

SER-PROCONT has been merged with TOCHPT

WEAV-ANC has been merged with WEAV-MAT

WEAV-PEN, TRAIN and SKILL-DEV has been merged with SERV-PRO

ASSETS/ CAPABILITIES

ART-IM merged with AES-JDG

DES-CON merged with DES-REP

(All 4 grouped under the theme of DES-ABL (Design Ability))

EARLY-SKILL not very significant

INF-ASY combined with MARK-KNOW

EARLY-SKILL, SKIL-DEV, WEAV-SKILL combined in WEAV-SKILL

Skills/ knowledge was grouped as:

WEAV-RLTD

DES-REP

MARK- KNOW

VALUE

PROF-JUDG merged with VALUE

WEAV-ASP merged with GRO-BAR

SWI-CON merged with SERV-SAT

SOC-REC combined with VALUE

PROFILE

APP-AGE combined with WORK-AGE

ALT-PRACT combined with WEAV-HIST

FAM-SIZ and FAM WEAV-HIST and SIG-EVE merged with FAM-BAC

Delete WEAV-PRI

D. Coding Cycle IV

MAIN THEME	SUB-THEME		CODE DESCRIPTION		
Service Offering <i>(tangible capital inputs provided) soft skills/ capabilities enabled. Details about touchpoint, interaction- how spread over)</i>	Capital	QUAL-CON	Quality control		
		SAR-COST	Saree costing		
		SERV-PRO	Service provided		
		TOCHPT	Touchpoints with service provider		
		WEAV-MAT	Weaving material		
	What/how	ACT-SEQ	Activity sequence		
	Assets/ Capabilities	ASSETS	BODY	WEL-STAT	Wellbeing status
			HOUSING		Need photo analysis
			WEAVING	WEAV-AST	Weaving assets
TECH-AD				Technology adoption	
INCOME			WEAV-INC	Weaver income	
CAPABILITIES (skill, knowledge)		WEAV-RLTD	WEAV-PROD	Weaver productivity/ production	
			WEAV-SKILL	Weavers skill/knowledge level of tie and dye etc	
		DES-ABL	AES-JDG	Aesthetic judgement	
			DES-REP	Design Repertoire (design names known/made)	
		MARK-KNOW	MARK-KNOW	Market knowledge	
Value	WEAV-ASP (future plan, capability gaps. Can include ENT-EXP)	WEAV-ASP	Weaver aspiration		
		GRO-BAR	Growth barrier, constraints		
	VALUE	SERV-SAT	Service satisfaction		
		VALUE	Thinking style/ preference		
		CHO-THE	Choice Theory		
Profile/ background details		APP-AGE	Age when started apprenticing		
		EDU-STAT	Education status		
	FAM-BAC	FAM-BAC	Family background		
		FAM-WEAVHIST	Family weaving history/ background		
		SIGN-EVE	Significant event such as birth/life/death		
	WEAV-HIST	Career history in weaving			

	WEAV-AFL	Weaver affiliation, memberships etc
	WEAV-AGE	Age of the weaver
Miscellaneous	BHU-CUL	Bhulia culture
	CHD-LBR	Child labour
	CRED-SYS	Credit system
	DES-MET	Design Method
	ENT-EXP	Enterprise expansion (requirements)
	ENT-EXPCOS	Enterprise expansion cost
	EDU-PREF	Education preference
	GOV-SUP	Government support
	HEL-HAZ	Health Hazards
	LEARN-MOD	Learning model for Trying new skills/ things
	LEARN-SOU	Source of learning
	OR-HIST	Oral history
	ORG-INV	Organisational Involvement
	RES	Resilience
	SCH-DRP	School Drop
	WEAV-CON	Weaver concerns, questions..
WEAV-INV	Weaver investment	
WEAV-PRO	Weaving problem	
WEAV-OPI	Weaver opinion	

E. Coding Cycle V

Theme	Category	Code		
SERV-OF	SERV-WHAT	HUM-CAP		
		SOC-CAP		
		FIN-CAP		
		PHY-CAP		
		NAT-CAP		
	SERV-HOW	TOCHPT		
		ACT-SEQ		
		ROLE		
		CA-AST	AST	BOD
				FAM-SIZ
HOS				
WEAV-AST				
CAP	WEAV-SKILL			
	WEAV-PROD			
	DES-ABL			
	MARK-KNOW			
	VAL		CHO-RAT/ ART-VAL	UTL-VAL
				SOC-VAL
EMOT-VAL				
EPI-VAL		COND-VAL		
		SERV-SAT		
		WEAV-ASP		
		PROF	AGE	APP-AGE
WEAV-AGE				
FAM-BAC			FAM-WEAVHIST	
			SIG-EVE	
WEAV-OTH	EDU-STAT			
	WEAV-HIST			
	WEAV-AFL			

Appendix XIV: Sample of Data Categorisation under codes (cooperative weavers)

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
HUM-CAP	<p>This was given by the Bastralaya. (design) (7)</p> <p>No, no. sometimes they tell otherwise we make from our idea (8)</p> <p>Colour mixing? The manager of the cooperative tells us. (8)</p> <p>Yes, he tells. What to mix with what to get a particular colour. (8)</p> <p>No, haven't done training. (12)</p> <p>No, whichever design they like, then they don't say. If there is no demand, if it doesn't sell, then they say stop this, make a new design. (16)</p>	<p>They had given their design once or twice, but when we made that design, we didn't get wages commensurate to the effort, so we left it. Our design is still working well. (5)</p> <p>Rs.1500. I saree for Rs.1500. There is an advance order for two sarees already. Since his health is not well, he hasn't been able to make it. He had gone to the doctor in Barpali. (9)</p> <p>He is not well. Fever. Doesn't feel like eating anything that's why he had gone to the doctor. Not able to make the saree. We have an advance order for two sarees. (9) (importance of health)</p> <p>Bastralaya likes new, new colours. If we mix two to three colours then we get a new colour. They like it more and that is not available in the market. You get only shading colour. If you mix two or three colours that is not available in the market. That's why they like it more. That's why we make these new colours. (11)</p> <p>If you do a lot you do. Body problem. (23)</p> <p>Electricity facilities as well. If you come complain how much can he listen everyday. Sometimes one does. Now there is a healthcard scheme. That is a good scheme for weavers but the amount that farmer gets, if we weavers get that will be very good. We weavers can also improve. (31)</p>	<p>When in our village the Bastralaya started, from that time design started in our village, he is saying like that.(3)</p> <p>What they used to do in the beginning, Bastralaya would give the graph on paper. The people who were expert in tying, so they used to give that first and then collect the saree. If the saree design was good, if they liked it, what they used to do, to the rest of the people they used to give one-one piece saree and seeing that, the rest of the people would make the design. So what he did, he took design from someone else and wove the saree and give to the Bastralaya. (8)</p> <p>First one or two years, then when Anuradha saree design came, so what he thought, I might be able to do it myself, thinking so. He got the design, he got the graph and he made the bandha himself and gave it to the Bastralaya. (9)</p> <p>He had done, but the bandha that Bastralaya used to give, he wont be able to do, thinking that, he used to get the bandha from others. (9)</p> <p>From the morning, what he used to do, is take time out and do bandha work. In the morning after bathing he used to take one to two hours out and in that do bandha work, then after eating in the night when work used to get over at 10 pm, in that time he used to do bandha work. One to two hours till midnight and then sleep. Then from morning again the routine starts. (9)</p> <p>I used to make bandha myself. I used to get yarn from Bastralaya and make the bandha myself. (9)</p> <p>If he couldn't afford, if there was less income then he used to tell them, compulsory they had to weave at the time, like that, like that he got experience. (11)</p> <p>No. (training) (13)</p> <p>No (exposure visit) (13)</p>
SOC-CAP	<p>No, no fear. (13)</p> <p>If there is any problem, we ask the manager is it possible to get some advance. He gives advance. (14)</p>	<p>Sometimes they do/ don't also. The manager of the Bastralaya is my uncle. (advance) (17)</p> <p>So sometimes we get an advance. He doesn't tell anyone, but he gives it to us. If there is a need, if there is a festival, we ask for advance. (17)</p> <p>Yes, all the weavers went on strike. When we did it three to four times then they called a meeting and increased the saree rate. All saree rates. (20)</p>	<p>Setting up of Bastralaya</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
FIN-CAP	<p>Yes, we get a loan. Our money is deposited there. For example 10 percent is deposited. They give us the loan from that. (13)</p> <p>Yes, first we used to get bonus, during fathers time. Bonus, then we used to get pania, dungi, nari, lots of things we used to get. The President in between ate up all the money. (14)</p> <p>Yes, the money we deposit, we get it from there. (15)</p> <p>No we don't. (no other type of saving) (20)</p>	<p>In Bastralaya we get this and money. (6)</p> <p>From here, in one saree we get five percent commission. (17)</p> <p>In one year they are giving five percent commission, but they said, if the production is better next year, they will give 15 to 20 percent commission. (17)</p> <p>It has started, but we have not got as our production was less. Ok that's why we have to increase the production because two to three sarees we sold in the market. (20)</p> <p>For this saree we take Rs. 850, so to fulfill our wages we tried. We didn't give to Bastralaya. We took it to market. We got Rs.980 for the saree. They increased the rate then our production was reduced. (20)</p> <p>Production has to be over Rs.30,000 then only we can get bonus. (20)</p> <p>Yes, if they don't like something (cut wage) (27)</p> <p>First we used to get, bonus. Now it has stopped. We don't get, first every weaver used to get a bonus when my uncle used to weave that time they got bonus, every year. Now the bonus has stopped. (37)</p>	<p>He is saying that when weaving Anuradha saree, he used to get Rs. 40 wages. Then at master shop they would say that this design has stopped, start a new design. So he used to ask what are the wages for that. They used to say whatever the wages were. If he couldn't afford, if there was less income then he used to tell them, compulsory they had to weave at the time, like that, like that he got experience. (11)</p> <p>About 10-12 years since it was closed- He is saying that it is 10 years since it has closed giving and taking interest. So that time there was Badabhura President, in the meeting he raised the point that why from their (artisans) money we are taking interest. We also don't want to take interest and give interest. He said the interest issue is better closed right now and since then it was closed. (11)</p> <p>From Rs.100 they get Rs.80. They used to deposit according to 10 percent and if they need any loan, they give application for the loan and from that he gets according to 80 percent of the loan. (11)</p> <p>When there was a problem at home and there were financial difficulties, that time he used to go and take loan from his deposited money. At that time, he had to write an application, and he used to get the money. Now he is saying, that they give according to 10 percent meaning whatever your total amount, they can take. (11)</p> <p>If for loan they would apply in another bank, then they would get harassed more, because they didn't know the way to talk, how to take the loan- go to him, go to them. Harass (him) more. The people who are defaulter, they would only get the money, and his thinking is that he will take the money and return the money to them, so he wasn't able to talk like this with them. So they used to think, that he would not be able to repay the loan, so they didn't give him loan. (12)</p> <p>Last year to get his son married, he had taken a loan, that's why now Rs. 3-4,000 is left. (12)</p> <p>When Bastralaya went into a loss, that time their money that was deposited, he was confident that he will get the money, but the bonus, interest money they didn't get. (12)</p> <p>Bonus the people who used to weave more used to get it, the people who used to weave less didn't get it. (13)</p> <p>He is saying that is Bastralaya fixes that if you work up to Rs.40,000 then you will get bonus, so if they worked more then they would get more commission, meaning if they did work worth Rs. 45,000 then they would get commission for Rs.45,000 as well. If it was less than Rs.40,000 meaning like Rs. 38,000 or Rs.35,000 then they didn't get any bonus. (13)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
PHY-CAP	<p>Mine I get from Bastralaya. When I have to buy, I get the yarn from Benu Meher. (2) It looks white. (yarn) (8) Colour from Benu Meher. (9) For one pair... (two sarees) it costs Rs.100. (9) No, only yarn from there. (9) Yes, yes good quality. A quality yarn comes. (10) There is benefit. Our weaver gets pania, you get weaver cottage. (11) Yes, first we used to get bonus, during fathers time. Bonus, then we used to get pania, dunggi, nari, lots of things we used to get. The President in between ate up all the money. (14) Manager allows us. First it goes to office, but when they are not able to sell, then it is returned. Then we sell it into the market at reduced price. (20) Mostly work happens in the night. If there is no light in the night how can one work. How much can one do in the day? (22)</p>	<p>First we get the yarn. We weave from the Bastralaya, so they give us the yarn. They give us white yarn. (3) We had tried one to two designs but they didn't do well in the Bastralaya, so we had to sell it in the market. (6) In Bastralaya we get this and money. (6) From the shop. We have a shop in the village. (10) They give us free white yarn. We have to purchase everything else. (10) Yes. Rs. 44 for two sarees. Hydrosulphate is also needed. Minimum for two sarees you need about Rs.100 (11) We get panya also, nail also. (17) We also get shal (loom) (17) We use the heater (23) From Benu or Kalia we buy yarn, clothes. (28)</p>	<p>The yarn used to come from Bargarh. In that whoever wanted whatever kind of yarn, they used to give that and take the cloth back. (5) Like design meaning they used to give white yarn then you make the design yourself, weave the cloth and give. There was coloured yarn as well, whoever wanted it they used to get it. There were different, different designs, that time. (5) Here when there was a shortage of yarn, they used to write and give. The manager, they used to get yarn from there and take sarees from here. (6) Yes they used to give colour also and thick yarn- That time they used to buy colour from the Bastralaya- The people who used to weave with thicker yarn, they got free colour and the ones who wove in thinner yarn, they had to buy the colour. If they had to buy the colour outside at Rs.20, then from Bastralaya they would get it at Rs.18. (6) First one or two years, then when Anuradha saree design came, so what he thought, I might be able to do it myself, thinking so. He got the design, he got the graph and he made the bandha himself and gave it to the Bastralaya. (9) I used to make bandha myself. I used to get yarn from Bastralaya and make the bandha myself. (9) They have given phool doobby, nari, one in which the thread goes in between. (13)</p>
NAT-CAP	<p>Yes we get water, there is a tubewell. No, problem. (water) (12)</p>	<p>No there is a big water problem. (21) We wash it, we wash it with surf, then we boil it, then we colour it. Four to five times we have to wash it. After the colour also. After the colour also we have to wash it again. To fasten the dye. After washing the colour gets shining. (22)</p>	
TOCHPT	<p>Once in 2 weeks (yarn) (2) Get yarn worth four pieces. Once every two weeks. (8) Colour from Benu Meher. (9) We get it once a week. We colour for four sarees at once (9) Now. The manager. Rama Meher. (13)</p>	<p>First we get the yarn. We weave from the Bastralaya, so they give us the yarn. They give us white yarn. (3) No at first there was buti design in the market. It was doing very well, so an uncle of mine was in the Bastralaya. He was a manager, so he told my elder brother, if you can make this design. He bought one of our sarees for his mother. The one we sold in the market, the two-faced saree. The body is plain. He bought that saree for his mother. He saw that the weaving of the saree was good. So he thought that if they weave for Bastralaya, then their saree will do very well. So he gave us a design, the buti design. It was launched for the very first time in Bandhpali village and a good rate. We started it. At first the wages were Rs.630 for two sarees. They used to give yarn and colour, then we used to weave. So at that time the saree was doing very well. So that's how we entered the Bastralaya.</p>	<p>There was a shop in Budhapali. I was 25-22 years. I wove Mahima saree. (3) So he is saying that watching people he got to know. So what he used to do is the people who worked with the Bastralaya, he saw that they were benefitting more, meaning getting more benefit, so he thought if he worked for the Bastralaya also it will be good, and that's how he started working with the Bastralaya. (4) No, when the Bastralaya came to our village, that time he filled the membership. (4) Yes. They used to send notice, if they sent notice, they went. In the annual meeting they used to give notice. So if you had work, you would go, if you wouldn't go. Then also nothing would happen. (14)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
TOCHPT (CTD)		<p>Then slowly, slowly my elder brother thought everyone weaves double ikat. Our neighbour used to, at my maternal uncle's as well. So when he went there, he learnt by observing. We used to go there during Dussera to fetch my bhabhi (brothers wife). We had to stay two to three days. So stayed with them and learnt tie and dye. Learnt all of that. So we told my uncle that we also want to learn, please teach us. Uncle said ok. He taught us at first. We wove the dhadi sapta. First the big dhadi sapta, then we came home and started. So it came out very well. Then we sold it in the market. It was not there in Bastralaya at the time. At the time Bastralaya gave us a design. If you can make this, they gave us a graph. If you can give us this, then we can do the costing and give you more wages. My elder brother saw the graph and thought if this design can work or no, there is only graph and nothing else, then thought about it and made a design and that design is still around today. Nobody else in the Bastralaya weaves this design, in the entire Bargarh branches of the Bastralaya. In our village nobody working with the Bastralaya weaves this design, only us and my uncle weave this. (4)</p> <p>This at one time we get yarn for four sarees. When we deposit three sarees, we get yarn for four sarees. (6)</p> <p>After making/not making this saree and selecting, they will give the anchal design. After costing the saree they will give design of the anchal. First we can put any face on the saree, then after the costing, they will give the design of the anchal. After the costing, if we like the wages, then they will give the design of the anchal. (16)</p> <p>Yes. That every year how much profit/loss happened. How much loan was taken from the government? What will we do in the coming year? (35)</p> <p>Also go for touring. Sometimes if there is a new design go direct to the head office for costing, sometimes the costing works well. Sometimes they don't like it. (36)</p> <p>Yes President does the costing. There is a costing designer as well. Three to four people get together and do costing. (36)</p> <p>About two to three times. If there is a new saree or to tour or sometimes don't go either or if there is some work in Bargarh, go to visit. (36)</p>	

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
ACT-SEQ	<p>After getting the yarn, make tana.(2)</p> <p>After bandha, then colour.</p> <p>After colour, spin in the charka (3)</p> <p>So first you get the yarn and then wash it (3)</p> <p>One and a half days (winding) (3)</p> <p>In a day five to six hours (winding) (3)</p> <p>Five hours. After that to make this pointing to the tana. This also takes one and a half days. Altogether it takes three days (3)</p> <p>Each thread is counted. After that we make design and then colour. (4)</p> <p>After bunching and counting over here it is taken inside. (4)</p> <p>After this we make tie and dye. We colour it. (5)</p> <p>It takes two hours. (to dye) (5)</p> <p>Two hours (to tie) (5)</p> <p>They fold it as there is not too much place in the house. (to tie) (5)</p> <p>Yes in two hours. There is only one design. (5)</p> <p>Yes made a drawing. Then made a graph and after that started the work. (7)</p> <p>Before this made box patli design. Anchal is different. (7)</p> <p>We get it once a week. We colour for four sarees at once. (9)</p> <p>Most of the weaving work happens in the night. (22)</p>	<p>First we get the yarn. We weave from the Bastralaya, so they give us the yarn. They give us white yarn. (3)</p> <p>This at one time we get yarn for four sarees. When we deposit three sarees, we get yarn for four sarees. (6)</p> <p>My wife. All the women do this work. My mother, my sister-in-law. (winding) (7)</p> <p>Two hours. (winding) (8)</p> <p>Outside. Area. Here the tie and dye happens. Here the saree, the ikat is made. Then it is hung there. There the design is made. (8)</p> <p>This takes three hours for two sarees. (8)</p> <p>After this we hang it there and make the ikat design, first we tie and then do the colour. (8)</p> <p>We fit it in between two rods and then tie. (8)</p> <p>First you heat the water, add colour, heat it. Mix it. (11)</p> <p>You mix it in cold water and then the tie, dye design is rubbed. (11)</p> <p>It is rubbed. After rubbing when it gets a bit of colour, then it is heated again in the same water and hydrosulphate is added. That makes the colour fast. It becomes an original colour. It does not fade. However much you wash, it does not fade. (11)</p> <p>Yes at once. (colour 2 sarees) (11)</p> <p>Minimum 3 hours. (11)</p> <p>This warp, to tie and make it about one day. (12)</p> <p>It takes about one hour. For setting.(13)</p> <p>In a day [long pause] minimum 10 hours (14)</p> <p>We don't both sit together all the time. We keep changing, coming, going, bathing etc. If you take out, then 10 hours. From morning 6 am to night 10 am. There is break in between to bathe, eat, sleep etc. (14)</p> <p>Matching white on white takes more time. In the plain saree, it doesn't take so much time. It takes only a day. See the white here, you have to match it. If it moves from here to here, then it won't do. It will be damaged. (14)</p> <p>In two sarees. Weaving the saree is five days. (18)</p> <p>The saree (kothi, kothi) (boxes), you have to count each thread. You have to check. In the total saree there are how taars and karis, checks we have to measure it before making. (18)</p> <p>For weaving two sarees, it is five days. And in between the rest of this work is adjusted. (19)</p> <p>See the initial spinning, takes two hours. After that the tie/dye preparation, takes three hours. Then the tying of the design takes one day (19)</p> <p>Two sarees can be tied in one day.</p> <p>It takes four to five hours to make the tani (warp) Two people.(for warp) (19)</p> <p>Colour. (19)</p>	<p>Whenever he gave the saree he used to get it. Whenever he used to go. How much ever the wages were, he used to take it. (10)</p> <p>In two looms, two-two people weave and the rest like bandha etc. He and his eldest son do together. (14)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
ACT-SEQ (ctd)		Colour takes about three hours. Warp three hours, weft three hours. Both about six hours. (13) We wash it, we wash it with surf, then we boil it, then we colour it. Four to five times we have to wash it. After the colour also. After the colour also we have to wash it again. To fasten the dye. After washing the colour gets shining. (22)	
ROLE	I do it. (colour mixing) (8) In a week, three. With both of us working together. You need two people for double ikat. One person has to hold on one side. (12) Yes everyone works together. See the sarees are big you cant do it alone. We work together. (19) Yes they will both help each other even when they have separate looms. Right now there is one loom so they work together (19) See the number of people who are working. Four to five to six people (20) No see, my family two people. Mother and sister also work four people. My elder brothers family two people. The 11 year old child also helps. (21) He does small, small work. He is studying, but does small, small work.) [Pointing to the sister] She works on tana-bana on the bandhpura machine. (22)	My wife. All the women do this work. My mother, my sister-in-law. (winding) (7) Both brothers do. This can't be done by one. Both people have to sit. (12) If one person catches at the other end then it will be fine. It will be good. (12) He does only that work, tying, colour he does. We only weave. We two brothers. This elder brother, he makes the design. He does only that work, tying, colour he does. We only weave. We two brothers. This elder brother, he makes the design. (18) The rest of the time, bathing, eating. Three people work full time and mother and Mrs. work part time. The sister in law also works. If there is time after cooking, then the work in that time. (18) Our wives carry the water (22)	In two looms, two-two people weave and the rest like bandha etc. He and his eldest son do together. (14) Yes, he and his younger son helps. (15)
BOD	Good built, small potbelly	If you do a lot you do. Body problem. (23)	Slim and slightly bent. Son however had a medium built
HOS	The bunasar, if it leaks then it is a problem (the bunasar has a tin roof) (17) The house was in good condition although small, but had a large outside space for tie-dye activity	House was part of a row of houses next to each other. Many rooms of decent size and space for outdoor activities	House was part of a row of houses next to each other. Many rooms of decent size and space for outdoor activities
WEAV-AST	Two looms.(11) Father used to weave. They had a loom. (11)	Two looms. One loom is outside. (12) No different sarees in different looms. Plain saree in that one. (19) Have got the loom. Have to make some space. When I make some space then I will start. It is a frame loom, the jacquard machine. (23)	2 looms (14)
WEAV-INC	Rs. 950. One saree Rs. 950. (7) Rs.950 (20) Yes. Also they cut 10 percent on every piece towards our saving. So after deductions we get about Rs.850 (20)	Only wages Rs.1000. We also felt good then. We make about three sarees a week. We are three brothers and make three sarees a week then, it works well. We are able to earn a livelihood. (5) Rs.1000 per saree. Rs.980 (19) Yes, all the weavers went on strike. When we did it three to four times then they called a meeting and increased the saree rate. All saree rates. (20) About Rs.50 to Rs.100 (wages cut) (35)	Rs. 980. (14) Rs.980 (16)

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
FAM-SIZ	Wife, mother, sister and one child.	He, wife and baby. Lives in a joint family with 2 brothers.	Five. (sons) (14) Earlier only one person was working, now if two to three people are working and each is earning then the income will be more. (15)
WEAV-PROD	In a week, three. With both of us working together. You need two people for double ikat. One person has to hold on one side. (12) Bandhpura. To do it by hand it takes longer. It takes two days. (15) Yes it is continuous, but if there is no time, then it stops. That's why if we have bandhapura machine or tanapura machine it will help. (18) No with two people you can make four pieces with both looms.(19) There is no disturbance in the night. In the day there are other things to do as well. If one works two to three hours here then one works well. Then in January one works more because it is cold. In the hot one can't work so much. [Pointing to the sister] She works on tana-bana on the bandhpura machine. (22)	One saree takes about two to two and a half days. (14) Two to three sarees. If the work goes well, mind is not disturbed. We can make three sarees. If we have to go from here somewhere, if there is a disturbance, then two sarees, but two sarees guaranteed. And it goes on regularly. It doesn't change with any season. There is no season for this. Less/more. Get yarn, take wages and give saree. (18) In two sarees. Weaving the saree is five days. (18)	In 15 days. Three to four pieces. In a month five pieces. (14) There are only two people for bandha that's why. (14) About eight to nine pieces (16)
WEAV-SKILL	Right in the beginning, pajni. After pajni, tanasara, tying the thread. (1) You need both geometry and Maths. (4) If the person doesn't do it in line, it won't happen. If the person doesn't know geometry he cant do. (5) First from Bastralaya. When I grew older I started to get ideas. (7) Yes, only double ikat since eight years (12) In the village whoever is doing, I went and asked around and learnt. (12) Yes then I can make new design as well. (17)	When I started, I learnt about the pre-weaving stage. After that slowly-slowly weaving (2) The tana bharna, then tani, pajni, used to apprentice with father. After that learnt bit by bit of weaving. (2) Yes, only one type of design. The colours are different but the design is the same. (6) It is in the mind. Five to seven years they have been doing the same design (9) No at first we had to see the graph, but now it is a habit. (9) No. We have a habit now. I we need to do more, then we need to wear gloves. In a week we need to do once or twice. We don't need to. (12) We have fallen into a kind of habit, weaving together makes it quicker. We take more time to make single ikat. [Laughs] (15) Whoever has never woven double ikat before, if they see this saree, they will say, they wont be able to make it. (15) Even if they make one saree a week, even then they wont be able to do such neat work (15) Jacquard work. I have done jacquard training. I have even got a certificate. (23)	

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
DES-ABL	<p>Line box (pronounced as line box) (6) The name of this is box. Because there are boxes in this. So when you wear it turns around (modeling the saree, the box pattern goes round and round) (6) No, I have made this design. I have also got prize. Got a prize (6) This was made earlier. This is box patli (7) Different colours. Same design but different colours. One colour in every four piece. Repeats.</p> <p>If the colour is not good, there is no show. (9) I would have made about 15-16 designs. (16) No, not this type we don't know. (elephant, horses etc) (17) The yarn breaks in between, it won't take good colour. The colour will get damaged if it is not good quality yarn. (20)</p>	<p>This is our own, my mothers. See, This is very nice saree for puja, it has the feet of goddess Lakshmi on it. In the face (anchal) there is an ikat kalash. See. (9) This is olive R and golden mixed. Orange colour. Two to three colours are mixed together to make a colour. (10) Golden with olive R gives this colour. (14) It is a bit deeper than this, bit deeper, that's why it looks almost black. (14) Not in single. In this the warp and weft have to be matched even if it moves a little bit, it won't do. (14)</p>	<p>Yes first they used to weave buti, with 40 count yarn. (1) Do-muhi, then Ek-muhi (2) Chandankura flower and Nagbandhi flower. (2) He is saying it was square, square in the border. It is tikdi, you know. (2) Like this patches, patches are there and gar gar. (2) Gulab flower. That time different types of flowers they used to cook (make) in it and many colours were there in it. He is saying that now it is ok to do one colour. At that time they had to put five to seven colours (2) Gulabi (pink), Haldi (golden), green, red (3) First the Anuradha saree that was there, in that there was a phool meaning flower, from that the stem used to come out like eyes and there used to be patches there and small, small flowers used to come, so when you set it, it looked like a 'kalash'. On top of it zinnia, zinnia meaning coloured flower- How many zinnia flowers?- On top of that zinnia flowers, four four used to fall (9) Kalpana. (9) There used to be lehar (stem/wave) and in that, there was one colour and on the other side another colour. (10) I don't have so much knowledge (experience). I can see a design and make it. Preparing it myself, I don't have knowledge. (10) It is called 'Aad-kothi' (like diagonal lines) (14)</p>
MARK-KNOW	<p>In Bastralaya, before me father was working. Never worked with anyone private else. After my father expired, did private for two years.</p>	<p>How to make different colours, designs. How to present it outside. If we go to sell the saree in government programmes/ exhibitions then how we can display the sarees. To attract people. They had come to tell us this. The fees they took for only these two days is Rs. 10,000. They had come from Hyderabad. (25) Yes in exhibitions. Yes. Bargarh two to four times. Then outside in Tamilnadu we had seen an exhibition in Coimbatore. (26) In a month we go two to three times just to see/shop, get veggies etc. If saree gets disturbed/damaged, then we go to sell it in the market. If there is a new design, the Bastralaya doesn't like, then we sell it in the market. If we have money problem, if there is a big festival, we need more money, we sell two to three sarees in the market. Market has a more expensive rate. (28)</p>	<p>Bargarh and Keontipali. (4)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
CHO-RAT	<p>No we get, we get. But we don't get prize when they give. When we make our own design we get prize (7)</p> <p>No we do but it takes a month and a half and if we make good design and don't get benefit then what is the point. (7)</p> <p>Made one design and then when we get good wages. Then when it seems less, we stop this and make a new design. If we don't get benefit then what is the point. (7)</p> <p>Not from Bastralaya (laughs)</p> <p>Bastralaya colour is not good. They don't keep all types of colours. This colour one won't get from Bastralaya. (8)</p> <p>Because Bastralaya, the president that was there, made the Bastralaya down. He made it in such a way, that no weaver got any support, or good price, that's why people went into private. (10)</p> <p>There is no benefit in private, Bastralaya is fine for us. (10)</p> <p>No, my circumstances were not good. (for training) (12)</p> <p>There are more wages in double ikat. (12)</p> <p>But despite more time we get more wages. Yes. (12)</p> <p>Yes, Bastralaya is ok. Because when it rains, after making the saree, go give it in the office nearby which is open till 5 pm and get the money and come back. Now, in the bazaar, how will one go in the rain? So how will we get the money? Then how will we eat? Our Bastralaya is very good. Very good. If there is any problem, we ask the manager is it possible to get some advance. He gives advance. (14)</p> <p>Whoever thinks the Bastralaya system is ok, it is ok for him. For some people the bazaar is good. This year the bazaar is good, the sale is good, that's why public says the bazaar is good. (14)</p> <p>No how will I buy it? There are people right now, so I am not getting it. (16)</p>	<p>Approximately 10 years. We go very little to the market. Almost never. If we do go to the market ever then we take two pieces of saree. If it gets rejected sometimes, we take it to the market, otherwise we never go to the market. (3)</p> <p>Machine. If there is a lot of work, they keep machine. For our one or two sarees there is no need for a machine. We can do it by hand. You will take pictures while working as well. (7)</p> <p>No this saree is not Premada. This is market saree. We haven't given this to Bastralaya. Since we didn't get the rate we asked for, we sold it in the market. (9)</p> <p>No, this I had made myself for the Bastralaya for costing, but they didn't take it at the rate we wanted. We had a loss, so we sold it in the market. We got good profit there. (9)</p> <p>We get colour from Bastralaya, but they charge more price. It is the same colour. If we get the same colour in the market then why will we go to the Bastralaya. (10)</p> <p>Absolutely not, don't feel like doing it at all. Don't feel like doing it at all [smiles]</p> <p>See single ikat also takes about two to two and a half days to weave, so why won't we make double ikat. (15)</p> <p>No. If we sell on our own, the market is not sometimes good. Sometimes it sells at this rate. Then we go to the market at less rate, two to three months we can sell at a higher price, but for the whole month, we won't be able to sell. Not through the whole year. Then going to the market is a days loss, then expenses to go and come. If we are not able to sell the saree, and come back in the hot sun, then there are difficulties at home. It affects the health, then if you are not able to sell the saree, the mind is also sad. Then there are money problems. Till a week, the business is out, the market is once a week, the weekly supplies of yarn, food, ration, things, where will we get from? (16)</p> <p>That's why we have to do maintenance. That's why anytime we cut the saree and give it to the Bastralaya and we get our wages. (16)</p> <p>Here in the village itself. If there was another village, we would have closed this. (17)</p> <p>No they liked it. But we didn't get enough wages. (27)</p> <p>Maybe. (that they may not work if Bastralaya office was not there) (34)</p> <p>Like yarn, colour or if something goes wrong in our saree or if something goes wrong in our deposited saree, we go and improve it. (35)</p> <p>If it is somewhere else we wouldn't be able to go or they also wouldn't be able to contact us. (35)</p>	<p>He is saying that first he used to weave on his own, it used to be difficult, so he started working with the Bastralaya. (3)</p> <p>I was alone. Have to do everything on my own. Do colour, pajni, the rest and have a family. (3)</p> <p>He used to work on his own, so most of the work used to fall on him, he was a lone man, if he goes to the market his time would be wasted. (3)</p> <p>And also more expenses, more expenses. And if I make three to four pieces... gives yarn, colour, make everything at home. They give the money for the market, it is once in eight days, whereas with Bastralaya you can give it today and get the money at the same time. You can get the money and spend it. (3)</p> <p>What he is saying is first he used to weave on his own, he had to go to the market, he had to go weekly once, so his time was wasted and he was married at that time, he also had children, so in that he used to end up spending more as well. When he used to go to the market his time was also wasted and he also incurred more expenses so he thought that if he worked with the Bastralaya even if he finished one saree, he can go and get the money and staying at home, he could work more. Make one to two sarees more. That's why he started working with the Bastralaya. (3)</p> <p>What he used to say that when it used to be thicker cloth, in one day they could take out only one piece. It was more work and also more effort. Effort meaning they had to work hard with the thicker yarn. Then they thought that if they wove with thinner yarn then. (7)</p> <p>First the saree they used to weave, that saree was seven to eight hands. What used to happen in that is they had to do pajni, tanasara everyday and one saree they had to take out, so it was more effort. So he thought that if in one day if they were working eight, nine, ten hours then if they work with finer yarn the work will be less, it will be the same. The income will be the same. That's why he used thinner yarn (7)</p> <p>Work less meaning, if in 10 hours how much saree he can make with thicker yarn, with finer yarn, it will be less no? But finer yarn there is more demand. If they sell at more rate won't it get make (made) up? (7)</p> <p>Working with finer yarn, it will be less effort and more wages. In thicker yarn, there will be lot of effort and less wages. That's why we prefer working with finer yarn. (7)</p> <p>Yes it is hard and in one day you have to take out one piece. It happens. If you weave this in 120, in seven days two pieces will come out and income will be more. Its demand is more. The 120 count one. (8)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
CHO-RAT (ctd)		<p>If the saree has a bit of difficult if we have not been able to see it for example then they call it 'damaged'. The same thing we get here and improve it. We go to Bastralaya and improve it. (35)</p>	<p>Meaning two pieces. For two pieces and it used to need the same amount of colour and the same amount of effort. So that's why he used thinner yarn. (8)</p> <p>If we weave Anuradha we get Rs. 20 more. Then if we weave Kalpana we get Rs.25 more. Like that slowly, slowly change whichever design paid better, get that design, prepare it and make bandha. But to change a design it would take a month. (10)</p> <p>So what they did earlier was whichever design they would benefit and if they make another design, it would benefit more. He is giving an example first if they would have a benefit of Rs.20, then if they made another design they would benefit by Rs.25 so Rs.5 profit, but the effort is the same so like this like this, they changed many designs. (10)</p> <p>He is saying that when weaving Anuradha saree, he used to get Rs. 40 wages. Then at master shop they would say that this design has stopped, start a new design. So he used to ask what are the wages for that. They used to say whatever the wages were. If he couldn't afford, if there was less income then he used to tell them, compulsory they had to weave at the time, like that, like that he got experience. (10)</p> <p>It takes time to go to the market. In that time if they weave they will have more benefit. (15)</p> <p>He said that if there are more people, more work will happen, then if more work happens there will be more income, so it is ok to spend. But first what used to happen is there was only one person to earn and in that he used to have children etc. and they used to work with thick yarn as well, then their income was less and expenditure was more. (15)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
SERV-SAT	<p>Yes, there is always supply. They give advance yarn. And then when yarn is bad, colour gets defected, so we complained. After complaint all yarn goes back (9)</p> <p>No, they take the damaged saree. It is their fault not ours. (9)</p> <p>In between, if there is no problem, we don't go. If there is any problem, our manager goes there and does the work for us. (13)</p> <p>Now P Babu is the president, then it is doing very well. All the loss, he has brought it back to profit. Our Kruthartha Acharya's grandson. After he came, he became the President. All of us weavers worked and told him, you become President and save our Bastralaya and run it. (10)</p> <p>Yes. It is ok. (wages) (13)</p> <p>Now it is okay. (14)</p> <p>No, no, Bastralaya is good. (15)</p>	<p>Only wages Rs.1000. We also felt good then. We make about three sarees a week. We are three brothers and make three sarees a week then, it works well. We are able to earn a livelihood. (5)</p> <p>Yes if there are money problems one one and a half day, they let you know if there is a problem but otherwise we get it immediately. (16)</p> <p>It is in the village. It is very convenient. If we make a phone call, they keep the money and go. (17)</p> <p>Benefits meaning, after 10 years we have not benefitted enough. Meaning we have not got any help. We weave, we get wages. No other help. (20)</p> <p>In a month. Last time we sold regularly for three to four months because of strike. If there is no strike, we don't go to the market even for a whole year. (28)</p> <p>They used to. Now there is a new rule, if the saree is damaged they don't take then we sell it in the market. If it is very damaged. If it is a little damage we can improve it. They say if this is damaged set it at home. So we get it home and set it. If something gets broken in between, if this is a saree, there are two threads on the side attached to tighten it. This gets broken sometimes, so it gets damaged if it is broken. It gets holes so it doesn't work in the Bastralaya. So that we are not able to see it sometime. Then at Bastralaya we take a needle and set it. (35)</p> <p>It has changed a little. First it used to have a lot of money corruption, now it has changed a bit. This President is good. He is strict. He stops from money corruption. He gives good facilities as well. (37)</p>	<p>No, our money will not drown. That is Bastralaya money, the shop money. It is government money. (12)</p> <p>Yes very fine. (15)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
WEAV-ASP	<p>No, we do need a bigger loan to do some work. To make our bunasar (weavers cottage), if we get it is good. (15)</p> <p>I will get a kampura machine. (15)</p> <p>This bandha work which takes so much time, with the machine it will take much less time. (15)</p> <p>Machine will be quicker. It will take two to three hours. (15)</p> <p>I can make one more. So can make four pieces a week (16)</p> <p>If I have more money... (17)</p> <p>Yes, I thought. For example to do a saree business. I thought of buying from other weavers and supplying to Bastralaya or bazaar. But I don't have enough money for this type of work. (17)</p> <p>If I get money or help, I will definitely think about it. (17)</p> <p>Yes, I think. But I don't have money right now. (18)</p> <p>No, I have thought. But for this it takes a different phani, pania. After that there will be a new design, but for a new design, this loom will be shut. It takes 10-15 days for a new design. The loom will be shut for 10-15 days. Then what will we eat? (17)</p> <p>See if I get a bandhapura machine, a pania, a bunasar. Having a good environment, one can weave more, then we can improve. The bunasar, if it leaks then it is a problem (the bunasar has a tin roof) (17)</p> <p>No weaving will continue. One of the brothers will do the outside work.</p> <p>We will stock every two to three days and sell to Bastralaya. (17)</p> <p>Yes, I have new, new designs. No time to make. When I have money, then I can. If I get the bandhpura then. What takes two days, it will take three hours, then how much time will be saved, then I can do different work. (18)</p> <p>Yes I will. If I get more profit I will leave. (21)</p> <p>You know this Bolangir. If I can do like a saree shop job or something then. We have to do something otherwise how will we survive. (21)</p>	<p>No we feel like making a different design, but we are not able to get fair wages for the same. We tried two to three times. We didn't get the wages. So then we are not motivated. Just now, elder brother has got a new design to make. The graph from Bastralaya. It will have a minimum wages of Rs.1500. Even then we feel it is less. There is a lot of work in it. (15)</p> <p>Want to make the bigger saree, but there is a huge time loss behind it. If you do a costing after a new saree, it takes about a month. The work gets disturbed but the saree we can make now as well, but don't get the fair wages. (19)</p> <p>No we want make. One design is not good all the time. We also don't like this design after so many days. But it is necessary we have to make. If the Bastralaya gives scope the design you saw on graph paper. We are thinking of making that. If it happens, if the wages are ok then we are thinking of making that. The weaving doesn't take time, it is the making (preparation) that takes time. Weaving, no matter how big the saree is will take two and a half days. The Rs. 1500 saree will take two and a half days and the Rs.800 saree will take two and a half days. No problem in weaving. Takes time to make. New saree takes a lot of time to think. If it goes wrong then our money is gone. (26)</p> <p>No we will make. (new sarees)(26)</p> <p>To make an expensive saree in the beginning you waste time in the beginning. See right now we are making two sarees in five days. But if you make a more expensive saree for two sarees it will take a month. So in that time, in one month, this saree we can make 10 to 11 pieces. That saree, if it is two sarees, we will have a loss the first month. To maintain that loss, if we have more money on our hand, then we can balance it. (27)</p> <p>Yes, that is what we have thought, that we will make new designs in one loom. If Bastralaya doesn't take it, then sell it in the market. Traders also come and say Rs. 1500, Rs.1700, Rs.2000 worth designs, please make, we will take them. It takes time and in one loom it can't be free with two looms we should be able to manage. Make new, new designs.(27)</p> <p>Have to work a bit harder. If the other loom starts, and brother's health gets better, then we can start (27)</p> <p>If the new design doesn't work in the Bastralaya, we will sell in the market and if it does well in the market, we will even buy sarees from the market and sell it. See, if we make a big design, it will be Rs. 1700, Rs.1800 at least so if we make two to three sarees a week the little profit we will make on it, we will buy a cheaper price saree from the market and sell it right there.</p>	

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
WEAV-ASP (ctd)		<p>It happens like this in Bailjuri market. The people who have money, take money to the market and come back with more money. They buy and sell sarees. They buy in advance and sell with Rs. 20 to Rs.50 profit there (28)</p> <p>Neither. If I think discussing with my brothers, I should leave weaving and do some other business in LIC line, go to some exhibitions etc. I feel like doing other things but because of family problems I cant go. If I get the opportunity then I will. (29)</p> <p>Like dress, material, shirt piece, handkerchiefs, sarees, different types of sarees. New designs that are currently not sold in the market. (29)</p> <p>Right now it is family problem, nothing else. (30)</p> <p>Yes buy from other people. I will also like to get people to weave. Make the design myself and get people to weave. Have seen many designs. ADT has just said in Sambalpuri saree, embroidery work. In Sambalpuri saree we currently don't do embroidery work. I love this kind of work. What we saw in Benares embroidery work, hand embroidered saree. I like this work, so when ADT officer asked what we like. I said that embroidery. If in Sambalpuri saree, we do embroidery, then perhaps a new design might emerge. It hasn't happened yet. (30)</p> <p>Yes one will have to learn. I am very interested in learning embroidery. Now my friend had said that you have computer embroidery. He has got something. That does computer embroidery, his house is faraway. I have told him I want to see it once. Ok he said once when we are free you can come to see it. Till now we haven't managed to find the time. I have seen computer embroidery in Benares. There is a store in which the entire embroidery is done in the machine. I have seen this. I had got the photos. It is somewhere. I don't know where but all this is in silk. I want that this work is done on our Sambalpuri tie and dye saree. (30)</p> <p>That's what I want. I want to make something that is not available anywhere. (30)</p>	

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
ART-VALUE	<p>Otherwise warp and weft won't match. (4)</p> <p>No, I have made this design. I have also got prize. Got a prize (6)</p> <p>All the designs outside saw them, got an idea. You won't see this design anywhere. (6)</p> <p>No we get, we get. But we don't get prize when they give. When we make our own design we get prize (7)</p> <p>If the colour is not good, there is no show. (9)</p> <p>See it will take less time for tana and bana. (18)</p> <p>Yes the same quality otherwise we find it difficult to work. (20)</p> <p>See actually the wages are not enough, it is not profitable, but since this is our caste occupation that is why we are working. (21)</p> <p>The yarn breaks in between, it won't take good colour. The colour will get damaged if it is not good quality yarn. (20)</p> <p>No haven't done training. No haven't tried ever. (21)</p>	<p>If one person catches at the other end then it will be fine. It will be good. (12)</p> <p>If it is one person, he has to see both sides. If there is one more person then, then it is quicker and also fine. (12)</p> <p>Very nice. This colour is in great demand. (12)</p> <p>This orange. (12)</p> <p>Then the ikat. White will match with white. Orange will match orange. It will match completely. The way it is now. (12)</p> <p>The white colour gives the shining. (13)</p> <p>See here. The warp and weft haven't matched but here they are matching white on white. If the warp and weft match, then it will appear white. It will also look good. If you see this (probably a single ikat pattern) from faraway, it won't be seen, but this (double ikat pattern), no matter how far you see it from it will be seen. (15)</p> <p>Even if they make one saree a week, even then they won't be able to do such neat work (15)</p> <p>To increase the wages, we sold in the market for some days. So our production reduced. (20)</p> <p>To increase the rate of the saree. First it was Rs.850 to increase it. (20)</p> <p>Rs.100- Rs.150 increase, then our saree rate became Rs.980. In the market everything increases, see, from dal, rice, tomatoes everything. Everything increases, so why should our saree rate not increase. The yarn rate also increases. So if we get the saree for Rs.800- Rs.850, then the wages should increase proportionately. So we went on strike we gave application, and the Rs.850 saree was then made Rs.980. (20)</p> <p>But our saree quality is high quality.(21)</p> <p>No problem for our saree even if we go now we can sell it in the market because our saree is good. The colour is guaranteed. The length breadth everything is guaranteed. So traders come to our house to take sarees then since we give it in the Bastralaya, we refuse them. (21)</p> <p>When the colour is good the more you wash the more it shines. If the colour is wrong it will go away on washing. If the colour is good the more you wash the more it shines. (22)</p> <p>Yes it was silk, Benarsi saree. The body was silk and the border had gold work in it. The saree looks very fine (26)</p> <p>The same day. In one day in three to four hours. In three to four hours. You go at 3 am in the night and come back by 10 am, with profit. They go in the night and buy and sell it early morning. If one to two sarees remain, they get it back. (28)</p> <p>Now the weaver has improved since olden times, but not as much as they should have. See to survive/live you need three things, food, clothes and house. Food is cultivated by farmers.</p>	<p>We changed it, but we didn't like it as the wages were less. For the new design, babu, they gave us Rs.950 didn't they? (15)</p> <p>The effort was too much, the wages was less. (15)</p>

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
ART-VALUE (ctd)		<p>The amount of scope for farmers that the government gives, they don't give the same amount of scope to weavers. Is it? (30)</p> <p>I was given a saree by the Bastralaya to make a thaan. It looked so bad if you see. You wont even use it as wiping cloth but that saree, the Commissioners Mrs, wears. I had made that saree. If that saree hadn't happened then my manager's job would have gone. (33)</p> <p>Get it from outside. Own saree we don't like. We weave it everday. However big the saree our own saree, our wives don't like. She doesn't like. They see it everyday so they get bored in the mind. They like a different cheaper saree even but not the more expensive saree we weave everyday. They see it since they wake up in the morning to evening and get bored seeing it. They don't feel like wearing it. (34)</p> <p>Yes you have to vote. But we don't go. It is useless (36)</p>	
		<p>Yes the training was in Barpali. I have the certificate for jacquard training. See (23)</p> <p>I am in that group. I am the most educated of the group. I have to do all the work. (24)</p>	
APP-AGE	Meaning 12 years. (1)	About 15-16 years (2)	About 15-16 years. (1)
WEAV-AGE	32	31	65
FAM-SIZ	My elder brothers family two people. The 11-year-old child also helps. (21)	No. I have four brothers. I was the youngest. So I was studying. (2)	3 sons. 1 married, daughter-in-law, wife and grandchild.
FAM-WEAVHIST	No seeing the family conditions didn't go. When I started working earlier in two years my father expired. Then I had to stay home	<p>No. He worked on his own. He used to sell in the market. He was a trader. When my father stopped working, then my elder brothers, had two looms, then they taught me. (3)</p> <p>First they were a master weaver and also buyers, like trader marketing. (3)</p> <p>Bargarh, Barpali... at that time there was Bargarh market, not Bailjuri market. During my father's time, Keontpali. Used to buy saree, after that whoever are staying in this pada (hamlet) used to weave our sarees.(4)</p>	
SIG-EVE		<p>No. [a hesitant smile and lowered voice]</p> <p>No what happened is my mother took very sick at one point. A lot of money was wasted (spent) (3)</p> <p>The whole business was wiped out and we couldn't save it. (3)</p> <p>Mother's health deteriorated and the business went down. It was tough. (4)</p>	

Code	Jadhava Meher	Gajendra Meher	Balmukund Meher
WEAV-HIST	<p>When they had gone to grandmothers house. Stayed there for seven days. (5)</p> <p>In Bastralaya, before me father was working. Never worked with anyone private else. After my father expired, did private for two years. Because Bastralaya, the president that was there, made the Bastralaya down. He made it in such a way, that no weaver got any support, or good price, that's why people went into private. (10)</p> <p>Six to seven years before. Did it for two years, then went back to Bastralaya. (10)</p> <p>No I don't. Some days ago I had been once. I bought and sold. Buy there and sell. I did this for two or three years and you make profit. (12)</p>	<p>I have been with the Bastralaya for 10 years now. (4)</p> <p>I tried the army. That time my weight was too less. For one kg I lost. Everything else was fine. Height, chest etc. But for one kg I lost. I was also in a company in Calcutta. In Kimi Company. (29)</p> <p>There I was working as a guard. I worked for 10-15 days. Didn't like it and came back. (29)</p> <p>I have been to many places for work. Had gone to Bhubaneswar for work. I didn't like it there. Had gone with a friend. It takes a lot of money there. I came back.</p>	<p>He used to weave for himself. His brother first started to learn. Then he started and like that slowly he started to weave. (1)</p> <p>Do-muhi, then Ek-muhi (2)</p> <p>When they used to make design with thicker yarn, tie the bandha. Then what used to happen is they were able to make it for one saree only. Because it was more thick. It used to be more difficult to colour it as well, if they use finer yarn. It will be for one and a half pieces and with the same amount of colour. (8)</p>
EDU-STAT	Matric did not pass. (2)	Above class X	Below Class V
WEAV-AFL		<p>Bijoyini weavers SHG. You stay opposite that place. Have you ever seen there are big, big machines.(24)</p> <p>I am an LIC agent. (25)</p>	
BHU-CUL	<p>Our Meher work, till death one cannot become fully experienced. (23)</p>		
OR-HIST			<p>First when they wove with 40-count yarn, the cloth had more weight and it was thicker. People used to like it earlier. They wanted thicker cloth. Slowly, slowly, people wanted less weight cloth. So what happened, they started with 60, then they wanted even less weighted cloth so 80 count came. Then they wanted even less, so 100 number came. Then they wanted even less so it came to 120. What happened is there was a difference in rate also. Like with 40-count yarn they used to sell the saree for Rs.50-60, then 100 number (yarn) used to sell for Rs. 100-150. People used to like that also because it was lightweight and had more design. What they used to do is if someone went to the village or sat in a puja, they used to specially buy it and keep it and use it at that time. (7)</p>