

IT-Enabled Social Innovation in China's Taobao Villages: The Role of Netrepreneurs

Research-in-Progress

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Abstract

We present a model of IT-enabled social innovation. Our model draws on the theoretical lens of social shaping of technology and the role of villagers-turned-netrepreneurs, as reference actors in the context of rural e-commerce development. The model is built on stage-wise observations of intermediary roles that villagers play and how these roles enhance or decrease in importance in the biography of rural to e-commerce villages' transformations across China in recent years. In this research-in-progress paper, we present a case study of Daji, China's first "Taobao performance costumes town", located in rural Shandong province. Our preliminary model prescribes three mechanisms—advancing, authenticating and attaching—that are enacted by reference actors in the process of negotiating rural e-commerce development in their communities, and also resurrect heritage and community identity. Our model builds on conjectural discussion in recent IS research on the expanding role of the users in influencing the development of IT-enabled social innovations.

Keywords: IT-Enabled Social Innovation, Netrepreneurs, Community Identity

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Introduction

Notwithstanding decades of global economic growth, extreme poverty and the *digital divide* (Lamb and Kling 2003; Walsham 2005) continues to be age-old problems that present important social challenges to developing countries and their communities within (Narayan-Parker 2002; Nijkamp et al. 1999). Social innovation which describes novel solutions, processes and initiatives to simultaneously address social needs (Phills et al. 2008) and create new social collaborations (Chad 2011), is a response to enable communities to increase control over their lives and the capacity to transform choices into desired outcomes (Laverack and Mohammadi 2011; Narayan-Parker 2005). Analogously, literature on Information technology (IT) as a catalyst for national progress and social transformation (Majchrzak and Markus 2012; Strong et al. 2014) is rapidly building. Emergent studies suggest IT enhances level of community empowerment, to alleviate poverty and empower rural men and women from socially and economically deficit communities to development (Avgerou and Li 2013; Leonardi 2011).

Despite academic literature in IT-enabled socially innovative initiatives building, there are still several knowledge gaps which motivate our study. First, the understanding of the relationships between social innovation and the role of IS is still predominantly practitioner-led, still largely contextual and as such developed with ill-defined boundaries, meaning and definitions (Caulier-Grice et al. 2012; Nicholls and Murdock 2011). Secondly and despite the motivations, social innovation consequences are not universally positive nor always intended (Liu and Li 2002), with IT contributing to a host of other social problems (Pollock and Hyysalo 2014; Watson et al. 1988) and accompanied by dramatic identity shifts (Walsham 2001). Hence, Walsham and Sahay (2006) urges IS researchers to treat ‘identity issues’ and ‘focus on community’ (p. 16). To delve into such issues of IT enabled societal transformations requires researchers to investigate the mechanisms of how IT empower users and, identify situations of individual usage to achieving collective usage and ‘coordinated action’ for example (Walsham et al. 2007; Walsham and Sahay 2006). Thirdly, the role of entrepreneurs as social actors in e-commerce enabled rural development has received little theoretical scrutiny. Recent literature term groups of entrepreneurs who apply innovation to create online business, viewing social challenges as business opportunities as *netpreneurs* (Avgerou et al. 2011). This research is important as scholars indicate that a focused research on IT *users* reveals the key roles they play in providing information and assurances, to fill a gap in knowledge playing new roles (O’Connell and Williams 2005; O’Connor 2008; Pollock and Hyysalo 2014). The significance of this research would reveal how social actors and leaders emerge in facilitating the adoption of new technology in social context.

Our study is guided by the research question: how do netpreneurs shape IT-enabled social innovation? To address this question, this article presents a case study of an emerging IT-enabled social innovation phenomenon in China- *Taobao Villages* and the role of its netpreneurs. A Taobao Village is a cluster of rural electronic retailers where at least 10% of village households engage in e-commerce and total annual e-commerce transaction volume in the village is at least \$10 million Chinese yuan (AliResearch 2012). Specifically, we present the revelatory case study of *Daji Town*, China’s first ‘Taobao Performance Costumes Town’ as an expression of social innovation, but also as a valuable marketable brand for its villagers. By studying how social innovation is enabled through e-commerce and IT use by villagers in rural communities, we build theory on its process. Notwithstanding the contributions made by the recent articles on rural e-commerce development (Avgerou and Li 2013), this article contributes to the conjectural discussion of IT enabled social innovation in two ways (i) our study reveals the role of key reference actors (Lamb and Kling 2003; O’Connor 2008) in IT enabled social innovation (Strong et al. 2014), (ii) our study reveals the process of social shaping rural e-commerce and community identity building. Furthermore, we build on the processes of identity resurrection (Howard-Grenville et al. 2013) through this qualitative study, adding to how community members reenergized a valued community identity following years of slow economic growth.

Literature Review

In this section we review literature around two central topics of this research. First, we discuss IT-enabled social innovation and how we will build on knowledge. Next we discuss the theoretical notions of social shaping and reference actors which we draw on as our research lens for the remainder of this study.

IT-enabled Social Innovation

Social innovation, which generally describes novel solutions and initiatives (Phills et al. 2008) is a process of change emerging from the creative re-combination of existing assets (from social capital to historical heritage, from traditional craftsmanship to accessible advanced technology), which aims to achieve socially recognized goals in a new way (Tallon et al. 2000) and to simultaneously address social needs. In the above definition, Tallon et al. (2000) hints at the use of IT in social innovation. *Acumen*, *Ushahidi* and *Taobao villages* are just some of the many globally recognised sites and projects representing the use of digital tools to enable social innovation including crisis response, tackling poverty and economic empowerment (NominetTrust 2014). Although IT-enabled social innovation which generally focuses on its tools and processes is building (Strong et al. 2014) it is still predominantly practitioner-led, still largely contextual and as such developed with ill-defined boundaries, meaning and definitions (Caulier-Grice et al. 2012; Nicholls and Murdock 2011). This is partly because social challenges are shaped by more dynamic and interdependent factors that cannot be solved by simple interventions, and there is little agreement on effective solutions. In the context of social innovation research, there is little theory on how to rapidly mobilize empowerment initiatives (Mulgan 2006). Hence, IS researchers are urged to pay more attention to how IT can empower the socially and economically deficit individuals, groups and marginalized communities in developing countries (Avgerou and Li 2013; Njihia and Merali 2013). Regional communities are place-based social units that supply the context for the firms, voluntary organizations, social movements, and individuals who are located within them. Studying community-based facilities is one way of trying to understand support and access to marginalized groups within the developing countries. Hence and subscribing to Lamb and Kling (2003) view, we postulate that IT-enabled social innovation requires researchers to delve into users – or the active agent in IT use – that are social actors that interact with others to form the basis of social identities. IT is integral to these interactions and to shape identity and institutions. Walsham and Sahay (2006) identifies China as context for IS research in developing countries. Because culture has also strongly influenced the acceptance and management of IT in transition economies like China, the models and theories developed in and for Western countries may be of limited use in transition economies (Iivari and Huisman 2007; Sull 2010).

Theoretical Lens: Social Shaping and Reference Actor Roles

In this study, we draw on theoretical lens of social shaping and reference actors to investigate how villagers in rural communities become netpreneurs, with some emerging to form part of politics of rural e-commerce development, and how they position themselves to wield influence on current and future community development strategies. We discuss the theoretical notions in an e-commerce context below.

We refer a *reference actor* in this study to an individual user or a network of IT users that form a part of community. If we are to understand the rural e-commerce development as a social process, it is crucial to take the artefacts as they are viewed by the relevant groups and users, since to do otherwise would imply the technology is autonomous. We build on the IS notion of social actor (Lamb and Kling 2003), recent work allude researchers to reference users (O'Connor 2008; Pollock and Hyysalo 2014), relevant social groups (Martinsons 2008) and communities that are delineated according to similarities among their interpretations of a specific artefact and the mechanisms that open to negotiation where different groups exert influence on how the technologies will be adopted and used. One of the groups to participate in rural e-commerce are *netpreneurs*, entrepreneurs who apply innovation to create online business, viewing social challenges as business opportunities (Avgerou et al. 2011; Jiwa et al. 2004; Lowery et al. 1998) and generally discover entrepreneurial opportunities in the value chain in an e-commerce enabled industry (Sawhney 2014). As indicated by prior studies, the term reference actors draws from theoretical notions of *Social Shaping of Technology* (Zammuto et al. 2007) which explains how innovation did not end when the artefact left the vendor premises but could continue in implementation and use, throwing light on the cycles of domestication and appropriation. These are conducted by adopters of systems to meet local organizational circumstances, and wide range of actors, particularly *intermediate* and final users crucial in getting new systems to work-in- practice (Liu and Li 2002). IT users interact with others to form the basis of social capital and identities. As these interactions are simultaneously enabled and constrained by the socio-technical affiliations and environments of the users, ICT are integral to these interactions and so shape identity and institutions (Lamb and Kling 2003). We rely on concepts social capital (Nahapiet and Ghoshal 1998) and interpretive frame (O'Connor 2008) as identification of

assumptions, expectations and interests, for understanding how problems and solutions associated with a technology present themselves differently to different groups of people.

We use this to postulate that reference actors are not only involved in IT related work within their own villages but interact across the communities with current and prospective netpreneurs as well as vendors, to offer his or her community's experience as a model or standard for others. The premise for reference actors is that in a changing character of the adopter environment has meant that users have come to take on increased tasks in a development process. Reference actors include wider groups of users who may not have initiated the referencing activity or identify themselves as performing an IT role, but are drawn in when referencing activity occurs. And their perspectives are based on a reflection of the values, beliefs, and intentions that shape decision-making behaviour that impact others. Focusing on the emergence of reference actors, their work, and how they become entwined into the politics of rural development gives us the opportunity to understand emergent *intermediary mechanisms* for providing accounts of capacities and benefits of IT systems. Besides reference actors from organizations, networks of business people and groups as intermediaries (Mettler and Winter 2015a; Mettler and Winter 2015b), technology users as intermediaries (Sawhney 2014) are well documented in literature. The presence of asymmetric information between pairs of transaction parties creates an opportunity for intermediation or the failures of existing exchange institutions enabling these entrepreneurs to bear uncertainties that their potential buyers and sellers would neither willing nor able to bear (Sharma et al. 2014).

Case Study Method

We adopt a case study method to perform the empirical research. The case research methodology is particularly appropriate for this study for a number of reasons. First, case research addresses 'how' research questions (Pan and Tan 2011; Walsham 1995) whilst examining processes (Gephart 2004), and our research question delves into the process of rural e-commerce development, a form of IT-enabled social innovation. Second, because we established that rural e-commerce development forms an inherently complex phenomenon, an objective approach to research is difficult (Koch and Schultze 2011), making it more appropriate to examine the phenomenon by interpreting the shared understanding of the relevant stakeholders (Klein and Myers 1999) and vendors in this case. Case selection is based on a number of criteria: (1) the case must be a social innovation involving social actors in the process of rural e-commerce development to fulfil our examination of activities per our earlier definitions. (2) the processes of rural e-commerce development must be reasonably complex for underlying mechanisms to be studied, which also means that social actors shaping mechanisms are cited and (3) the case study must present opportunities for ethnographic research of social actors or reference users, to study their intermediary activities. Further, while the range of countries in which social innovation research has been carried out is reasonably broad, it does tend to be the English-speaking to itself; the world's most populous country, China, is severely underrepresented in terms of reported research in the literature (Walsham and Sahay 2006). Based on these criteria, we chose to examine the rural e-commerce development represented in China's *Taobao villages*. Although we conducted interviews on multiple research sites, we present findings from a few sites (in Cao county) in this paper. The case study findings stimulates much further research and analysis on the intermediary role netpreneurs play in community identity, in the context of IT-enabled social innovation. The advantage is that we have access to a phenomenon and descriptive information previously inaccessible to scientific observation and social scientists, and such conditions justify the use of a case study on the grounds of its revelatory nature.

Data Collection and Analysis

To this end, the authors conducted site visits across two provinces in China, to three counties and townships and a dozen villages. In this study we report on the town of *Daji* in the southeastern county of *Cao* (population 1.58 million), under the administration of *Heze* city in southwestern *Shandong Province*, a pivotal cultural site in China. The authors perform several site-visits to some of its villages in *Daji Town*, including *Dinglou* (300 households, 1100 people) and *Zhangzhuang* villages (400 households, 1500 people). We conducted **84** semi-structured interviews (Taylor and Bogdan 1998) with relevant reference actors from September 2014 including the villagers, netpreneurs and local government officers at county, town and village administrative levels, generating over 200 pages of transcripts (refer to table 1 and table 2 for breakdown of interviewees and topics). We narrow the focus of our inquiry to two

pertinent themes: (1) the intermediate e-commerce environment including history, heritage and social climate of the rural e-commerce villages and its development, and (2) the role of IT and activity of reference actors. We conduct interviews with villagers and netpreneurs, observe them in meetings with other villagers and local government officials, received feedback, focusing specifically on their roles during the rural e-commerce development processes for Daji town, its villages and the rest of the Cao county.

Table 1: Breakdown of Site Visits in Shandong Province, China

County	Town and Village	Revenue in Million Yuan	Goods Sold	Interviews
Qiaoni	Shaji	NA	Household goods	33
Boxing	Jinqiu, Wantou Village	1000	Willow household goods	14
	Jinqiu, Gujia Village	100+	Coarse Clothes	
Cao	Daji, Dinglou Village	300+	Performance Costumes	38
	Daji, Zhangzhuang Village	240+	Performance Costumes	

We perform data analysis concurrently during data collection to take full advantage of the flexibility of the case research approach. We use our theoretical understanding of IT-enabled social shaping as a guiding lens to examine the initial data. Our approach focuses on both rural e-commerce development processes and its impact on the community, its villagers and local government groups. Moving between the empirical data, our guiding lens and the related literature exposed new patterns and allowed us to develop further mappings of the coded responses. As part of our data analysis, we adopt a combination of the *temporal bracketing*, narrative, and visual mapping strategies to organise the empirical data (Langley 1999; Langley 2009). We also drew on secondary data such as newspaper articles, books and information from *Taobao.com*, Alibaba's corporate website (Taobao is the B2C subsidiary of Alibaba) to triangulate our mappings. The events timeline, our interpretive account of the events that unfold and diagrammatic representations of our theoretical ideas were verified with our informants. If our findings appeared to extend beyond the propositions of the lens, or if propositions emerged that were unsupported by our empirical data, we conducted additional interviews to build an explanation iteratively (Walsham 2006). Ongoing analysis will extract, confirm, and use pieces of evidence that illustrates the continual interplay between reference users and the other stakeholders to derive a stage-wise model, which represents the first steps towards a more complex process model (Montealegre 2002; Newman and Robey 1992).

Table 2: Sample of Interviewees in Daji Town and Villages

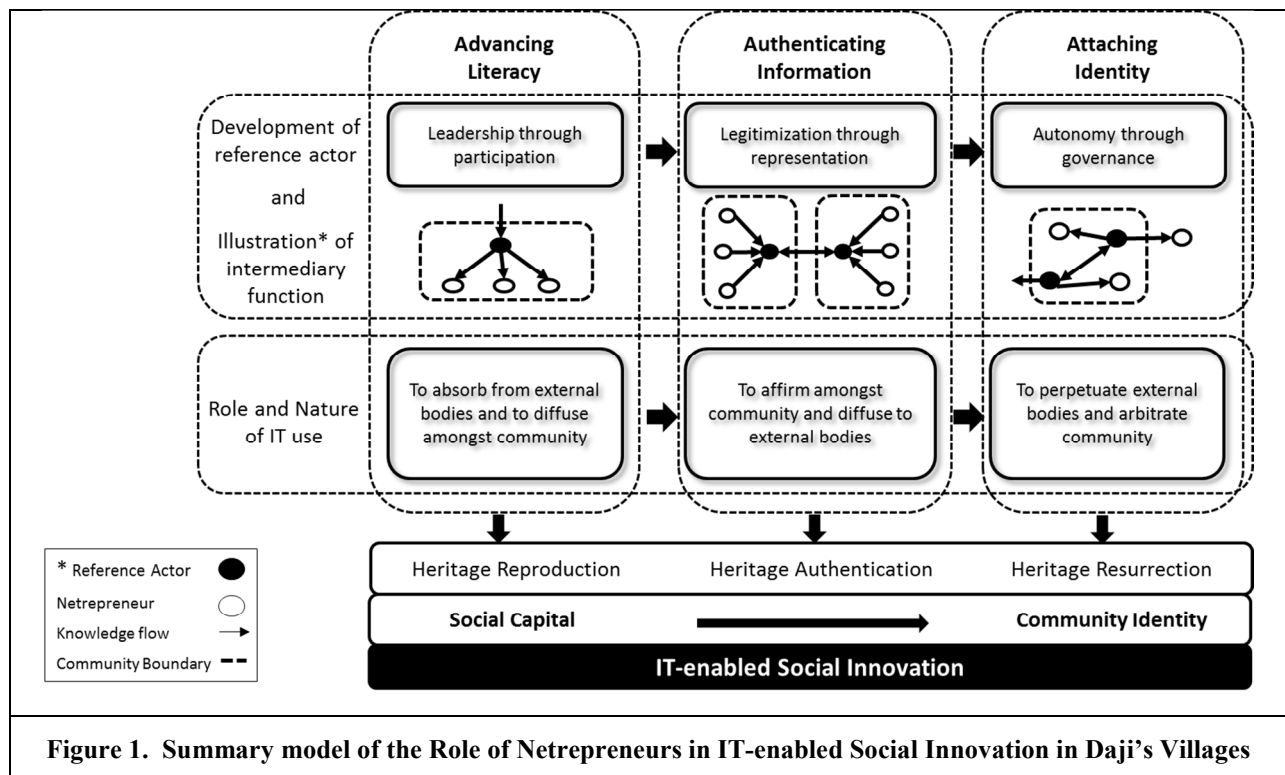
Interviewees	Title/Business	Topics Discussed
Mayor	Daji Town	History of Taobao and villages in Daji, goods and products sold, village sales data,
Party Secretary	Cao County, People's Government of Heze City	Overall e-commerce plan, Taobao assistance, effect of association and government support
Platform President	Daji E-Commerce and Netpreneurs Association	Stage performance roots of village, arrival at village, e-commerce business plan, supplier network, setting up of associations, goods and products sold, village sales data,
Youth Commission		
Wholesale Office		
Finance Officer	Taobao Financial Cooperatives	Impact of e-commerce on public services, Taobao assistance, effect of association and government support on infrastructure
Representative	Law Enforcement	
Officers (x 2)	Credit Union	
Representative	Unicom (Telecommunications)	
Representative	Electricity Authority	Stage performance roots of village, environment of village, e-commerce business plan, supplier network, production strategy, Taobao as intermediary, effect of netpreneur association, internet order fulfillment
Netpreneurs 1- 25	Large Scale Performance Equipment Manufacturer (x 1)	
	Performance Costumes/ Props (x 24)	

Preliminary Findings: IT-enabled Social Innovation in Daji Town

In this section, we present preliminary findings on the stage-wise development of IT-enabled social innovation in Daji Town. Before this, we reveal the town’s roots, industries and livelihood of its villagers: *“Our town was known to produce studio sceneries since the 1980s, and we sold them to and through studios in the cities. Because, we only had telephone into the town in 1997, we walked door to door to studios and photo galleries with our samples, we walked for 10miles each day with 20-30 kg sacks. When we had hand-carts, we carried 100-200 kg. We slept at train stations at bus-stops, in 10 days we would earn 100 yuan. Nobody wanted to work in this industry”* [Netrepreneur 1, large scale stage equipment manufacturer]

Hence, since 1980s, Daji become largely an agricultural town in the traditional sense where farmers' income from its villages drew mainly from farming, aquaculture industry, and agricultural processing of mainly corn cobs outside their homes. Netrepreneur 5, who now employs 200 staff, sums up her days: *“Before 2009 I was farming, cultivating that land acre by acre with my hoe and oxcart because there was no automation, it was very tough and when weather was bad we suffer more losses with this land.”*

Next, we describe the stages of development and focus on the intermediate roles played by netrepreneurs. The first stage describes how netrepreneurs advocated literacy in trading on Taobao and orchestrated the building of craftsmanship reproduction knowledge throughout their community. The second stage describes how leading netrepreneurs represented and urged local government bodies to authenticate and establish businesses in villages. Third, we describe how netrepreneurs act as custodians of a dormant heritage and achieved business autonomy for the town. We present a summary model in figure 1.



Advancing Social Capital and Digital Literacy for Villagers (2009-2010)

Our field observations found that most Taobao businesses are conducted on very little, such that garment processing and production often occurs in their own courtyards in small and colored workshops. *“Taobao has become the main work outside farming for villagers, such that many households have even abandoned farmland cultivation, to focus on their online sales of performance costumes. I was an electrician but also cultivated land, I am not even keen on online shopping.* [Netrepreneur 3, Dinglou village] For the 300 households in a close-knit Dinglou village, word-of-mouth amongst villagers of e-

commerce business caused mass replication. The success of Dinglou became a strong exemplar for nearby Zangzhuang village. Netpreneur 4 we spoke to, who learnt his trade from Netpreneur 2 sums it up: *“I have 6 online shops myself, supplying to about 600 other online shops in this village. Ding (Netpreneur 1) was the first to sell costumes online, then he became not only our village’s supplier but other village’s”*

Our early investigations reveal the close ties between social learning and training are far reaching. Users gradually choose to combine existing knowledge with others when they think appropriate; use knowledge to cover shortfalls in existing knowledge and (or) form a preference for other users’ knowledge. The appointment of Party Secretary in 2010 to the village was crucial for improving business and IT literacy. *“Because farm labor was always low, the products have price advantage. But low price is also its Achilles’s heel. At the start, we have a relatively low level of IT, limiting design capabilities and versions of clothing styles are obtained by imitating the pictures from the Internet”* [Party Secretary, Cao County]

The Party Secretary explains that by 2010, the town of Daji achieved conditions for Taobao villages including penetration of Internet and e-commerce to rural areas, a third party e-commerce platform that lower the barriers of entry and collectivity in villages. This contradicted the common understanding that the improvement of infrastructure is the antecedents to the development of Taobao village. The rapid development of entrepreneurial e-commerce in Daji attracted famous logistics companies such as Shen Tong that was quick to “set up camp” town. Despite this, netpreneurs still suffers from competition due to homogeneous products, a general lack of organization and human capital, and space constraints.

Authenticating the Expanding Roles of Netpreneurs (2011-2013)

We found that in the first years of using IT tools and e-commerce, villagers often rely on such netpreneurs who are more reputable merchants, especially to learn to build brand image, eliminating trust concerns on transaction. Netpreneur 6 spoke of his arrival at the Dinglou village: When I came to this (Dinglou) village, I had little or no foundations so I worked with Ren who has become president (Daji e-commerce association Platform President). I want to stay here and start my family now.

From these recollections, we find the emergence of local leaders amongst netpreneurs. These leaders adopt new community roles that enable their incumbents (Goldschmidt 2005) to access and organize tangible resources. In turn these leaders will urge local government to assist and encourage other villagers to register their trademarks, standardize operations and incorporate a dozen performance costume manufacturing companies in the process. They act as *gatekeepers* and *liaisons* (He 2004) that mediate technological knowledge by creating shortcuts between sources of knowledge and recipients. These include Non-for-Profits Organizations (Gutierrez and Zhang 2007), farmer co-ops founded and led by netpreneurs –and hence not controlled by local, state, or federal governments – leverage IT to pool their resources to increase efficiency of service delivery, fundraising, sharing best practices. Authorities and representatives from public services in Daji summed up the developments: *“improved amenities, low interest credit loans, allocated transformers, 24hours enforcement and monitoring were some of the developments following negotiations between associations, local government, energy and telecommunications provider, police and local credit unions.”*

We find that they generally align their activities with a mission to create social values, creating awareness of issues in the community, and sharing information about their operations to establish legitimacy (Richardson et al. 2011). Through local government policy and funding subsequently, the town established a Daji town leadership group in a large industrial office and soon after Taobao industry association. Within six months, the association had over 30 companies and related logistics company registered. On November 20, 2013, the county’s first Taobao costume industry association and Daji Taobao industry Association was formally established. This led to a county level initiative called the “Lead Goose project” to promote rural youth entrepreneurship worth 20,000 yuan per start-up funding. According to youth commission, its implementation is rich rural youth leaders with a certain mass base and entrepreneurial experience provide focus training in return.

Attaching Autonomous Operations to Community Identity (2014 onwards)

The performance costume industry has again become a pillar industry of Daji town; Today, there are ten thousand Daji town villagers engaged in performance costume e-commerce, more than 480 households

are large processing operations offering more than 1,000 types of performance apparel. In 2013 alone, sales reached 2 billion yuan. The mayor of Daji town sums up the unprecedented changes for many of its villagers Taobao and related IT infrastructure made, especially for reviving its stage performance roots. *“Stage performance is an old tradition of this farming town and its villages from the eighties. But when it (E-commerce) came, it has given full advantage to locals in traditional performance costume craftsmanship, and shows the potential of our many seasoned cloth cutting villagers”* [Mayor, Daji town]

Simply by chance, netpreneurs proposed to create the first advertisement of the town and the promoting the two villages as Shandong’s first professional performance costumes villages at the end of March 2013. After a routine inspection of the town by the party secretary of Daji which saw the accumulation of fabric and cloth cutting machines in the town, he realised that this move would attract more local and foreign companies to invest into the town to deal with these issues. *“Doing this (having an identity), we can invite more investments, establish an e-commerce economic zone, turn scattered household workshops into larger standardized production, have netpreneurs directly engage Taobao to promote us and bring common prosperity.”* [Party Secretary, Cao County]

From the above quote, netpreneurs turned from reference actors to becoming *identity custodians* (Goldschmidt 2005) who are exemplars or practitioners of a dormant heritage and tradition, who focuses attention, invests time, and exerts energy in an effort to sustain that collective identity. *“Celebrities talk about our custom costume and scarfs. We recognise them (red scarfs) on CCTV Spring Festival Evening, we see our clothes sold in Chinatowns in United States and Southeast Asia”*

From this, the netpreneurs can use their knowledge to *affirm* the culture of the community through the products, their ownership of the process they take charge of, and (or) others in the community. Netpreneur 2 describes this year’s performance costume theme, *queues*. The queue was a specific male hairstyle worn by the Manchu people from central Manchuria and later imposed on the Han Chinese during the Qing dynasty (Teece and Pisano 1994) *“Every year we have a product that represents unique tradition of China or nationalistic-this year its queues or braids theme for our costumes, I will tell everyone that this product is good and everyone will sell this product. Studio scenery and performance costumes are interdependent so easy.”* [Netpreneur 2]

Future Work and Conclusion

Future work focuses on further theoretical development of notions presented in our study, to uncover processes and consequences of rural e-commerce, particularly long-term social change that requires the emergence of local leaders and grassroots movements in these Taobao villages. Our preliminary model, established based on data from villages in Daji town in one county Cao, makes a number of preliminary contributions to theory and practice; we discuss them in light of ongoing analysis of remaining data of other villages (see table 1). Firstly we will reveal that the introduction of E-commerce as a means of changing poverty reduction to rural development brought about not only inclusion of villagers (Narayan-Parker 2002; Narayan-Parker 2005) but brought about new intermediaries in the form of IT and netpreneurs. Our study uncovers for the first time, how netpreneurs function as intermediaries serve as building blocks for rural e-commerce development, in the context of IT-enabled social innovation. Through ongoing validation of the posited three phases—advancing, authenticating and attaching—we will reveal how netpreneurs spontaneously arrange villagers’ activity and business operations in a purposeful (non-random) manner, under appropriate conditions but without the help of an external agency. This adds relevant but not yet obvious development to the emergent notions of digital natives (Kenneth 1996) and grassroots entrepreneurs (Avgerou et al. 2011). Akin to (Mettler and Winter 2015a; Mettler and Winter 2015b; Sawhney 2014), we show how they position themselves close to government and communities through developing mechanisms of leadership, legitimization in order to monitor operations, enforce costs and wield influence on current and future development strategies. Secondly, ongoing analysis seeks to reveal how e-commerce has enabled a community to not only promote its identity but overcome rural-urban diaspora, through capability building and reproduction, authentication and resurrection. This however, requires the existence of netpreneurs to open the opportunity to control the preservation and interventions, greatly facilitating the inventory, evaluation, and preservation of craft on the platform. This is contrary to notions that digital content and webpages challenges the provenance

(the documentation of the origins of an archived item) and *authenticity* (the preservation of the original object rather than the truth of its content) of heritage objects (Ulrich and Barney 1984).

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