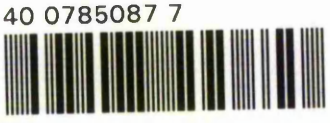

# Rural.com.cn: A Study of the Impact of Information Technology on Rural Communities in Contemporary China

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# Abstract

This study is an investigation of a project of poverty alleviation in rural China through the implementation of development schemes involving computer education, the use of the internet and the development of e-commerce. The project, 'Town and Talent Technologies', was established in 2000 as a joint initiative between a group of Taiwanese businessmen and the Chinese government. The research focuses on the pilot scheme for this project – the village of Yellow Sheep River in Gansu Province. The project is approached in the context of emerging policy discourses in relation to rural poverty and particularly the optimism that has been generated around the potential for the use of information and communication technologies (ICTs) to rapidly promote economic development in remote rural locations.

The research is conducted within the analytic contexts of global poverty discourse and the emerging discourse of 'ICTs for development', and is informed by anthropological approaches to traditional Chinese village culture. It deploys both institutional and policy analysis of the project, and ethnographic field research amongst the 'end users' – the villagers of Yellow Sheep River. This ethnography includes both conventional interview techniques and the use of video deployed according to the tradition of visual anthropology. The focus of the ethnography is on the process of the domestication and 'indigenisation' of ICT practices and experiences within the local cultural context.

The findings of the research suggest a complex emergent process of the appropriation of new technologies - and their adaptation to local contexts - bringing certain economic opportunities and benefits, but also posing new problems and uncertainties and establishing new cleavages within the economy, the class structure and the culture of village life. At a macro level these tensions can be understood as the outcome of a struggle for power over the use of ICTs between different constituencies of interest: the global planner, the national government and local groups. Despite these tensions, there are signs that an 'indigenous internet' may be emerging as a viable grassroots vehicle for development. It remains very uncertain however as to whether the project's original predictions of a process of compressed technological and economic 'leapfrogging' for rural communities into the global information society is a plausible one.

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# CHAPTER 1. INTRODUCTION

## 1.1 Yellow-Sheep-River: an Experiment in ICT-driven Socio-economic Development

China's open-door policy has shifted its previous command-economy socialist state to a globalized free market in many perspectives. (Zweig, 2002) While globalization is closely related to the process of modernization, it is also notorious for differential development among various social classes and regions. For example, while the coastal areas of China have started to enjoy prosperity from tremendous economic growth, the western inland areas still suffer from serious social and economic underdevelopment. Such inequality has created many problems such as large scale internal migration from poor rural areas to the coastal cities. This, in turn, has been associated with an increase in social deprivation and a host of other social problems and human miseries (Dutton, 1999)

An educational-social development project called the "Town and Talent technologies" was established in 2000 by a business group from Taiwan, with the support of the Chinese government, in an attempt to solve the problem of the "Great West Development" by introducing digital technology and computer education to agricultural villages. The sponsors of the project believe that these villages will be rapidly transformed into 'internet villages', which will spur rapid economic growth in these remote areas, subsequently eliminating the gap between the digital haves and have-nots.

The initial project was established in a small village in Western China, called Yellow-Sheep-River, in Gansu Province. Subsequently, it has been expanded to many other villages in the north-west of China. It is claimed that these Internet villages represent the future for 0.8 billion Chinese farmers, and as a consequence, western China will leapfrog over the industrial society into the information society.

## 1.2 Defining the Research Problem

The primary objectives of my research focused upon this project to understand the underlying roots of the differential developments in globalizing China and to scrutinize the policy-oriented thinking behind this "Internet Village Plan". Combining methods of theoretical reflection, policy analysis and ethnographic fieldwork, I aim to address the key issues of the transformation process of Chinese rural areas under the rapid expansion of global ICT development and market forces. While a clear determination of whether an agricultural society could be transformed directly into an information society may be beyond the scope of this initial study, I expected to be able to share, describe and interpret the experiences, attitudes and cultural interpretations of the local people in western China regarding globalization after being educated in computer technology and the Internet.

As part of my research, I have questioned and assessed this project from both theoretical and practical dimensions. I will start to introduce this project by

analyzing the basic components and strategies and then assess their relevance, especially their linkage between poverty alleviation and ICT development. I will then investigate the actual practices of the project plans, including computer education, e-commerce and school-based development in the village. I will focus on the perspective of the villagers and the transitions in their daily lives that they experienced after the project launched. I also want to explore in depth my own opinions about technology, e-commerce and social change. Based on my research findings, I also develop a theoretical explanatory model for future village transformations in China. Although such an attempt is based exclusively on the pilot village study of this project, it provides a microcosm of the challenges and accomplishments of the project in the village as well as a prototype for the development of other agricultural regions in western China.

I believe that the most appropriate level of analysis used for studies of the transformation of Chinese agricultural society is at the village level and so the village study approach is at the core of my research. As part of this thesis I will review the previous literature starting with the pioneering studies of the Chinese agricultural village by Fei Xiao-Tong in the 1930s. Rooted in this approach, I will expand the literature to a more contemporary view of Chinese agricultural society that has been dramatically changed after China's reform policy was initiated in the 1980s. Further, I will discuss the recent debates regarding the "Internet village" within the context of a local/global, and de-territorialized/re-territorialized settings and their impact on those relevant issues that influence peasant identity.

Methodologically, this study is not confined to traditional 'verbal' or textual discussion as I used camcorders to record interviews with the villagers as well as to observe their daily lives. This application not only provided a contextual richness to the participatory observations of transition within the village but also added reflexive and collaborative interactions that are associated with Visual Anthropology. Particularly, under the very special context of Chinese social background, I have focused upon the complicated power relationships between myself as the researcher and the villagers as the researched that occurs when using the elicitation method to develop ethnographic filming. (See chapter two)

Two main theoretical frameworks are employed in my analysis of this project. These frameworks are ICT development and their use in economic development, and global poverty alleviation. I analysed the effect of this project within the context of poverty alleviation and considered how the use of ICTs may be a critical method in the development of economic opportunities in these poor regions of the world. Although both of these frameworks have been subjected to much scrutiny and have served as ways to assist the poor, both frameworks have also been criticised for their external "top-down" approach to problem solving to the exclusion of the concerns and needs of the people whose problems are being solved. I will elaborate upon how the poor are portrayed as being victimized by social and economic deprivation which therefore makes these efforts to eliminate poverty as being infused with social justice.

With the recognition of poverty and inequality as major problems in developing or under-developed countries the task of development has become more and

more entangled with multi-lateral donor agencies and international organisations many with conflicting views and motivations as to how best to achieve these developmental objectives. Much of the ensuing discourse concerning solutions to economic problems appear to be grounded in an integrated approach to development derived from a partnership of the state and market with civil society (Howell & Pearce, 2001), in this instance the discourse of poverty alleviation and the plausibility of economic development are deeply entangled with the ideology of the expansion of the free markets and with political democracy.

This point of view has replaced the prevailing radical-socialist policy-oriented development discourses with a new set of policies derived from classical economic liberalism (Pearce, 2000; Pieterse, 2001). Following the Washington consensuses in the1980s and 1990s, this emerging world-order was embraced by third world countries. There appeared an integration of trans-national networks of cultural and ideological formations. Local political economies were widely opened up to international markets and invited direct foreign investment projects and technological transfers (Wickramasinghe, 2001).

It is from this perspective that development projects which were intertwined with global technological adoption as well as ideological expansion have been introduced into different regions of the world, all in the name of poverty alleviation. It is necessary to now evaluate these complex developmental projects from political, economic and global/local perspectives rather than just from the developmental agent's point of view. Some sceptics have questioned

the ideological implications behind these development projects and have made a linkage between them and the expansion of neo-conservatism due to their deeply rooted belief in free trade, technology and economic development. Desai and Potter argued that the `new right' orthodoxy, involving the `magic of the market', the neo-liberal policies of structural adjustment, and most recently, poverty reduction strategies can be traced back directly to the works of Smith and Ricardo. (2002: 59) The current "neo-liberal" manifestation dating from the 1980s has three outstanding features: trans-national corporations, inclusive reach, and dependence on communications and information technologies. (Boyd-Barrett, 2004: 25) My research however aims to develop an ethnographic approach which avoids either undue scepticism or euphoria in exploring the effects of this developmental project in the pilot village. I created dialogues with the villagers and listened to their voices in order to understand their views about this project as well as their hopes and dreams about the future.

To some extent, this research has involved a searching for 'indigenous knowledge' from 'indigenous people'. I sought to understand their own attitudes towards the transition of their local economy and the new technology that is being imposed upon them by global/local market expansion. I will argue that this indigenous knowledge has constantly interacted, been influenced and impacted with the outside world and therefore cannot be a kind of objective knowledge already recorded in history. On the contrary, the indigenous knowledge in this case lies in the subjectivity of the villagers and has evolved through the changes that have been triggered by outsiders, even by researchers such as myself.

In conclusion, my research started from theoretical debates surrounding poverty, inequality and 'leapfrogging development' through the use of information technology and then investigated those questions within the specific context of Chinese contemporary society with a particular focus upon the interviews and observations of the researcher's fieldwork at the pilot village.

## 1.3 Analytical Contexts

### 1.3.1 Global Poverty Discourses

In the last decade of the 20th century, accompanied by the rise of globalization in the post- Cold War era, poverty became an important issue and its relief the dominant international development agenda for global governance, even though it had been recognized as a problem nationally and internationally for many centuries. (Jones, 2004) The former World Bank president James Wolfensohn noted that 'one of the most important developments of the 1990s was the sharper focus on poverty reduction as the major goal of development and development assistance.'(Wolfensohn, 2005) Development and development studies of poverty also increased substantially using various methods of measurement and estimation. (Desai and Potter, 2002: 38-40) Maia Green traced the development of poverty research to the 1970s. She pointed out that the concept of poverty has been central to the international development agenda for more than a quarter of a century. (Green, 2003) Two landmark moments that can be used to identify the re-emergence of poverty alleviation as a critical problem of the world and the different contexts of its recent formation.

The United Nations launched its Millennium Development Goals (MDGs) which stated goals aimed at the implementation of elementary education in poor areas and the elimination of extreme poverty by the year 2015. The eight MDGs, which comprised 18 targets and 48 indicators, covered both income and non-income related measures of well being. These goals were adopted by the United Nations Millennium Summit in September 2000 with the leaders of 191 nations agreeing that together they had the resources and the political will to eradicate extreme poverty, hunger and disease. Many relevant projects and plans have been implemented, especially in African and Asian countries.

The second landmark moment was the 'Make Poverty History' campaign, based in Britain, which brought together government leaders, NGOs, church groups, social activists, charities and celebrities in a call for global action that focused primarily upon debt relief, an increase in aid, and fairer global trade. This campaign was highlighted on the 2nd of July, 2005 with a rally in Edinburgh and a Live 8 concert. More than half a million people from G8 countries attended the concert with the objective being to put pressure on their leaders before the G8 summit at Gleneagles.The summit finally reached an agreement including a US$50 billion pledge in aid to developing countries by 2010, of which US$25 billion would go to Africa. In the aftermath of the summit, many activists expressed disappointment that the actual amount of the aid fell far short of previous agreements while others noted that the debt relief and the increase in aid might not truly eradicate extreme poverty. Focusing on the serious corruption and turmoil in Africa, Collier analyzed the causes of failure of dealing with poverty which can include civil war, a dependence on the extraction

and exportation of natural resources, and bad governance. Therefore, within these contexts the standard solutions from the outside did not work. (Collier, 2007)

Additionally the World Bank also established systematic ways of representing, analysing and theorising poverty. (Mehta 2001) In addition to engaging in the promotion of academic research concerning poverty issues, the World Bank also published the highly influential annual World Development Report. While Mehta has criticized the World Bank for attempting to carve out a niche for itself as the 'Knowledge Bank', there has been a significant shift in focus for the Institution beyond its past, almost exclusive, attention to the transfer of capital. Now the World Bank seeks to assume the lead in the development of expertise and the transfer of knowledge in international economic development. (Mehta 2001)

In 2002, a three-year plan called The UN Millennium Project was proposed to analyze policy options and develop a blueprint of implementation for achieving the Millennium Development Goals. Headed by Jeffrey Sachs, the Millennium Project was commissioned by the United Nations Secretary-General to initiate a concrete action plan, which came to be known as "Investing in Development: A Practical Plan to Achieve the Millennium Development Goals", which was prepared by a team of 265 development experts. It included specific cost-effective measures that together could cut extreme poverty in half and radically improve the lives of at least one billion people in poor, developing countries by the year 2015. (Sachs, 2005a) The attitude towards poverty alleviation as

expressed in the report was generally optimistic. For example, the Sachs report for the UN Millennium Project proposed a series of 'quick wins', approaches identified by development experts that would cost relatively little but could have a major effect on world poverty.

Following the 'quick wins' idea, a timetable was developed that include the optimistic message that 'we can end poverty by 2025', (Sachs, 2005b) and proposed that poor countries could be regenerated through aid, trade, and international development. Therefore a deadline to escape poverty in the near future could be calculated predicting when developing countries would 'take-off' if they could follow the formula of development as established by the report in a step by step manner. To show that the timetable was possible, Sachs used England as an example of how poverty in a nation could be solved within one century. He argued that, "Eighty-five years ago the great British economist John Maynard Keynes pondered the dire circumstances of the Great Depression. From the depths of despair around him.... he envisioned the end of poverty in Great Britain and other industrial countries in his grandchildren's day, toward the end of the twentieth century. Keynes emphasized the dramatic march of science and technology.... Indeed to end the age-old economic problem." (Sachs, 2005b:3) So, employing Keynes's logic, Sachs claims that 'extreme poverty can be ended not in the time of our grandchildren but in our time' (2005b:3).

I am personally sceptical that this 'quick-win' policy can relieve world poverty. The 'new' poverty and the 'old' development discourse have limitations in their definition of 'who, where, and how', both in rhetoric and in ways of thinking.

No matter how their strategies approach the problem of poverty nor how overly optimistic their presentations may be, the debate, policies, solutions, and actions to relieve the worlds poverty appear questionable. (Green, 2005) The shaping of any epistemological regime of global poverty discourse may resonate with terms such as 'paradigm' (Kuhn, 1996), 'episteme' (Foucault, 2001) or 'problematic' (Althusser and Balibar, 1970), but only allows us to ask some questions while silencing others. (Johnson, 2004: 93) Therefore as it relates to specific knowledge and discourse, the term 'problematic' constitutes an 'absolute determination of the forms in which all problems must be posed, at any given moment of science'. (Althusser and Balibar, 1970: 25) and in that sense, "development has created a space in which only certain things could be said or even imagined." (Escobar, 1995:39)

Poverty has been standardized and universalized for those people who are identified as being poor. Global poverty has now expanded these standards and universal to geographical areas or as Escobar has described "the discursive power of geographical description" (Escobar, 1995: 1-20). The ultimate solution for poverty has thus become entangled with international development and global governance. Consequently, poverty as the object of the international development effort has become the overriding problem in development economics and in development studies. (Green, 2003)

The main data sources for the measurement of poverty are the UNDP's Human Development Report and the World Bank's World Development Indicators, both of which are published annually. There is a clear contrast between the main

indicators of poverty and of development used by the World Bank and the UNDP. (Allen and Thomas, 2000: 14) While the former concentrates on income measures, the latter has a broader view of poverty and is focused more upon human development than solely upon economic development. (Desai and Potter, 2002: 324) The World Bank still adopts the most common income-poverty measurement of headcount, (i.e. the percentage of the population falling below the poverty line) even though in practice data is collected at the level of the household rather than at the individual.

The World Bank uses US$1 per day to define the level of absolute poverty. According to this standard, in 2001, about 1.1 billion humans (21% of the world's population) suffered in extreme poverty. For a long time, the anti-poverty strategy of the World Bank depended heavily on preventing poverty through the promotion of economic growth. However, this development model has not necessarily eliminated poverty with its so-called `trickle-down' effects of growth and has generally failed to benefit the poor in both spatial and social terms. (Desai and Potter, 2002: 79)

In recent years the understanding of poverty has undergone significant changes. It is no longer viewed as being restricted to material deprivation but now encompasses intangible aspects, such as a lack of access to schooling or health care, vulnerability towards external events or being excluded from decision making processes. In line with the World Bank Development Report 2000/2001, poverty in this study will be looked at in terms of promoting opportunity, facilitating empowerment, and enhancing security.

Yet assessing poverty, no matter which quantitative or qualitative approach, is still a function of locating the poor and trying to measure comparatively the incidence and depth of poverty. It assumes that poverty is a state that is universally accessible to such devices. If these devices can make poverty visible and generalizable then poverty can be seen to be increasing or decreasing and the scale of poverty can be measured and assessed. Such technologies can also permit development agencies to construct poverty rankings, in which countries and regions within countries can appear as poorer than other countries or regions in the sense of having more poverty than their global neighbours. (Green, 2003)

Besides standardization, the poverty discourses also involve geographical imaginings in the way in which the poverty has been linked with geography. As Escobar describes:

> Development discourse inevitably contains geo-political imaginations that have shaped the meaning of development for more than four decades. For some, this will of spatial power is one of the essential features of development (Slater, 1993). "It is implicit in expressions such as First and Third World, North and South, centre and periphery." Escobar, 1995:9

The critique of geographical imaginations from a western perspective in development projects is the core issue of both post-development and post-colonialism thinking. Bhabha noticed the function of the creation of a space for 'subject people' through the production of knowledge in which the colonial discourse justifies its surveillance. (1990: 75) Escobar argued that, by creating

the Third World, the development discourse has successfully deployed a regime of government over the Third World, a "space for 'subject peoples'" that ensures certain control of it. (Escobar, 1995: 9) Here, the 'space' contains a broader meaning of racial/cultural/historical differences, but still clearly is the geographical imaginations as described by Said. (1979)

To point out a similar imagined relationship between poverty and geography, Desai and Potter claim that there can be little doubt that abject poverty is geographically concentrated in Central America, sub-Saharan Africa and parts of South, Southeast and Northeast Asia. (2002: 6) For example, the World Bank recognized in the 1990s that the poorest countries in the world were located in the South. (2002: 5) These geographic descriptions and accounts of poverty ultimately become important for justifying proposed interventions.

Consequently, poverty has become a problematic definition of 'who' are the poor and now the imagination of 'where' are they. While global poverty discourse has reproduced many academic and populist arguments which usually mix an optimistic mood with technological and developmental solutions they are still limited by these 'who/where/how' linear thinking approaches.

In my research, the Town and Talent Projects could be positioned within such a context of global poverty discourse and developmental logic. It describes rural poverty in Western China in a geographically uneven and problematic development framework. It has changed poverty discourses into a Chinese version and has provided different practices in an attempt to alleviate poverty in

China, drawing particularly on the potentiality of ICT development in western China. It has proposed a solution based on implementing ICTs and computer education in every member school and village in order to transform these traditional rural villages into 'internet villages'. It assumes that step by step, huge numbers of the agricultural population can be empowered and then the poverty will be eliminated at the lowest cost and with the highest possible speed.

The founder of this project, Sayling Wen, was not only optimistic about the use of ICTs for rural development but also believed that it should be a three-way-win project between the government, the entrepreneur, and the farmer. The Chinese government has worked hard to readjust its unbalanced open-door policy and has started to emphasise the development of the western provinces. These areas have now become a great potential market for entrepreneurs, no matter whether it is in the labour market or in the consumption market, if, of course, they can get access to it. Therefore, the Chinese government and entrepreneurs share the same vision of ICT development in western China and the same passionate belief that farmers in this development process will also certainly benefit. In Wen's own word, it is a 'three-win policy'.

### 1.3.2 ICT for Development

Information and Communication Technologies for Development (ICT4D) refers to the application of ICTs for social development. It has been argued that ICTs can benefit the people in developing or underdeveloped countries and improve their socio-economic conditions. Credé and Mansell (1998) argue that ICTs can

be truly transformational even though the costs of building national information infrastructures are relatively high. Digital communication networks, information-technology applications, and new electronic services are inevitably transforming the everyday lives of people around the world and ICTs can facilitate the emergence of innovative, knowledge-based development, though as critics insist, the use of ICTs for development must be based upon the social, economic, and organizational context in which the ICTs are applied. (1998: ix-xi)

In this case the Town and Talent Technologies project planned to replicate the experience of the pilot village, Yellow-Sheep-River, in 1000 additional towns throughout China. The new expansion would allow for the recruitment of long-distance employees, which within several years would amount to 10,000 software engineers in western China. These engineers would be expected to remain as highly skilled labour in the west, thus creating wealth, improving the standard of living, and preserving the cultural heritage in their home regions. The ultimate objective was to install digital technology in struggling agricultural villages in order to foster swift and sweeping knowledge-based economic development. The assumption was that further developments of a knowledge-based economy would then follow. (Yellowsheepriver.com)

In this village-based, education-led project, the founder, Sayling Wen, predicted that ICTs would provide the cheapest and most feasible way in which west rural China could be totally transformed and that this transformation could occur within ten years. (Wen, 2002) The project also proposed that the more Internet

users and knowledge workers there were in the region the better the economy of the country would be. New information technology and its cost-effectiveness would make it much easier and much less expensive to equip an agricultural area with information age facilities than investing in the necessary infrastructure and capital assets that would be needed to industrialize it.

Based upon this argument, ICTs would be the fast and cheapest way to alleviate poverty in China and would not only lead to agriculture modernization but also would transform the traditional village into an information society. Therefore the positive effect of ICTs in shortening the information gap, as well as flattening the income gap, which had been presumed would be confirmed by this project and, critically, that this smooth transformation would occur without a harmful social cost to pay for this advancement. The villagers would still be able to work on their land but now would be able to sell their products through e-commerce, or even be employed through distance-hiring. They would not have to leave their village in order to make a living and they could enjoy the same, or even a better life, than city people for they would be able to retain their own culture and natural environment.

In my research, a critical analysis considered exactly what ICTs have brought to this pilot village after several years' of implementation of computer education and e-commerce. I investigated not only how much on-line business or distance-hiring had been created but also the extent of social transformation that had occurred in this so-called 'traditional village'. However, before presenting these

findings I will first examine the use of ICTs in economic development from a theoretical, historical and critical perspective.

To some extent, this project has tried to find its own niche and special scheme for Chinese contemporary agricultural society rather than just applying a general blueprint of ICT implementation for the development of western China. 'Technological transcendence' is an ideological view that can still be traced back to the discourse surrounding the global development of ICTs especially in Alvin Toffler's 'The Third Wave'(Toffler, 1980), and the government's role in ICT competition between nation-states. (Everard, 2000) It can also be linked to the expansion of global entrepreneurship in ICT development. (Main, 2001), though these backgrounds seem to come from different approaches and with different emphases.

Since the "information society" concept was introduced in the seventies, the correlation between access to information and poverty has been widely acknowledged. (Flor, 1986) For example, the World Bank Communication Technology for Rural Education (CTRE) Project, which began in 1975, made use of a network of community radio stations based in state colleges and universities in the Philippines. Flor has stated that this was the first technical assistance project to apply information and communication technology to problems of underdevelopment, foremost of which was poverty. (Flor, 1986)

Since then, the most ambitious project of ICT for Development (ICT4D) at a global level was the Global Information Infrastructure (GII), coined by former

US Vice- President Al Gore. "The vision is that the GII will enable a massive acceleration of economic and social development that will narrow the poverty gap and eliminate many of the geographic obstacles to prosperity and equality" (Main, 2001:85).

The 2000 Okinawa Summit of G7/G8 nations described ICT development as "one of the most potent forces in shaping the Twenty-first Century…fast becoming a vital engine of growth for the world economy."[1] The Charter also proposed the "development of information networks offering fast, reliable, secure and affordable access through competitive market conditions and through related innovation in network technology, services and applications." Establishing knowledge networks to combat poverty fitted snugly into this recommendation.

Such levels of optimism have invited at times similar levels of scepticism (Schiller, 1999; May, 2002). Even former World Bank President James Wolfensohn warned that with the knowledge-development opportunities of the information revolution "come tremendous risks" for the poor (Mudhai, 2002:100). As there is little research that identifies potential benefits or risks, the use of ICT for development debates still rages on. Questions are now asked about the usefulness of funding ICT projects and there is scepticism regarding the role of ICTs in poverty reduction. Even where it is accepted that ICTs are useful it is still unclear what aspects of ICT projects make them effective, how they can be made more effective, and how they can be sustained.

[1] Okinawa Charter on Global Information Society, G8 Scholarly Publications and Papers, University of Toronto, G8 Information Centre.

There are similar projects in Africa and Asia currently ongoing that are trying to use information technology to alleviate poverty. Mudhai noted that ICTs are increasingly becoming popular as tools for advocacy and for improving human, technical and financial capital for the benefit of individuals, communities and nation-states. It is for this reason that a number of bilateral and multilateral donors have been promoting the ICT for Development (ICT4D) agenda in less developed countries. (Mudhai, 2004) However, these ICT development plans in poor and rural areas are vulnerable to what Robert Chambers once argued as technological development that was conceived and executed by high-ranking professionals or development experts who were generally from the West and who were often biased when they entered the field. (Chambers, 1983) Chambers (1983) believed that the world should be made aware that those who talked the most about developmental technology were the ones who have already benefited from it and, in some cases, were most likely to benefit even more if the Third World is connected. From this viewpoint the position that ICTs are necessary tools for development is an elitist representation and may have a large potential for hidden self-interest hidden behind those apparent good intentions.

So the question remains, who will be the real beneficiaries in this ICT expansion and social transformation, and will the use of ICTs as a tool in economic development actually shorten the gap between those who have and those who have-not, or will it widen it?

Linda Main discussed whether the implementation of ICTs in developing countries is empowerment or imperialism. (Main, 2001) From her point of view ICTs have potential but only if the market demands that poor people are connected. The market must demand that poor people be transformed into consumers for the development of ICTs in poorer countries will be to a large extent driven by business interests. (Main, 2001) These interests will want a return on the investments made in development with that return being defined as access to the new big markets in the Third World. The ICT development plan is an example of how demands from developers follow the implementation of the new technology. (Main, 2001) Clement and Shade are also critical of many of these programmes, "it is ironic that most notions of access have typically relied on models that are solely technology driven, and not socially constructed" (Quote from Day and Schuler, 2004: 11).

My research poses the general question regarding the plausibility of a smooth transformation occurring as a rural community moves into the information society. Without question, Chinese rural areas are changing under the impact of this and other similar projects and also without question this process will likely be full of contradictions and resistance rather than quiet acceptance and smooth transformations. Support for this plan to relieve poverty in Yellow-Sheep-River, like many other poverty alleviation plans, has come from the highest levels of Chinese authority down to the rural communities. Poverty has been categorized by these high level officials into easier-to-solve smaller problems some of which can be solved by perceived panaceas such as ICTs without consideration of

historical and geographical differences. Furthermore, ICTs can provide a way for agrarian societies to leapfrog directly into the information era

The 'leapfrogging' hypothesis is often referred to the implementation of information technology and its consequences on economic development. It proposes that a developing country, with the proper telecommunications policies, modernize its communications infrastructure will have more chances to enhance its economic competition and transform directly into information society. (Howard, 2006)

As Howard mentioned, there is a growing amount of research into the role that ICTs play in improving the quality of life around the world. But the leapfrogging hypothesis has rarely been tested. Evidence only suggests that ICTs are significantly more effective in public health services, agricultural research, and distance education. Aside from these specific effects of improving the development task, it is still lack of efficient confirmation to prove that ICTs will help developing countries directly leap-frog over some of the difficult political, cultural and economic problems that developed countries have had to deal with. (Howard, 2006)

Singh argues that Walt Whitman Rostow's 'getting-from-here-to-there' which describes linear stages of growth has been replaced by 'leapfrogging' views (Singh, 1999), analyses and implementations of ICTs and are still replete with universal models and imageries. (Mudhai, 2004) The global poverty discourse has successfully described developmental strategies within a new international

context since the end of the cold war. As the world has become more global an increasing number of NGOs have replaced Third World governments as the main agencies in putting into practice most of the leading projects that use ICT implementation as a primary resource in the alleviation of poverty. Therefore, Mudhai calls for a more horizontal, participatory approach rather than a hierarchical approach in the implementation of these projects. (2004) He also stresses local context and local capacity-building, so that ICTs are not just channels for transmission of skewed information but become tools for creating content for distribution, and for resisting oppressive dominant conditions and practices.

This research, like the critique regarding over-optimistic and over-generalization of global poverty discourses, considers the demystification of ICTs as a metaphor for the leapfrogging solution and relies in part on what Escobar called the 'anthropology of modernity' (1995). The 'anthropology of modernity' is a general investigation of Western modernity as a culturally and historically specific phenomenon which has been constituted and universalized through an "anthropological structure" (Foucault, 2003: 244) to sustain the modern order and its human sciences. (Escobar, 1995:11) It centres on the economy and leads to questions about the market, production, and labour, which are described as the root of Western economy. (Escobar, 1995: 59) 'Anthropology of modernity' investigates to what extent this structure of economics and epistemology has also given rise to the regime of development which has become the dominant form of socio/cultural and economic production of the Third World. According to Escobar, the 'anthropology of modernity' would rely on ethnographic

approaches that look at development discourses as the production of historical practices combining knowledge and power. (1995: 11-13)

This research will also rely upon ethnographic studies of the actual process of this individual project to investigate the implication and impact of ICT implementation in this "pristine" area of the digital world. This anthropological task is different from the complicit ethnography associated with the rationalization of modern economics (Escobar, 1995:61). This new mode of anthropology criticizes 'the loss of indigenous culture, environmentally and psychologically rich modes of life' in development intervention (Desai and Potter, 2002:16). Therefore, the nature of this research agenda is socio/culturally inclusive and sceptical regarding technological imposition.

## 1.4 The Fieldwork: The Research Turn in Information Society Studies

*Contrary to the first generation of Internet literature – the Internet is not a monolithic or placeless 'cyberspace'; rather, it is numerous new technologies, used by diverse people, in diverse real-world locations. Hence, there is everything to be gained by an ethnographic approach, by investigating how Internet technologies are being understood and assimilated somewhere in particular.* *Don Slater and Daniel Miller (2000)*

Don Slater and Daniel Miller (2000) rejected the universal survey and virtual cyber-space study choosing instead to investigate the ethnography of the Internet in Trinidad. They rightly pointed out that the Internet is not a monolithic or

placeless 'cyberspace'; rather, that there is the reality behind virtual spaces and that the internet is used by different people, in different real-world locations. The internet is not a place somewhere apart from the rest of social life and therefore, the domestication of CMC (computer-mediated-communication) in specific locality and society is an important theoretical framework for understanding internet culture. For Miller and Slater, it is difficult for their research to differentiate "between, say, e-commerce and other commerce, playground chat and ICQ chat, religious instruction face-to-face or by e-mail...in terms of any clear distinction between the 'real' and 'virtual'". (2000:6)

Maia Green (2003) has also suggested that anthropological studies that are conducted outside the framework of "development" have consistently demonstrated the social constitution of categories and the importance of social relations which have served as the bedrock of inequality. She indicates that an anthropological approach explores the content of the constitution of classifications and its genealogy in relation to the specific historical and social contexts in which it has salience for different categories of persons. (Green, 2003)

Accounts of 'poverty' or 'ICT for development' from this perspective would not seek to refine globally applicable definitions. My research has attempted to follow this epistemological as well as methodological approach to poverty and to ICT studies, and was conducted using fieldwork in the pilot village of this project as a microcosm for understanding the specific process of transformation in rural areas under the impact of ICT implementation.

There are many approaches to anthropological or ethnographic studies; even virtual ethnography of on-line communities has been mentioned as a new research method particularly in ICT-related projects. According to Hine (2000), the interest in the Internet has drawn heavily upon ethnographic methods in recent years. She proposes a virtual method to explore the methodological solutions for understanding the social interactions mediated by information and communications technologies (Hine, 2005:1). Logically speaking, if social research involves communication, it is reasonable to ask if changing the mode of communication affects any methodological assumptions or practices (Hine, 2005:3). A virtual community is shaped in the mode of computer-mediated-communication; studies that investigate virtual communities must therefore develop methodologies that reflect this computer mediated form of communication.

For this research I have used a more narrow methodological, ethnographic approach that is based upon a long-term and multi-faceted engagement within a social setting. There is controversy about how long is 'long-term' in order for a study to be considered ethnographic. For this reason the term 'fieldtrip' may be a better descriptor in this case due to the limitation of time and the truncated timescale.

In my first fieldtrip to the pilot village, I conducted interviews with certain people and recorded some visual footage with my camcorder. I found that documentary footage, rather than writing, offered a different opportunity to

record and investigate the process of transformation of this pilot village. There are advantages and disadvantages associated with the use of video in the conduct of my research. My aim was not to visualize or represent the poverty experienced by the villagers, on the contrary, the visual method offered ways in which the researcher and the viewer could experience and understand ethnographic complexity. This approach drew the researcher out of a position of authority and gave room for 'native points of view' on the research topics and moved towards an inter-subjective and poly-vocal ethnography.

In conclusion, my research does not assess this project as a failure or a success as it is only in its initial stages. Rather, this research focused upon a double journey that has been triggered by this project. One journey is described by the villagers' experiences with the outside world through virtual contact on the internet as well as physical contact with outsiders. The other journey is described by an outsider's encounter with a totally different way of everyday life that may challenge modern points of view about poverty and progress.

## 1.5 Outline of the Thesis

In this chapter, I have outlined the background of the project and the key research question of how to view poverty and rural inequality in western China, and whether the implementation of information technology can alleviate the ills of poverty and inequality in an agricultural village in western China. I have also introduced the theoretical contexts and addressed the relevant literature.

In the next chapter I will describe the choice of methodology in relation to this research problem. The methodology will involve a visual approach and the significance of using of a video camera in data collection. I will discuss this in the context of ethnography/visual anthropology/documentary and try to justify why I chose to conduct this case study in the pilot village using a digital camera to record interviews and the daily life activities of the villagers. By comparing these modes of visual analysis, traditional documentary representation, reflexivity, and collaboration, I will explore the possibility of integrating these different modes into a methodology that particular draws upon the use of the camera as a source of elicitation between researcher and the researched.

Chapter three and four will focus on the project itself and describe the background of the Chinese rural farmer particularly in western agricultural areas. I will explain the details of this project and how it is developing and then the pilot village, Yellow-Sheep-River, within a historical/socio/economic context.

Chapter five will look closely at several personal stories related to this project. These stories include the village political leader, a computer teacher at the local high school and some of the students. I have sketched their memories and interpretations about social change as well as the impacts that this project has had on their village and their lives. I have tried to find out their own ways of using the internet in which the indigenous culture and local political/social conditions have decisive roles.

Based on the ethnographic work, chapter six will reflect on the results that can be generalised towards a critical analysis which explores the effects of culture/economy/politics, from both a positive and negative perspective, on the development of an indigenous internet. In the final chapter, I will summarize the research findings on the basis of this case study and give a general review and assessment of the outcome of this project. I will also provide a critical discussion of this sort of development policy and search for the new route of epistemology and possible alternatives for the development of inland villages.

# CHAPTER 2. DOCUMENTARY, VISUAL ANTHROPOLOGY APPLIED TO ETHNOGRAPHIC RESEARCH

## 2.1 Introduction

As I mentioned in the first chapter, my core research method adapts an anthropological approach to new media studies. In this chapter, I will discuss further how I practice this within the interdisciplinary development of visual anthropology, which engages using camera and visual footage in an ethnographic process. I will also explore the relevant dimensions of this methodological practice as I apply it into a specific society in my case study, and how it relates to other aspects such as culture, power, and strategies entangled behind the visual representation. Furthermore, I will highlight how technological innovations, especially the internet and digitalization, provide new opportunities and implications for visual methods towards more collaborative and reflexive ways of representation, circulation and interpretation. Finally, I will discuss the potential limitations of this method in theoretical construction and social practice, particularly in the context of China's social transformation.

The research for this thesis was carried out between March 2004 and August 2005 on three separate visits. The first visit was for two weeks and allowed me to finalize the core issues for the study and conduct the first interviews with selected informants in the pilot village. The second trip began in September of 2004 and last about four weeks. During that time, I was able to further consolidate my relationships in the village, make more concrete interviews and

recordings and began initial inquiries about the transition under the impact of this ICT project implemented in the village. My final visit was in July and August of 2005, a total of one month, almost one year after the second fieldtrip. This provided a viable time frame to observe the way in which the pilot village has responded to this plan as a whole and its broader implications.

Methodologically, I used the video camera as a psychological stimulant tool to evoke villagers to express their own interpretations of this project and their memories of social change, especially as the project was initiated six years ago. However, before I start the methodological debates on the visual method that I employed, here, a relevant question needs to be clarified: what will be the final form of my research product? The answer seems not to be confined to the traditional form – a thesis, because I have employed video footage intrinsically in the research. Therefore, how to locate these visual resources in my thesis becomes an extended problem and it also relates to the comparisons of different forms of representation, especially the advantages and disadvantages between the visual and verbal text.

The basic form of my findings is thesis-like, and predominantly, it is based on the verbal text. However, unlike a conventional thesis, it contains visual references which are burnt on a CD-ROM attached with the thesis. Secondly, I will think about the possibility of multimedia form of production to include multiple genres of video footage, photography, and writing text. In the future, I intend to put them on a website to share the resources and research findings with other people via the internet. Lastly, an edited documentary about the project and the research process will be produced, echoing what Crawford mentions that

ethnographic footage may 'eventually be edited into a film'. (Crawford, 1992: 74)

In that sense, the most important concern is not only about how to facilitate the different forms of representation and production of the research itself, but also about an unfinished process and long-term commitment of visual anthropology recently practiced in the digital and internet era. The emergence of new communication technology empowers multi-level dialogues between the researchers and the researched beyond time-and-space limitations. Therefore, the research process will not end in a written-up thesis or an edited film but will remain as a permanently unfinished, open-ended text in hypermedia form where audio recording, photographs, verbal text and visual footage are integrated into one website (Pink, 2001: 167). Authorship of the representation of knowledge, which usually belongs to the ethnographic writer and video maker, now is getting dissolved to a different kind of narration of multi-linearity and multi-vocality where the researched have more powers to participate in every stage of research process. (Pink, 2001: 166)

In my case, documentary film, rather than writing, could be viewed as a different opportunity to record the process of transformation of Yellow-Sheep-River. Yet many questions remain to be answered; How to develop it as a useful record for understanding, not only about the villagers' everyday life but also about China's transformation. What is the nature of ethnographic documentary? In what ways can I position my research method in this field? What is the discipline and limitations of this visual methodology?

## 2.2 Why Visual Methods and How

*Documentary occupies a complex zone of representation in which the art of observing, responding, and listening must be combined with the art of shaping, interpreting, or arguing.* ---- *Bill Nichols*[2]

The methodology applied in my research raises two types of questions: first, what are the implications of this method in terms of epistemology and ontology, as well as its benefits and limitations; and second, how to apply this method to investigate and answer a specific research question? Although these two questions can be discussed separately, they are actually reciprocal in the process of research practice. In my case, the first question is related to using visual methods as a main research scheme to collect data and represent the research process itself; the second is about how to link this method with my research topic, that is, the transformation process of agricultural villages under the impact of this project. Furthermore, what is the implication of applying this visual method, basically developed in western countries, to a non-western society?

Theoretically, to use a camera in visual anthropology is to encounter different modes of representation. The term 'visual anthropology' was coined after Word War II and has been associated with the idea of using cameras to make records of culture (Worth 1980:15-22). In Europe, visual anthropologists have focused almost exclusively on ethnographic film. In the United States, all visual formats

[2] Bill Nichols: "Documentary and the coming of Sound", *Documentary Box, No. 6,* Mar. 1995
(http://www.city.yamagata.yamagata.jp/yidff/docbox/6/box6-1-e.html)

and media developed for teaching, recording, research, and analysis are considered part of visual anthropology. (Guindi, 1998: 459) According to Marcus Banks, visual anthropology involves three broad activities of visual research methods: 'making visual representations (studying society by producing images)'; 'examining pre-existing visual representations (studying images for information about society)'; 'collaborating with social actors in the production of visual representations' (Banks, 2001)

There are many ways to distinguish the differences of visual methods in visual anthropology. I categorize them into two dichotomous modes in terms of their attitude towards the relationship between visuality and reality. The first is the realistic mode, which uses a camera as an objective method to capture reality. Because the camera has the ontological capacity to freeze reality, therefore, visuality is realistic through the spectacle of a camera. In this mode, the camera is like a fly on the wall and visuality is the way in which objectivity associated with the unadulterated cinematic 'observation' in order to capture the reality of event and people without bias. (Bruzzi, 2000:68-69) Collier and Collier further advocate a systematic method of observation in which the researcher is supported by visual technology including good video and film records. (Collier and Collier, 1986: 149)

The second is the constructive mode, which insists reality is produced or reproduced in visuality. As with Clifford's (1986) comparison of ethnographic writing to fiction, Loizos notes the absence of concrete boundaries between ethnographic, documentary and fictional film (Loizos 1993: 7-8) In their point of

view, the visual reality claimed by previous scientific-realist paradigms is not objective as authentic but constructive as fictional, and rooted in the specific context of how to produce it and who produces it. In this mode, using a camera involves the process of partiality, or in Clifford's words: 'Ethnographic truths are inherently partial- committed and incomplete' (1986: 7) Thus, it is subjective and contextualized and we should consider reflexiveness and positionality when the visual method is introduced.

There is large amount of literature on the debates of visual anthropology, basically surrounding the different emphases on the 'triangular' relationship between researcher (observer), camera and the researched. The two opposite modes describe previously exactly reflect the different attitude towards the function of the camera and the nature of the researcher's interventions. Based on the realistic and constructive modes, I have tried to develop another mode of visuality that can be described as 'strategic visuality' which is shaped by my field experience.

I found that using a camera in China can be highly sensitive and strategic. Even remote villagers are not naïve in front of the camera. They have their strategy in regard to how to answer, who should talk and even who can get access to the interview. The whole strategy is related to a particular political culture. It was also very difficult to make them conceive that my research is independent as research in China usually is initiated by some government institute or relevant network. So, the visual method applied in this society must take into account the highly 'political' context that it is rooted in.

This awareness of complexity of visuality and political culture in China on the other hand has helped me to develop a different kind of research strategy. I took the camera as an elicitation to induce the villagers' attitude towards it and tried to find the way in which they embraced the new technology coming from outside and how they absorbed it into their society, not only about the camera itself but also about the internet as well. Therefore, the elicitation of the camera in that sense implies both methodologically and symbolically in terms of the psychological responses of intervention from outside. This process is not playing tricks with villagers but using the visual method in a political sense to explore the cultural and psychological aspects of the interactions between outsiders (including myself as a researcher) and local people through modern media technology (camera or the internet).

Marcus Banks has already discussed photo-elicitation and film-elicitation, but his approach concerns the method by which a researcher uses photographic pictures or film to raise memory, comment and discussion, and its limitations. (Banks, 2001: 87). In my case, the camera itself was an elicitation and the process of elicitation involves the double elicitation between myself, as a researcher, and the villagers, as the researched. Sometimes I became a cameraman and played a passive role when they tried to use my camera to serve their purposes. In that sense, camera-elicitation can turn a highly sensitive situation into a highly productive and rewarding method in many ways. I will provide an exact example later in this chapter to elaborate on what I call 'strategic visuality' and camera-elicitation.

In conclusion, the visual method applied in my research is related to the question of the intervention of the camera (how to see from the camera, and also how to use it in a different social context), the reflexivity of the researcher-self (whose eye? for what purpose?), and the collaboration of the researched (who was seen? how to understand their ideas?). The major task of the visual method and ethnographic process is to find a way to dialogue with people and record their daily lives, then give reflections on particular questions and, most importantly, help to obtain understanding about my research topics. As Sarah Pink mentions, this process opens up new possibilities for the representation and analysis of visual materials with the collaboration of informants in the field, as well as for the post-fieldwork organization and interpretation of materials. (Pink, 2001: 92)

Next, I will talk about how I use the video camera in ethnographic fieldwork, especially focusing on the *vérité* method and reflexivity in visual anthropology. In my opinion, methodology is not only about a method but also an ontological and historical reflection. Therefore, I will discuss the nature and relevant development of documentary and visual anthropology. I will then try to position my method as a combination of *vérité* and reflexivity. Both are sensitive to the relationship between the researcher and the researched, the power struggle behind filming, editing and viewing. In my case, visual methodology also involves the question of applying the western *vérité* method to Chinese society. Therefore, it is necessary to scrutinise what the *vérité* method means in different contexts and the power struggle between the methodologies themselves.

## 2.3 The Vérité Method

### 2.3.1 The Intervention of the Camera in Visual Anthropology

Documentary film-making, or using a camera as a research method, integrated with writing, has been discussed for a long time in visual anthropology. Although the disciplines of anthropology and visual documentation both came into existence in the nineteenth century and have evolved in many ways separate from one another, use of photography and visual documentary by anthropologists in the field has happened continually as part of their fieldwork evidence to document what they were experiencing abroad. 'Ethnographers continue this practice today, though their methods have evolved with the changing theories within anthropology as a discipline as well as the changes in photographic technology.' (Matthew Ball, 1997)

Visual Anthropology is basically developed around the different emphasis on the triangular relationship between researcher (observer), camera and the researched. André Bazin was not the first, but maybe the most influential, proponent of the idea that cinema, under the aegis of photography, 'freed Western painting, once and for all, from its obsession with realism and allowed it to recover its aesthetic autonomy.' (1967:16) Although Bazin's ontological claim of the camera's potentiality in recapturing or representing reality has been criticized, use of the camera as an approach of objective research began in the 1930s and flourished in ethnography in the 1950s, '60s, and early '70s. Camera and film might today be considered as important as the notebook in an ethnographic research project. In

that sense, visual tools are indispensably used to gather, discover, or elicit data for analysis in both fieldwork and post-fieldwork.

Regnault was the first to use a camera to film cultural practice on a scientific purpose. (According to Guindi, 1998: 471) In 1931, he surveyed the function of film in anthropology, formulated a typology of film according to its use: entertainment, education, and research. He also pointed out that the importance of film in scientific research had been overlooked (Regnault 1931:306, cited in de Brigard 1975:20). Subsequently Margaret Mead and Gregory Bateson pioneered systematic film use over an extended period of research and cross-cultural observation. In Bali and New Guinea from 1936-1938, they shot 22,000 feet of 16-mm film and 25,000 stills, then made the 'first saturated photographic research in another culture' (Collier and Collier 1986:12) Therefore, research film, or what Sorensen calls 'record footage', is meant to provide a credible source of information for continued analysis and research (1976:248). From this perspective, the visual method is considered a relatively exact tool that ensures data accuracy and enhances analysis objectivity. (Guindi, 1998: 471)

However, Adolfo Colombres situates the ethnographic film genre, like anthropology itself, within colonial encounters and dominating relationships. From this point of view, colonial filmakers were filming the colonized, and anthropology's colonial roots were being revisited through visual anthropology. (Guindi, 1998: 466)

### 2.3.2 From Objective to Subjective --- Camera as Stimulus

In 1960, anthropologist-film maker Jean Rouch and the sociologist Edgar Morin made a ground-breaking documentary, *Chronicle of a Summer*. This documentary film does not follow an established structure but is driven in an unpredictable manner by its characters and their reactions to the camera. From a simple starting question – 'Are you happy, sir?' - *Chronicle of a Summer* delves deeper and deeper into the lives of its characters. It was the first film to define itself using the term *cinéma-vérité*.

In many ways, Rouch's *Chronicle of a Summer* plays an important role in debates about the nature of documentary and the relationship between camera and object. Rouch redefined the nature and function of the camera, his cinema explored possibilities that had not yet been considered, and presented a very different response to new technological innovations:

> The presence of the camera is a kind of passport that opens all doors and makes every kind of scandal possible. The camera deforms, but not from the moment that it becomes an accomplice. At that point it has the possibility of doing something I couldn't do if the camera wasn't there: it becomes a kind of psychoanalytic stimulant, which lets people do things they wouldn't otherwise do. --- Jean Rouch[3]

Michael Renov (1995) argues that Jean Rouch had begun to explore the power of the camera to induce the display of subjectivity. Renov also thinks that "Rouch had from the late 1950s on employed the cinematic apparatus as a kind

[3] Quote from Levin, G. Roy: *Documentary explorations; 15 interviews with film-makers. (1st ed.)* N.Y.: Doubleday(1971:136)

of accelerator, an incitation for 'a very strange kind of confession', in which the subjects choose to probe memory and emotion for rather than in spite of the camera." Loizos identifies four qualities that describe Rouch's contributions: 1. documentation, 2, collaboration, 3, interrogation, and 4, improvisation and fantasy. For Rouch, the "camera is not confined to the role of a passive recording instrument," as in observational cinema, but becomes "rather an active agent of investigation and the camera user can become an interrogator of the world" (1993:46).

De Brigard (1975) states that Rouch, in the 1960's, was one of a few who pioneered the change in technology and shooting-synchronous sound filming combined with the hand-held camera. Barbara Bruni points out that Rouch, on the one hand, grasped the enormous shift in perception caused by the introduction of the photographic image, and on the other, due to his scientific background, comprehended the impact of the observer on his subject matter. "In fact, Rouch believes that, as the presence of the observer cannot be ignored, it should be taken into consideration so as not to invalidate the results of the observations."(Bruni, 2002) For Rouch, the camera acts as a new tool-observer and also as a stimulant for the observed, which actually bringing a new meaning to the relationship between objectivity and subjectivity.

In contrast to previous research films, Rouch used the camera as a stimulus to explore ethnographic reality by collaboration with people, and investigated subjective meaning by sharing his documentary with them after filming. And his pioneering idea of participant camera links camera and people, which turning filmmaking into a stimulant for mutual understanding and dignity. It is a visual

field technique of both humanistic and methodological value for enhancing the quality of field filming. This method engages the direct filming of actions and direct contact between filmmakers and filmed. However, provocation as such is still led by the researcher, and the stimulation is undergone with the filmmaker's questions, so Rouch finally exposed himself as a producer and participator in the film.

### 2.3.3 Stimulus and Elicitation

Unlike camera stimulation, the elicitation method uses personal intimate material like photos to seek the local view of the reality process. Visual elicitation as a technique in psychological research can be traced back to 1909 and became common in psychiatry during the Second World War (de Brigard 1975). In 1925, Mead introduced photo elicitation in anthropology using still photos to elicit responses from Samoan children. John Collier (1967) also notes that pictures can be used to gain other knowledge beyond the direct analysis-an understanding of culture informed by indigenous interpretations.

Photo-elicitation is a straightforward method to understand and to utilize. It involves using photographs to invoke comments, memory and discussion because the photographic content always provides something to talk about (Banks, 2001: 87). In early studies using still photography, researchers used photographs to discover or illustrate analytical concepts. Collier (1975:213) distinguished between projective and elicitive uses. He felt that elicitation could uncover informants' conceptions of the entire community and its social organization.

Krebs (1975) used both photo and film for elicitation during her fieldwork in Bangkok on the ancient form of Thai dance drama called Khon (1970-73). Her focus was more on film elicitation, using it with native informants "to elicit conceptual categories of culture from members of the filmed society . . . [and to] . . . discover how they conceptualize and categorize the phenomena of the world in which they live" (Krebs 1975:283). Marcus Banks points out that Krebs uses visual elicitation as a positivist or realist approach for she assumes that in most societies a realist reading is normative and unproblematic, and even in societies unfamiliar with moving pictures it would be relatively straightforward to 'introduce' the members to this form of representation and then begin elicitation (Banks, 2001: 96-97) Banks is also critical of taking photograph and film as a kind of neural third party. Because these images are mediated with the relationship between social researcher and subject, reading of them involves the issues of photographic multi-vocality and the complexity of the entanglement of visual objects in human social relations. Therefore, photo and film-elicitation cannot always be so straightforward in practice and a fairly transparent reading of these images is also questionable. (2001: 88)

Film-elicitation and photo-elicitation can be a highly productive research tool for the social researcher, yielding insights and understandings that might otherwise be missed or not discernible by other methods. (Banks, 2001: 99) According to Collier and Collier (1986: 105-7), an additional benefit of visual elicitation is that the awkwardness that an interviewee may feel can be reduced by the presence of visual materials to discuss. However, besides its many advantages, visual elicitation is strongly directed by the researcher, not by the researched who is still passive in the process of elicitation. Therefore, the power relation

leans to the researcher's side and the elicitation can only explore the explicit language and concepts of the interviewee and may not reach the implicit social context of visual culture in a particular society, especially when the researched have their own strategy or play with the researcher's elicitation in a particular social background.

In many cases, the interviewee is second-guessing the researcher's preferred outcomes (Banks, 2001: 88) and this psychological intention complicates the elicitation process from a superficially researcher-led one way journey to a more entangled reciprocal elicitation between the researcher and the researched. The way in which I used the visual method in this research is based on cautiousness and an awareness of such complicated psychological responses to camera and the research process itself in a Chinese village. Using the camera and visual objects, therefore, was not only a stimulus or one-way elicitation but also intertwined with what I called the 'double-elicitation' in which the camera elicits both the research strategy of the researcher and the performance of the researched. Bruzzi rightly used the mode of 'performative documentary' to openly acknowledge that the intrusion of the filmmaker into the situation being filmed inevitably affects and triggers the encounter between the film-makers subjects. (2000: 153) In this sense, both film-makers (the researchers) and subjects (the researched) conduct their strategies of performance in front of or behind the camera. Therefore, the documentary filming and research process involve a new mode of 'strategic representation' in which the different visual performances are elicited by using the camera.

### 2.3.4 Double-elicitation

In the first fieldtrip, following the normal ethnographic procedure, I conducted interviews and recorded visual footage with a camcorder. But even though I did this in a relatively natural way, using semi or open-ended interview, and though there was no intricate restriction from any authority to regulate my observation, the people who are willing to answer my questions and the way they answered seemed very tricky in many ways.

For example, on a snowy morning, I walked to the village centre and tried to capture some snapshots. (See video reference1) Several people had already gathered around the public well and took turns to draw water for their daily use. When I started to shoot and at the same time talk to them, most people, especially the women, only kept on smiling unnaturally and remained silent. It was a very natural response to such an intrusive, unexpected outsider's question particularly posed in front of a camera, which is so rare and obscure for these villagers. Yet to my surprise, there were two people who replied to my question and talked to me quite naturally. I did not know them previously, partly because I had just arrived a few days before, and partly because my previous interview focused on the village leader himself. So the shooting was more than a snapshot but a perfect interview in a highly-natural circumstance. There was no doubt how eager I was trying to make friends with them and think about how I could possibly conduct a more formal interview with them since they were so eloquent and expressive. Finally, I found that ten years before one of them used to be the village leader and another was also an activist in village politics and economics.

Their stories and relations with this project will be further discussed in chapter five.

What I wish to point out here is not a doubt about their seeming-to-be natural appearance when I were shooting, although it might be under some kind of arrangement that they were there when I was, but rather to emphasize a necessary recognition of using the camera as a research method especially when the camera is politically a highly-sensitive instrument in a society. Therefore the issue becomes one of who has the intricate power to decide who can appear and talk in front of camera. In that sense, using the visual method to collect research data becomes much more problematic and limited if these latent factors are ignored. On the other hand, the camera is still a useful tool of stimulus or elicitation to explore a hidden agenda of a society if it is used consciously and in a different way. Since, in a society like China, the camera is conceived as a very powerful piece of equipment rather than simply as a research or recording device, using the camera in the field might elicit an evasive strategy of the researched. The camera, then, like a double-edged sword, on the one side is used strategically for the interviewees whose intention is deeply grounded in their political culture, and on the other side is used for the researcher to follow the strategy of the researched and investigate its implication.

Based on my understanding, there is no previous case of using the camera in this 'double-elicitation' method; therefore, I tried to discover a useful way to use this method in practice. From my personal experience I found that changing the role from a researcher to a cameraman to follow the interviewee's requirement of

what should be shot is a beneficial way in terms of elicitation. I was not disguising my research purpose to them or abandoning the previous project of using the camera to collect visual data for further analysis merely re-structuring some of the roles and perceived power associated with these roles. Most of time, I still used the camera as a recorder or a stimulus in Rouch's sense. Only in certain situations, did I combine them into this 'double-elicitation' method. For example, besides shooting a semi-structured interview with the village leader, I also followed his request to record some daily activities and finally to burn this footage on a CD-ROM for him. (See video reference2)

In the whole process, there is only a simple change of the use of the camera from a purely research purpose to serving a requirement of the researched. The resulting footage in that sense might not suit the original research project but contains a lot of implications in terms of how the camera is used in a specific social context and what it is used for. It also creates some useful visual documents for the researched because the footage is shot under their guidance. So, this footage or what I call 'strategic representation' if compared with the realistic and reflexive mode of representation mentioned before, is grounded in the mutual elicitation between the researcher and the researched.

Methodologically, strategic representation can be multi-functional, serving the goals for both the researcher and the researched. It is contextualized in a political and psychological context and collaborative with engaging subjectivities. The most important is, in this case, that the villagers' attitude towards the camera is somehow similar to their attitude towards the outside world and new technology

such as the internet. Therefore, using the camera as a method in my research is not only about the methodology of visuality to collect the direct visual footage for analysing the impact of ICT implementation in the village but also involves the supplementary understanding of how the new technology is absorbed and manipulated in this village.

To sum up, double-elicitation or camera-elicitation in my study is not only a method of documentation but an approach to conscious awareness of different social contexts in terms of using visual methods to conduct ethnographic research. Its functions include:

a. exploring visual culture within this society,
b. creating a visual document for this society, and
c. understanding their attitude towards new technological material

In that sense, using the camera in my research is beyond the traditional realistic approach of visual anthropology to search for the objective materials for scientific knowledge, or Rouch's type of stimulus in which camera is a tool for the researcher to induce the subjective response of the researched, but rather is drawing on the possibilities of shaping more interactions between the filming and the filmed and its implications of how media, old and new, is articulated within the political landscape and particular social context.

In this section, I have tried to develop a better method of collaboration between researcher and the researched in documentary filming. This special approach is inspired in particular by Marcus Banks' elicitation method in anthropological

filming, and I aimed to extend it into a Chinese background. This draws on how I, as a researcher, can be ruled out of the position of authority and provides more opportunity for indigenous views on research topics. Although the reciprocal process of elicitation will be highly political and sensitive, visual methodology has a significant potential for moving towards an understanding of the inter-subjective and poly-vocal ethnography in China.

## 2.4 Reflexive and Collaborative Research

### 2.4.1 Reflexivity and Multi-form Ethnographic Production

Pink (2001) rightly points out that the video camera serves as ethnographic diary-keeping and note-taking becoming more and more popular in research practice. However, such video materials should be treated as representations rather than visual facts, and their analysis should be conducted with an awareness of the collaborations and strategies of self-representation that were part of their making. (2001: 88) The profound issue behind this concern with 'cinematic strategy' is the new theoretical perspectives that put new demands on the ethnographic film style and in which they form. (Pink, 2001: 139)

Pink suggests that the production of a research video is not objective recording, but rather is subjective text, often produced collaboratively with informants. When video plays a key role in the research, it does not necessarily mean editing a documentary ethnographic video, but, for example, using video clips, stills or transcripts in conference presentations or hypermedia text, or with written descriptions in printed publications. (Pink, 2001: 142)

Some cases indicate that showing visual footage to informants can also become part of a research process. However, as Pink points out "The extent to which this method is formalized varies from project to project. Whatever the context, the purpose of this method should not be simplified to use video images to elicit responses from informants or to extract information about the images. Rather, viewing video with informants should also be seen as something of media ethnography. This combines ethnographers actively discussing video images with informants while also attempting to understand how informants situate themselves as viewers of the footage." (Pink, 2001: 89)

In that sense, the reflexivity in my research is not only questioning the objectivity of the visual method or footage, but also explores the different mode of visuality through contextualizing the visual resources into their political and cultural background, further more, this reflexivity searches for a possible way of collaboration with the researched in terms of showing visual footage to them (See video reference3) and putting data onto a website. As opposed to the tradition of visual anthropology in which an edited documentary or ethnographic film usually will be the final form of the research project, the representation of my findings will not end in a film product. The main reason is not that I am strongly against the authorship explicitly and implicitly rooted within the body of the film, but that I agree with the argument of different possibilities of using or circulating these footages through new media technologies.

The internet also enables another way of doing fieldwork by 'virtual ethnography' which involves intensive engagement with mediated interaction through the internet and beyond time-spatial and physical limitation. (Hine,

2000) Hine argues that this kind of engagement adds a new dimension to the exploration of the use of the medium in context. Therefore, the emergence of interactive media like the internet provides a challenge and an opportunity for ethnography by bringing into question the notion of a site of interaction (2000). Adapting virtual ethnography is quite relevant in my research because of the increasing internet literacy in the remote village.

However, as Jones (1998) noted, the internet presents very many methodological difficulties in conducting ethnographic research due to its complex, diffuse, and multi-faceted structure that makes it difficult to focus on a specific research object, and to take a particular sector of the population as the research subjects. Such a research population cannot be determined solely according to regular criteria, since use of the Internet is not limited to a particular social space. Additional difficulties are posed by the main methods of data-gathering during the conducting of the ethnographic study: the interview and the online observation. When the online interview is taking place between researcher and users, they do not meet physically face-to-face, which leads to loss of many additional layers of meaning added to the purely verbal exchange, such as the tone of speech or body language such as gestures and facial expressions.

That is the reason why I still focused upon more traditional ways of ethnography or field study to underpin my research, although that approach also has many of the limitations and disadvantages mentioned before. The previous methodological reflection helps to relocate and redefine the implications of the method of visual anthropology and the way in which I practice in a specific context. Again, I would like to reiterate that the reflexivity and collaboration of

multimedia way of research mentioned in this section indicates an unfinished process of multi-forms of dialogue between myself as the researcher and villagers as the researched.

In recent years, there have been dramatic, technological changes combining media, formats, and bodies of data for enhancing information. The video format has presented new areas of application and facilitated filming with sound. With digitization, nonlinear editing, hypermedia, multimedia, web sites, CD-ROM technology, and other innovative technology, new directions have become a reality. (Seaman and Williams, 1992)

With the help of digital innovation and the methodological turn in visual anthropology, the use of visual documentary filmmaking in more reflexive and collaborative ways as my main research method meant that filming in an ethnographic process and dialoguing with informants as the viewed this footage reflexively. My analysis will be through this footage in the thesis and I will also put them to a website to share with other users/viewers. Anderson (1999) feels that the production of ethnographic research in such a new format can combine the traditional technologies of text and image into a hybrid computer-based document, a hypermedia which contains the pedagogical value of using hypermedia for producing interactive, user-driven ethnographies. "This would enable the user to form their own analysis and representation of the data for comparison with the author's analysis and representation of the same data. Therefore, this process allows for greater freedom of interpretation." (Anderson, 1999)

The limitation in this effort to search for multi-interpretation of ethnographic data through hypermedia is the capability of using the hypermedia form, particularly when the research is related to the ethnography of a remote village in so called the Third World. Although the researched are still capable of using the internet, in my case the non-linear format enabled the user to access information from multiple points of entry and navigates through this information by their own directives and particular interests. To expect their collaboration in the interpretation of ethnographic data is somehow unrealistic.

### 2.4.2 Reflection on the Empirical Use of Visual Anthropology

The basic premise of this research was relatively critical and sceptical about the determinism of technological power driven into an area of economic poverty as a way to alleviate poverty and enhance agricultural development. Through actual investigation of ethnographic fieldwork, especially interviews with the villagers and observation of their daily lives, this research has provided me with a different point of view about how local communities embrace new information technologies. This new perspective is driven from the villager's perception and is rooted in their own cultural background. Such ethnographic studies in the pilot village have given a micro perspective on the grand theoretical debate about the information society, yet it cannot provide all the evidence regarding the ultimate success of this project on a larger scale or on a multi-sited basis. Therefore, my research is restricted only to the village and is limited to a short period of and a small region of observation. Under the restriction of necessary funding, the limitation of meeting the standard of 'better ethnographicness' in my case is

obvious. What I have done in the field site is more like 'quick- ethnography' (Handwerker, 2002).

The major method that I employed in this ethnographic process was visual anthropology. I discussed the way in which I used the camera to record village life in this case study. Particularly, I tried to go beyond the mode of objective representation of visual realism and into the subjective approach of visuality by using the camera as a way to stimulate or elicit reactions from both the researcher and the researched. I have termed this method 'double elicitation' to describe the dialectics between different subjectivities in the visual producing process, a process that is highly rewarded when applied within the Chinese political/social context.

Visual anthropology is not just a 'method' with certain advantages and disadvantages dependent upon the research involved, but a 'methodology' that relates to basic epistemological reflection about how to get knowledge from visual footages, how to interpret the interviews, and how to understand the 'native point of view' or their worldview. These questions are indispensably related to the dialectic process between 'etic' and 'emic' hermeneutics of social action in certain contexts. Therefore, the visual method in my research is not restricted to using footage as the only resource of investigation; rather, it is combined with historical, social, economic, and cultural analysis of the village and the villager's daily lives. This research therefore employs a broader sense of 'multi-methodologies' even though the primary method was still grounded in visual anthropology.

The methodology of visual anthropology has faced a dramatic challenge after the rise of digital technology. The combination of visual footage and verbal text has created a form of hyper-textual research that has become popular on the internet. It has triggered more and more cooperation and data sharing, both during and after the conduct of research when the power of interpretation is not solely upon the researcher. Cross-geographic multi-sited and virtual ethnography further paves the way towards a 'hyper anthropology' in which ethnographic research involves the complicated multi-level geography and virtual/actual relationships. However, the increasing use of digital cameras and on-line visual streaming media has facilitated 'indigenous' visual anthropology and to some extent has accelerated the end of traditional ethnography as one-way authorship in the geographic remoteness.

My research was conducted in many aspects in traditional ways. I focused on one basic geographic site, the pilot village, using a camera to collect visual footage for further analysis, and then interpreted the data myself. I finally wrote a thesis following academic convention. Though I will put the footage and relevant data on the website for on-line sharing in the future, it is far from 'hyper anthropology' that is necessary in the research of this multi-level project. The pilot village has not yet shaped a kind of indigenous visual anthropology after the indigenous use of internet. It is predictable that the villagers will post the visual images that are shot and edited by themselves in the near future. Actually, some member schools have posted information on the website to ask for a

donated digital camera, which indicates there will be more visual materials produced by villagers themselves and put on the websites.

## 2.5 Conclusions

*The task of the documentary film is ... to make such a village understandable in its functions, too, i.e., socially, not just as a beautiful landscape. Only in this way can the true face, an authentic picture of how men live together, be produced.*

---- *Hans Richter*[4]

Hans Richter posits this as a clear difference between the beautiful village and the true village, between the scenic view and the knowledge of social and economic aspects of the village. In this approach there is a concern about how to present reality. So, in his view, documentary filmmaking is basically an epistemological question not only about what we can see but also about how to know. What Hans Richter raises here is a shift from actuality-film as spectacle to documentary filmmaking as an epistemology.

In this chapter, I have discussed and justified the reflexive visual methodology as my main research approach, not so much to present the reality in the village as to know what has happened in the village and how to explain it from the villager's point of view. In this sense, the visual method or documentary is also epistemological as Hans Richter argues, but not only from the observer or ethnographer's eyes. In my fieldtrips to the pilot village of the information

[4] Richter, Hans: *The Struggle for the Film--Towards a socially responsible cinema.* London: Scholar Press(1986:47)

technology plan, I have conducted interviews and recorded visual footage with my camcorder. The function of the footage is more like the raw data of my research than the representation of villagers' daily life. In that sense, documentary footage is contained in my thesis as the visual reference and this visual text could provide more opportunities for further interpretation, communication as well as revelation of the relationships between the researcher and the researched.

The relationship between visual footage and its analysis in the previous discipline of visual anthropology can be addressed in many different ways. The approach used in my thesis uses visual footage as evidence of the village's life changing process after this project was implemented and serves as a video reference to support my arguments. Most importantly this footage provides a basis for further investigation into the implicit power relationships and social structures of the village for the camera and the use of the *vérité* method has triggered and elicited a performative response from the informants. The more that I have watched the footage the more the social fabrics and power structures behind the visual performance has become more explicit. In that sense, I did not use the 'frame-to-frame' analysis that is normally employed in visual anthropology. Rather, I looked at the footage as visual clues linking in a broader sense within the surrounding political and cultural contexts. Therefore, the visual footage can be viewed as referential evidence, both for my arguments and for the power relationships behind the daily life within the village.

In conclusion, visual methods offer me the way in which ethnographic complexity is revealed in any layer and moment of the research process, and the depth of the content of visual ethnography is still necessarily based on long-term ethnographic engagements, interviews and participant observation. In order to think about this complicated entanglement, besides the ethnographic fieldwork and filming, I should concurrently develop an understanding of the broad development in globalizing China and the policy-oriented thinking behind this "Internet Village Plan". Using a combination of theoretical reflection, policy analysis and ethnographic fieldwork, my aim was to address the key issues of the transformation process of Chinese rural villages under the rapid expansion of global ICT development and market forces. Undoubtedly, these rural villages are definitely changing under the impact of this project, as well as other related ICT developments and ideas about the free market. Yet this is a process full of contradictions and resistance rather than a smooth transformation. I will further elaborate this 'project and response' process in the following chapters.

# CHAPTER 3. RURAL INFORMATIZATION IN CHINA

## 3.1 Introduction

In the first chapter, I discussed the framework of global development, the alleviation of poverty discourse and ICT expansion in order to understand the background in which this project was established. In this chapter I will expand upon this discussion by including the specific rational used to justify the project as well as analyze all of these factors within a more specific Chinese context. I will describe those people who created the project and the reasons why they felt that the implementation of this new communication technology would alleviate poverty in the west of China and how they felt this would occur. Providing this important background information establishes the foundation from which one can consider whether the use of the internet could be used in the development of e-business and education for remote villages and if it can do so in a way that creates a sustainable model. I will also investigate the context of Chinese internet development and whether such social engineering can be accomplished given the restriction of information freedom currently in place in China. Based on this understanding of the special conditions related to this project, which will be described in the following chapters, I will further describe how this project can help to shape a different perspective on the internet revolution in terms of relieving poverty, reducing the digital-divide, and overcoming social and regional marginality.

The Town and Talent Project aimed to introduce information network technology to villages still dwelling in an agrarian based society. It was felt that this project would help to shape a knowledge-based economy in rural villages by developing service industries and allowing them to make the leap into "Internet Villages". (Town and Talent Project Report: 'Internet Village', 2004:10) This project was primarily centred upon member school participation in numerous regions. Member schools were able to use computers and Internet resources to increase the rate of students successfully testing into higher education programmes as well as to enhance a student's "software, English, and typing" (SET) abilities. Students then would be able to establish websites for the village farmers who could then post local product information in order to develop e-business and/or e-agriculture. In this way knowledge, income and living standards in the west would increase and the potential for the west to catch up economically with the eastern coastal provinces would be greatly enhanced. (2004: 12)

It was felt by the originators that this project would support the goals of agricultural modernization in western China through increasing computer literacy and the implementation of ICTs. In this way a thriving e-community could be established in the village for the betterment of all of the villagers. Part of this optimistic attitude regarding the potentials of a leapfrogging process occurring in the village was based on the developing ICT infrastructure that was occurring throughout all of China and the continuing booming economy that the country had been experiencing. In the following section, I will analyze where such optimism originates from and the current wave of Chinese trans-national

entrepreneurialism that is sweeping the nation as well as the argument regarding the "Third Wave" revolution in China.

## 3.2 The Originators and Chinese Trans-national Entrepreneurialism

The Town and Talent Project was not a programme established in China but rather came from Taiwan. Its goal was to assist in the relief of poverty in China (particularly western China), yet it still was a goal established by outside parties and not the indigenous population. For this reason it is necessary to describe the key Taiwanese proponents of the project. Even though I described generally the goals and objectives of agencies that view global ICT expansion as a means to alleviate poverty it is important to understand these men's backgrounds and their motivations as it relates specifically to this project.

The chairman of the board of the Town and Talent Technologies was Sayling Wen, a man born and raised in Taipei, Taiwan. From 1970 onwards, he worked in the booming electronics industry in Taiwan where he became President of Inventec, and ultimately the vice-Chairman of the company. In the 1990's, as many Taiwanese businesses searched to expand into China's market, Wen's investment in the field of high-technology made him a famous Chinese entrepreneur.

Wen was highly interested in the development of western China. His vision for the Town and Talent Technologies project involved bringing widespread Internet use to the west and in doing so bridging the digital divide between

eastern and western China. Under such ambition, the Town and Talent Technologies invested five million US dollars to build a convention centre in the pilot village. The centre's primary role was to serve as a platform for the exchange of knowledge and business between east and west China as well as with the outside world. (Yellowsheepriver.com)

According to Sayling Wen, the agricultural problem in China was so serious and the digital divide between east and west of China so great that there was ever growing inequality between the regions which could only deteriorate relationships throughout the country. If allowed to continue China would suffer even worse social problems if the gap between the regions continued to grow. Wen felt that the internet could connect people in remote areas to the outside world at an affordable cost. He felt that it was 'Heaven's gift' in solving the impoverishment of the region as well as closing the digital gap, and it could do so in a very short period of time. He predicted that poverty in western China could be alleviated within ten years if his planned development of the project was followed step by step. (Town and Talent Project Report, 2004:13) There were two reasons why he felt that this leapfrogging development was a realistic possibility and not just a hopeful fantasy. The first was based upon the American experience of building the national railway system in the later part of the nineteenth century. That railway system successfully bridged different regions of the country and brought them together as a whole. It paved the way for the entire nation to prosper throughout the twentieth century. The second reason was the 'Third Wave' revolution that had been on-going since the 1980's. Some scholars have described this revolution as creating a profound social transformation of

nations and regions, a transformation away from industrial based societies and to information based societies. (Toffler, 1980) By means of new technologies, most particularly the computer, Wen felt that this project would have the same effect as the American railway system had in the U.S. by bridging east and west China and creating not heavy industries but rather knowledge based industries.

Wen had witnessed first hand Taiwan's dramatic change from a poor agrarian based economy to a rich and powerful technologically driven economy, a transition that took place in less than thirty years. He felt confident that the same transformation could occur in the agricultural areas of western China. In a television interview Wen re-iterated his optimistic attitude regarding the future development of China which he said would be based upon the convergence of two generations of experiences. One was his own generation, a generation that who might not have been born in China but consisted of over forty years of experience in manufacturing and global export management. The other was the younger generation, men and women under thirty with high aspirations and eagerness who would be willing to accept lower pay and worse working conditions in China in order to make their aspirations real. Wen therefore argued that there was no reason for pessimism about the future of China. (Wen, 2003)

Wen's argument reflected a crucial element of the rising of Chinese trans-nationalist discourse which is based on the intensive cooperation between different backgrounds of Chinese and the mobilization of resources in a sense of 'Chineseness' or for the development of a 'Great China'. In attempting to understand the remarkable transformation that had occurred in China over the

last two decades, scholars identified a process of flexible accumulation of capital and knowledge that had led the way to the emergence of polycentric global capitalism. (Ong, 1996: 14) In many ways, China was one of many countries that benefited by globalization for it had substantial competitive advantages over more developed countries in terms of both very low labour costs and huge potential markets. The convergence of different generations of Chinese no matter from Taiwan, Hong Kong or mainland China had successfully built an industrial network of global scale that was becoming increasingly strong enough to challenge the previous Western core of capitalism. Ong mentions that the particular history of the Chinese diaspora and the specific roles of Chinese in the development of flexible capitalism of the Asia Pacific were distinctive of such trans-national Chinese networks. (Ong, 1997:26) Therefore, the continuous growth of the Chinese economy over the past twenty years was substantially due to this Chinese trans-nationalism that integrated different experiences of diaspora with the aspirations of many generations of Chinese. In doing so it created China as a node of economic power in polycentric global capitalism. Following such tremendous development, Wen's project tried to further expand this Chinese trans-nationalism into the remote agricultural areas of the country with digitally based industries though still following the practices of accumulation of skill, abilities, and aspirations that had worked so well in developing China's industries.

On December 6, 2003, with the tragic death of Sayling Wen, the President of Town and Talent Technologies, Kenny Lin assumed leadership and continued the effort to realize the dream of using the internet to fully develop western

China. Lin, who is also from Taiwan, said in an interview with me in 2005 that during his first visit to the remote western Chinese village of Yellow-Sheep-River in 2000 that he was deeply moved by the bleak lifestyle of the villagers and immediately sought a cooperative programme to install Internet facilities and connect the village to the rest of the world. (Yellowsheepriver.com)

In October 2001, the first Internet base was established in Yellow-Sheep-River, and under Lin's leadership, the project expanded into three western provinces: Gansu, Ningxia, and Shanxi. Wen's death did not end the Town and Talent project as Lin assumed the responsibility to fulfil Wen's vision of developing the west within ten years. Although both men had different strategies as to how to reach the ultimate goal of this project, they shared a similar vision of an Internet Revolution in China. The formation of this vision can be traced back to Alvin Toffler's theory of the Third Wave in the 1980s and the global expansion of ICT markets since the 1990s. (See Chapter 1) The passionate commitment of these men to their vision of a digital or internet revolution in China came not just from Toffler but also from their high-tech background and their profound belief in the social and economic implications of ICTs. It is also conceivable that this project was somehow propelled by a spirit of 'venture capitalism' for the two generators frequently mentioned that their investment was just like that which occurred in the American frontiers 150 years before. In that instance an investment helped to develop the 'Big West' in the nineteenth century and finally succeeded in transforming the entire country. (Wen and Lin, 2003) Actually, Wen had written a book called 'Facing the Tofflers: Revisioning the Future' (2001) which gave his interpretation of the Third Wave and a face-to-face dialogue with Toffler.

Therefore, the idea of a Third Wave in China is the core of the theory and practice in this project.

## 3.3 The Third Wave in China

*In the 1980's, Toffler envisioned the future of the information society in The Third Wave. Twenty years later, it is now a reality. The development of communication infrastructure has permitted the rapid spread of wireless technology, including cellular phones, personal computers, and the Internet. Dr. Toffler predicted that in the information era, agricultural societies could be transformed directly into information societies, bypassing the industrial stage entirely. They could then easily avoid all of the side-effects and social turmoil that too often characterize the industrial period. Today in mainland China, a daring group of individuals has already proven Toffler' prophetic theory correct.*

---- *Sayling Wen*

For Sayling Wen, the Third Wave, which Toffler used as a term to describe the development of an information revolution, can not only transform an industrial society but can provide a way for agrarian societies to leapfrog directly into the information era. He believed that Toffler's theory was prophetically applicable to China and that his project would be a powerful model that would prove it. (Wen, 2001)

In Webster and Robins's view, Toffler's miracle of IT in social transformation represents the technological determinism and unrealistic futurism which 'fails to face up to social realities that are embodied in technologies that have been created and are now being expressed in the application of IT' (Webster and

Robins, 1986: 30). However, beyond the criticism of technological determinism in Toffler's thinking and the oversimplification of its application in China, ICT development in China has been supported rather ambivalently by the government which in turn has impacted the implementation of the Third Wave into contemporary China. While the ICT infrastructure has facilitated internet availability and communication, the government's control of the medium which restricts access to certain parties and to certain content sensitive to the government makes the potentials of the Third Wave in China difficult to predict and complicated. (Zhou and Schiller, 2001) Therefore, information development in China is unbalanced and restricted for use only in high-tech competition, global market connection and for economic purposes rather than through the free flow of information. (Zhou and Schiller, 2001) Yet the rapid growth of internet users and mobile phone subscribers in China is the inevitable driving force for decentralization. (Castells, 2007)

It is debatable that the free flow of information on the internet should be a universal standard in terms of developing information societies. Even in America, the most powerful advocate of constructing global information infrastructures and deregulating the information flows, requests such as those made to Google by the government in their surveillance of users search records for internet pornography and for national security reasons are part of the everyday reality associated with the positives and negatives of truly open access of information. Samoriski has argued that the American government's attempt to regulate obscenity and pornography on the Web was important in terms of the regulation of electronic media in the United States (2002: 265).

It is also necessary to point out that not only China but other national governments still play decisive roles in developing information technology and those roles can be seen in programmes such as the National Information Infrastructure (NII) in the United States and Information Highway in Canada. (Burnett and Marshall, 2003: 131) Therefore, the nature of nationalism cannot be ignored in global information politics for it has been practiced in different social contexts. In terms of the ambivalence a government may have in the stimulation and regulation of internet development, it is more likely to be asserted in a country such as China as it tries to develop its own version of an information society. While the Chinese government intends to incorporate the internet and digital networks into its strategic economic development plans (Hassan, 2004:60) there has been an unprecedented and continuous effort of internet censoring on the part of the Chinese government almost to the point of creating a 'national internet' which filters the influx of information from the outside through a rigid barricade of firewall systems. For example, in September 2002, the Chinese government blocked access to Google, Altavista as well as tried to limit access to the Reuters, CNN, the Washington Post, New York Times and the BBC websites. (Sloan, 2002; de Burgh, 2003: 27)

In recent years, this kind of 'national internet' model has been entangled with a new rise of trans-national nationalism. As Miller and Slater investigated the Internet in Trinidad, they noticed that the Internet naturally fitted the diasporic people because it provided a natural platform for enacting core values and components of Trinidadian identities on a global scale. (2000: 2) In that sense,

the internet can be used by the Chinese government to mobilize a new form of national identity in the way of trans-national on-line linkage. Zhou and Schiller also noticed a particular form of digital capitalism emerging in China. (Zhou and Schiller, 2001) Some scholars have talked about how the recent development of the internet in China raises a question not only about how the internet will impact China but also how China on the internet will impact the world. (Hassan, 2004; de Burgh, 2003) Hassan indicated that the scale and the pace of digital interconnectivity in China will soon eclipse the world. By 1998, the number of telephones had increased to 100 million and only four years later, in 2002, this number had doubled to 200 million with 65 million being mobile telephones. As for the internet users, there were only five thousand in 1994 but that number grew to almost nine million by the end of 1999; and almost doubled from 8.9 to 16.9 million between January and July of 2000 alone. (2004:59-60) Hugo de Burgh pointed out that Chinese enthusiasm for the internet and mobile phones has been sensational to the extent that Chinese will shortly be the most commonly used language on the internet. (2003: 26)

The development of an information infrastructure is broadly recognized as having a profound and wide-ranging impact on economies and societies in China. China has faced such a technological challenge from a very low base and as a late comer. In 1980 there were only 8,000 km of long-distance cables catering for 22,000 long-distance telephone lines. These were used almost exclusively by CCP organs, government agencies and the People's Liberation Army (PLA), making telephone services a luxury beyond the reach of ordinary citizens. (Dai, 2003: 12)

However, this low level of telecommunications infrastructure can be seen as something of a latecomer's advantage, rather than as an obstacle to China's participation in the global communications revolution. China began this 'jump-start' by deploying a nationwide fiber-optic cable network that offered a high capacity of digital transmission. The 1990s indeed witnessed spectacular progress in the construction of information superhighways in China, with a total of 22 long-distance fiber-optic cables deployed by the mid-1990s. By the end of 1998, a high-speed national grid of information superhighways was already in place, linking together all provinces and major cities. (Dai, 2003: 13)

In March 1999, Bill Gates's Venus Project promised 320 million Chinese television viewers access to the Internet at a cost ranging from 1,500 to 2,000 Chinese yuan. Later that year, IBM received approval from the Chinese government to set up the first computer-leasing company in China (Znati, 1999; Jussawalla, 2003). Yahoo launched a China-based website with a Beijing company, defying concern about a ban on foreign investment in China's Internet companies (Znati, 1999). These multinational media corporations pushed China to be more open to the world before its entry into the World Trade Organization (WTO). When the world's information technology chiefs met at the Fortune Global Forum in Shanghai in September 1999, they called for further Internet development. (Shen, 2002: 234) The driving force behind such an explosion of activity and its consequent optimism was a government that had a strong belief that the Internet and information technology (IT) were crucial factors in building

international economic competitiveness and overcoming interregional development gaps at home. (Giese, 2003: 30)

No matter how such a unique form of Chinese internet model has been criticized from the lasseiz-faire perspective, this project has benefited from the macro prosperity of ICT expansion throughout all of China. In remote villages in western China there are already two ways to gain access to the internet either through cable lines or through wireless forms like mobile and satellite communication. For example, in Yellow-Sheep-River, schools and households can gain access to the internet through telephone lines if they can pass the necessary application procedure and afford the 200 RMB (£13.5) monthly fees. In the neighbouring member school, Xi-Da-Tan high school, which is located in the Tibet reservation county about 15 miles from Yellow-Sheep-River, there is another education project which has been contributed to by a Hong-Kong entrepreneur which uses satellite systems to transmit relevant information such as educational TV programming and other audio-visual data to a receiver in the classroom. (See video reference 4)

It was not an overly optimistic prediction that the development of ICT infrastructure in the whole of China would continue due to the booming economy and the 'Great West' developing policy which began in 2000. The trickle-down effect from east to west and the fundamental infrastructure of cable and mobile technology gave Wen confidence that solutions to the problems associated with the implementation of Third Wave technology in ever-changing China would occur even though relevant facilities still needed to be improved

upon, especially in remote areas. As an example one need only look to mobile telephones.

A decade ago, text messaging was unknown in China, yet by January 2006, there were about 15.6 billion messages sent in China. (Eriksen, 2006) It was this explosive technological growth in China that served as the primary reason why Mr Lin felt that the project would not be seriously hampered by problems related to internet infrastructure, rather Wen felt other issues such as literacy and local economic conditions posed, in his mind, the greatest obstacles. Lin told me that the ultimate critical issue for this project would be social engineering.

In Wen and Lin's view, these relevant factors strongly supported the upcoming Third Wave revolution in China, especially in the poorer areas of the country. Also that the ultimate solution to the inequality problem was not only to establish the internet and then connect the villagers in these remote places so that they will have access to the outside world, but also to socially engineer a workable business model to make rural livelihoods using the internet sustainable. That ultimately would involve a profound modernization of Chinese agriculture and social structure. (Wen and Lin, 2003)

## 3.4 Farewell to Poverty: Steps in Agricultural Modernization

### 3.4.1 The Policy, Effect and Shadow of Agricultural Modernization

Agricultural modernization is one of the "Four Modernizations" of China. These refer to the modernization of China's industry, agriculture, national defence and

science and technology as proposed by Deng Xiao-Ping when he addressed the necessary need to reform and modernize socialistic China. (December 1978, Third Plenum, was the official launch of the Four Modernization) Deng advocated the household responsibility system in agricultural production, which initiated China's reform and lifted millions of Chinese out of poverty according to World Bank report. (World Bank report, 2000/2001:5) However, Unger pointed out that these official statistics were not trustworthy and that severe poverty remained entrenched in the village (2002:173). He (2005) also argued that the income gap between rural areas and cities, especially the regional differences between the east and the west had grown tremendously. The problem of these new forms of geographical inequality which has increased economic and social marginality has been of great concern in recent years. (2005, 163-188)

He pointed out that income from farming has remained very low, and that the huge size of China's rural population makes it impossible to modernize its agriculture through economies of scale, while current backward farming methods have virtually reached the limit of their output capacity. The combination of massive rural over-population and limited arable land likely makes it all but impossible to increase the income of the peasants in the near future. A peasant population is still 70 per cent of China's 1.2 billion people. He's pessimism regarding the future of Chinese peasant society is based on macro economics which focuses on the calculation of total arable land, rural population and their productivity. Therefore He has argued that agricultural modernization in China will be all but impossible due to the vulnerability of such a scale when facing the challenges of urban industrialization and foreign

competition, especially after China joined the WTO in 2000. In her view, most of the rural population was inevitably doomed to be forced to migrate into the city for agricultural development eventually will not be able to allow them to stay on their own land. These migrant workers will still be marginalized even though they avoid the serious unemployment in rural areas. (2005:163-188)

Sayling Wen shared the same kind of concern about the vulnerability of Chinese agriculture especially in remote areas but he provided different solutions to resolve the problems. Solutions that were based upon the internet could help to conquer the social and geographical marginality felt by the migrant workers and allow more farmers to stay in their hometowns. This could be done through distance hiring or by owning a successful e-business. How the internet generates such socio-economic effects in contemporary China was the difficult question. Wen believed that the transformation from an agricultural society into an information society required seven steps. These seven steps were that schools would lead local economic development and from this lead would be an expansion of e-business. This expansion would then improve both the agricultural and pastoral economy and ultimately lead to the adoption of the technology that would create Internet Villages which in turn would allow for the concentration of scattered villages into a central location. These Internet Villages would then develop a service industry base, and finally when all is in place the development of a system of remote employment and service would occur to support and sustain the village. (Town and Talent Project Report, 2004)

According to Wen, the seven steps were separated into two stages: the first stage focused upon furnishing under-developed areas with outside knowledge, which would in turn attract investors and capital. Corresponding modern techniques would then be added to agricultural villages in the latter stage. The first stage began with schools leading local economic development. By using the Internet, towns and villages in distant areas could be remotely trained in essential software, English, and typing skills. This would elevate the level of knowledge in underdeveloped areas to equal that of the eastern coastal region of China. Schools would become Internet bases, assisting villagers in performing e-business and facilitating the inflow of outside knowledge. This would also significantly improve the agricultural and pastoral economy of these areas. It would offer the opportunity for locals to create wealth without relocating, permitting skilled workers to remain in their hometowns. The latter stage would then commence with the constructing of Internet Villages. These Internet Villages would serve as communication platforms to encourage exchange between the western and eastern regions of China. Internet Villages would concentrate people from nearby scattered villages into selected locations. This ready pool of labourers could then switch into working in the growing service industry. By doing so, this would attract even more outside capital. Remote employment stands as the key to accelerating rural economic development. It would elevate disposable income levels in these areas to equal that of the eastern coastal region of China. This would raise the standard of living and permit those living there to enjoy a comfortable life without ever having to leave their homes. (Town and Talent Project Report, 2004)

It was a bold and expansive blueprint of social engineering especially in terms of education, e-commerce, new forms of production and the transformation of social structure through such a large scale as western China. It is now just past the half-way point so it is far too early to judge whether this project will success or fail. However after five years' of practice since its beginning in 2000, it has provided precious and practical experience which can be used to analyse the achievements and problems of the construction of an internet village in Yellow-sheep-river. Further this experience has great implications in the actual development of the so called Third Wave in China.

In some ways, Wen's version of the Third Wave revolution in China can be considered as part of a later stage of Deng's agricultural modernization. It is based on income increasing through the household responsibility system which could then be used to build the agricultural village into a more modern community, at least in regard to the Chinese information society. In this version of the revolution, the modernization process is implemented not only by ICTs but also is accompanied with a social and cultural design which transforms the previous peasant society into a society with a more modern way of life and environment. Clearly this process involves much more construction in many ways, and therefore has many more difficulties as compared to Deng's agricultural modernization. It also does not benefit from Deng's powerful status to put it into practice. This 'leapfrogging' process in the rural areas will also be much more difficult than a similar transformation of the Third Wave revolution in more advanced capitalistic areas of the world. However, it is a suitable example to observe the modernization process and the different organizational

manipulations that occurred from agencies other than those from the communistic party. It also provides an actual case of how the ICT revolution is happening in China today in terms of socio-economic transformation. It is a different model in societal shaping and it is this background that allows one to investigate how, and if, ICT implementation in rural areas can result in a "leapfrogging" effect as the project predicts.

There are many possibilities regarding this project and the future of the village. Next I will attempt to answer some of these complicated questions, not from an overly optimistic or pessimistic point of view, but rather from the actual observations of this case study. From this perspective I will look at the advantages and disadvantages of the impact of new technology upon a rural, isolated village.

### 3.4.2 The Actual Story of Unfinished Agricultural Modernization

Over the past five years, more than one hundred Internet based member schools were established at Yellow-Sheep-River, Gansu province, and other areas in China including Shaanxi, Gansu, Ningxia, Chongqin, Qinghai, Sichuan, Tibet and Inner Mongolia provinces. These schools were the first to adopt outside knowledge and use the newest technology to begin to create wealth. Giving schools access to computer systems also allowed for the computers to take on an e-learning role. Additionally the Town and Talent Technologies project also provided training to students and to villagers. The project also provided Internet management and endless amounts of encouragement. By doing so, the schools

were able to quickly use the computers and the Internet to foster 21st century SET skills. This also greatly increased the number of students continuing their education. School teachers guided their students in the gathering of information needed to create websites. This information included: local customs, businesses, specialties, culture and other information. These websites were then posted online, providing a window to life in remote, rural, western China. Teachers and students who already possessed the basic SET skills were then able to communicate with people in the outside world. This hastened the arrival of outside knowledge. The dissemination of this knowledge about the Internet and computers and the potential economic benefits that the two could provide became readily apparent to the villagers. This then stimulated greater interest and usage of computers and the Internet and it laid a solid foundation for future Internet-based economies.

The number of member schools has increased steadily but not as fast as previous predictions which expected 1000 member schools in different villages to join within ten years. The computer courses at the member schools were also restricted to only two hours a week and lots of students crammed into the computer classroom with two or three sharing one laptop. This has hampered the learning effect for the students who, unlike city students, usually lacked computers in their family homes to practice what they had learned. (See video reference 5) Although it is a considered a privilege to learn how to use the internet and surf websites, it is impossible to browse the internet freely and one can only get into the websites chosen and assigned by the teachers. The ability to use email to contact other persons is even more restricted. Yet most of the

students are eager to acquire more knowledge and skill in the use of the computer and attendance rates for further education have dramatically improved in just a few years.

Regarding the schools as leading the development of e-commerce for agricultural production, according to teacher Hu who is in charge of putting productive information onto a relative website, on-line sales have increased. However, this rhetoric has been challenged by others. It appears that still the most important difficulties facing the development of e-commerce are a lack of sufficient support and a systematic way to enhance this initial stage of development. The challenge is that this process involves the complicated and profound problem of transforming the previous circulation system into a new information form and structure.

Over the five years perhaps the greatest achievement of the project has been the bringing of new ideas and concepts into the village. These have successfully created a platform of networking opportunities merging resources from inside and outside of the village in such a way that they can serve as a powerful model for future, and more expansive, on-line networks between the east and the west.

The ultimate goal of this project was to build an internet village everywhere in western China. The question remains however whether this form of social engineering can be fulfilled without internet freedom. Can the internet be used only for business and education and under these conditions can it develop into a sustainable business model? Can China help to shape a different perspective in

how the internet and the Third Wave revolution can be used to alleviate the world's poverty, reduce the digital divide between countries and regions and overcome social and regional marginality?

I shall now focus upon the debate regarding the "internet village" and look closely at the experiences of the pilot village and the way in which a traditional agricultural community transformed itself in terms of the actual process, structural adjustment and problems that were overcome.

## 3.5 Internet Village: Ideal Type and Reality

It is probably too optimistic to assert that a traditional village in western China can be successfully transformed into an internet village, can change its historical production patterns and social structures into something brand new and do it all within a few short years. There are already relative studies about such utopian and mythical approaches of transformation, many cases of which are not just on economic development through ICT implementation. (Karim, 2001; Mosco, 2004)

As Heeks has pointed out, the design- reality gap has resulted in the failure of information projects in developing countries, no matter whether they were totally or partially failed. (Heeks, 2002) This limitation in the project's capacity to transform the present social and economic structure has become more apparent as the project has tried to implement some of the more difficult steps in Wen's plan. Generally, this project can not be considered as a failure of the developmental plans, especially as time has moved on and as previous blueprints

have shrunk as they are put into actual practice. Yet even though this project has been at times trapped by its ambitious plan and schedule, as well as the depth of economic reconstruction that was needed, the transition of the village has still moved towards a more energetic direction. This transition is rooted in the recent change of the ICT environment at the village level and the particular way of local adaptation of the technology into cultural and social networks. In some ways, the construction of an internet village can be described as a process both challenging to and compatible with the previous society's economic, cultural, and social systems.

During my field trips I witnessed a quick transition in the use of ICTs even at the village level. Within two years, not only has the e-literacy improved through education but new types of enterprise such as a digital centre and internet cafés have also emerged. These changes do not even consider the increasing numbers of mobile telephones and DVD/VCD players.

According to the two stage of development of the internet village in Yellow-Sheep-River, the first stage was building the bases for the information society with the help of input from outside resources while the second stage was the 'take off' where the village was successfully transformed and moving towards an information society while still maintaining its agriculture foundations and traditions. It is problematic to observe a society in change through this two-stage linear model and it will be even more difficult to measure exactly when and how a society has become fully prepared to 'take off' or 'leapfrog'. Actually, social transformation is related to a more complicated, intertwined and multilayered

process of transition. It is a holistic change allowing for diversified and entangled conflicts and for compromise at different levels. So it is hard, and even distracting, to focus upon the question of whether or not a 'take off' will happen in this pilot village. Rather it is more important to measure the depth and momentum of change that the village possesses and how far it will go in its process of transformation. These are the questions that need to be explored and clarified.

On the one hand, in the pilot village, this project has successfully created a platform for exchanging different resources both inside and outside of the village. Within just five years, financial donations have continuously come from the outside and hundreds of social and English-language volunteers have visited and taught here. Some investors have also evaluated the possibility of setting up their businesses and factories in the village. This is in addition to the substantial numbers of government officers and media reporters spotted in the village which now serves as a new model for the Great West Development. Yellow-Sheep-River's story has spread all over China, but on the other hand, many youngsters have still gone to the east as factory workers. E-commerce and distance hiring still remain and struggle in the initial stage. There has already emerged the new form of information accumulation and e- business in the village however this emergence has not yet accomplished the structural transition into an internet community.

However, a very strong sense of Chinese trans-nationalism has been developed in this locality and has expanded throughout western China especially in the

villages in which member schools are located. There is also an emerging local identity among the migrant workers through the process of the 'disembedding' and 'reembedding' nature of ICT use. (Eriksen, 2006) As noted by Steven Vertovec, "Whereas in previous eras migrants had to make exorbitantly expensive calls or slow-paced post, they are now able to communicate with their families abroad on a regular, if not day-to-day basis.' (2004: 220)

In some ways, a trend of emerging identity-shaping among the migrant workers from the village has helped to build a sense of a 'hometown' which creates centripetal forces in support of village economics and culture. There is still a major concern about a serious brain drain that can result when migrant working opportunities leads the village to lose its young generation that are so badly needed to develop the future. I will next explore this question from my ethnographic investigations of the change of daily life in the village.

# CHAPTER 4. ENTERING THE PILOT VILLAGE: HISTORICAL, SOCIAL AND ECONOMIC ASPECTS

## 4.1 Introduction: Village life in Yellow-Sheep-River

*[The task of the] Ethnographer, is: to grasp the native's point of view, his relation to life, to realise his vision of his world..... To study the institutions, customs, and codes or to study the behaviour and mentality without the subjective desire of feeling by what these people live, of realising the substance of their happiness -- is, in my opinion, to miss the greatest reward which we can hope to obtain from the study of man.* *Malinowski*[5]

This thesis began with a description of the various discourses regarding global poverty and how the use of ICTs could help to alleviate the suffering experienced by billions of the world's peoples. In doing so I established the general conceptual framework for my research. In chapter two, I described the methodology that I used to conduct this study focusing upon visual anthropology as the primary method that I used to explore the transitional processes being experienced by the pilot village as part of the implementation of this ICT project. In the third chapter, I provided a detailed description of the project from multiple perspectives. The purpose of the description was to recognize all of the internal and external factors that were impacting the project so as to provide a full and rich background of the motivations for its creation as well as the context

[5] Argonauts of the Western Pacific, Dutton 1961 edition, p. 25

in which it was implemented. In essence I wanted to describe how the project happened and what were the advantages and disadvantages of it occurring in a region as rapidly changing as China. In this chapter, I will describe in detail the village lives in Yellow-Sheep-River.

The purpose of this research was not to use the pilot village study as a microcosm in support of some general theory nor did I attempt to link the research to a 'micro theory' of development given the village's small size and remote geographic region. Rather I chose to investigate the historical formation and social texture of a village, using the term "Villageality" to describe the structure and the fabric of the village politically, socially and culturally. Therefore, the study of Villageality provides a holistic perspectives and specific clues to understand the social transformation that is on-going and provide reasons why this transformation is occurring and in what direction it is moving towards (See chapter 6)

In this chapter I will consider the historical, social and economic aspects of the pilot village and describe how these different factors are intertwined and interdependent and together have shaped a complex villageality in contemporary China. This new form of village society is derived accordingly by observations and by the individual stories of the villagers themselves (as described in chapter 5). In chapter 6 I will argue that this villageality is an important mechanism in the way in which the pilot village has absorbed and articulated the new technology.

Ethnographic interviews and observations through fieldwork are to be accompanied with the collection of historical documents and reliable statistics all in the effort to shed the 'available light' of understanding of the unique attributes of the field site including its culture and society. My research followed such a direction of intertwining my own ethnographic monologue with relevant documents and interviews of the villagers. Such a combination of subjective observation and historical documentation creates a representation of the village aimed at creating a picture of villageality under conditions of change as well as the cultural response by the village to the impact of ICTs.

## 4.2 The Historical Imagination of Yellow-Sheep-River

*The moon goes back to the time of Qin, the wall to the time of Han,*
*And the road our troops are travelling goes back three hundred miles....*

*Wang Changling: Over the border* [6]

On 28th September 2004, the day of the Chinese Moon Festival, I began my second fieldtrip to Yellow-Sheep-River. The international flight flew me half-way across the world to Shanghai and then by domestic flight to Lan Zhou. When I arrived at my destination it was nearly midnight, the full moon was shining from a clear, starry sky. The scene touched history for me for the

[6] *300 Tang Poems*. Available from:http://etext.virginia.edu/chinese/frame.htm

landscape has changed little since the Han and Tang dynasty especially in such a remote village surrounded by mountains.

Yellow-Sheep-River is geographically quite close to one of those ancient military forts along the Silk Road and is now located near the national motorway which links Lan Zhou and the western border province, Xin Jiang. Therefore, the next morning when I took the bus from Lan Zhou to Yellow-Sheep-River I again had a feeling of being on a historical journey instead of a half-day trip to my research site. It provided a connection to a different place and time even for a contemporary researcher such as myself and allowed me to connect to the place historically, geographically, and even poetically. When I arrived at the village again the challenges of reality came flooding back to me. How can this village be transformed in this impressively pre-modern, geographically timeless area into an 'internet village' a member of the global information society as the project proclaimed? How can the village develop a modern communication system in western China that transcends the previous methods of physical mobility, and how, through my research, to answer these questions not from a technological perspective but rather from a human perspective?

For a long time, the landscape of Yellow-Sheep-River has remained pristine and settlers had not yet come to dwell in this land. As the Yellowsheepriver.com website describes:

> Some 100 km northwest of Lan Zhou, the capital city of Gan Su Province, Wu Shao Ling, 3500 meters above sea level, is a mountain pass on the ancient Silk Road. It is

> located at the beginning of the West Yellow River Corridor. Situated to the northwest of it and measured as the narrowest spot of the Corridor is a place called Gu Lang Gorge.... Because of its strategic importance, this gorge has been a frequent battleground in military history. (Yellowsheepriver.com)

It is difficult to point out exactly when Yellow-Sheep-River became a village instead of a place of passage for anonymous travellers, merchants and warriors. It is also difficult to imagine how this land began to be territorialized and involved in the government's administrative system which was centred on households, population, production, ordering, classification and all kinds of 'matter out of place', in essence the processes of boundary maintenance (Morley, 2000:142). However once Yellow-Sheep-River became an agricultural village, it then acted as an individual unit of a self-contained economy and marked off not only the boundaries of residence but also the boundaries of production and consumption. (Huang, 1985: 23) The social ties of village residence were often reinforced by ties of kinship yet to some extent integrated into the larger state apparatus through the influence of local gentry. (Fei, 1953) These general ideas of how a village was formed in China and the issues regarding its locality need further investigation in order to provide a specific understanding of the formation and demographic development of a Chinese northern village like Yellow-Sheep-River. This is particularly true in identifying those factors that determined its population, its economy and its social scale.

Huang uses Geertz's 'involution' model to describe the type and limitation of Chinese agricultural development in which agricultural production grew through an expanding population all with the same skill level but without increasing the

productivity that leads to agricultural transformation and modernization. (Huang, 1985: 11) In some areas, the increasing population only caused social and economic problems due to scarce arable lands and poor productivity; therefore, famine and conflict inevitably occurred that drove rural society back to an affordable demography. According to Huang, population pressure often forced the marginal value of labour on the poorer family farms below that of market wages and the subsistence needed for the cultivator's household. (p.8) This led to the large scale of migration in Chinese history. Perkins points out that, from the beginning of the Ming dynasty until 1949, the Chinese population expanded seven to nine-folds within six centuries and the agricultural output grew at roughly the same rate. (Perkins, 1969: 184-189) The micro history of Yellow-Sheep-River from the beginning of its immigration period to its further development to some extent can be understood in this way, although previous documents are lacking to verify this development. There are still some myths that have remained and are circulated between villagers of different generations.

According to the villagers' own description their ancestors settled in Yellow-Sheep-River since the Ming dynasty. About four hundred years ago, their ancestors left their homeland, the proximate name of which was 'One Tree Village' in Shanxi province for they could no longer recall the exact county's name or where their ancestors were specifically from. The historical settlers not only dwelled on this land physically and socially, they also developed their own myth about the landscape and the politics.

The story begins with the first emperor of the Ming dynasty, who recovered China from Mongolian domination and sent his military consultant Liu Ji to this border area to control the rebellion. When Liu Ji arrived at Yellow-Sheep-River, he was shocked by the surrounding mountains because their shape is dragon-like implying that a future king would come from here according to Chinese Fung-Suei philosophy. To prevent the potential danger of another revolution, according to this philosophy, one needed to cut off the neck of this dragon mountain and destroy its energy. Therefore, Liu Ji ordered his troops to find the neck and, after three days of effort, to chop it off. After that, Yellow-Sheep-River no longer had the power to create a new emperor and the dragon-like land was tamed.

During my fieldtrip, I visited the broken-neck mountain and traced the fallen gorge that local myth refers to. The villagers seldom go there because they believe this area is 'Yin' land which contains some sort of negative energy, for this reason they have used the area to bury girls who have died young. I had an outstanding birds-eye view where I could see the Chives Board of the fields along the 'water land' alongside the river and the 'mountain land' scattered on the steep slopes. (See video reference 6) Such a landscape is shaped by the land responsibility system after reform, which distributed previous collective farms to households where every farmer could rent one section of 'water land' and one of 'mountain land'.

There is no evidence to trace back what the previous village landscape looked like, though the next part of that myth provides other interesting clues: such as,

when the dragon's neck had been cut off and there was a deluge of blood water which flooded down towards the nearby river. The blood/water hesitated where to go, then asked a shepherd who soon replied that it is better to go with the river which it then followed. This ending seems to explain the strange belt of red coloured soil along one side of the river and why the previous village survived due to this fertile arable area which was once enriched by dragon's blood. Besides the myth of the dragon mountain, the myth of Yellow-Sheep-River is interwoven with a magical political history and humanized geographic stories that provide a highly imagined interpretation of the formation of a village where the landscape as well as the people were successfully 'tamed' by political leaders of the Ming dynasty. Since then, the village has been formed and the landscape has its own story and symbolic meaning.

Barthes's point about myth was not to establish the difference between denotative (literal) and connotative meanings, it was to show the operation of myth as "de-politicized speech". (Barthes, 142-145) Barthes said that "myth has the task of giving an historical intention a natural justification," (142) and refers to its ideological dimension. Unlike such a de-politicized, naturalized and innocent version of mythical speech, the previous mythology in this village is more directly linked with political and social consciousness presented more as a statement of fact rather than an explanation or argument. It provides a reduced speech yet a highly sensitive and imaginary metaphor for the political history of the village.

Critically these metaphors not only provided an ideal of mythology for structural analysis or some kind of post-modern imagination of a pre-modern village, but also represented the subjective description by the villagers themselves about their ancestors and village history in a reduced, simplified yet rather explicit form. The myth still circulates among the villagers today. What concerns me is how such mythology operates within the conception of the villagers even in their conduct of their daily lives. However, rather than extend this argument too far into the general debate about the anthropology of mythology, here, I would like to narrow the topic to 'myths today' in Barthes's sense and look at the modern myth emerging and surrounding the villagers' daily lives in terms of their imagination and attitude towards recent change and the upcoming new technology. If the previous myth represents a luminous and de-politicized version of the past; then these modern myths of the village should be related to the implicit or explicit desires of the present and for the future.

If the myth about immigration and geographic formation reflects the villagers' imagination of the past, it is to be seen whether the internet and the computer will in their minds become another mythological power for the future. For example, on the junction of the national motorway and the county road which leads toward Yellow-Sheep-River stands a huge signboard made by the county government and on it is an explicit slogan, 'The first internet village in China.' (See video reference 7) It looks a bit awkward with a row of shabby restaurants nearby, but arguably it reflects the ambitions and wishes of government leaders and local villagers.

By implementing this ICTs project, the pilot village enjoys a kind of 'new hope' for the future. On the wall of village secretary's house, are several posters of this project that have been placed in the main area. It is unusual for a village leader to show the current policy in such a way even in his private lounge space. It also wasn't surprising to see other similar slogans and posters in the computer classroom or the campus internet café where the students are crowded to learn the basic skill of computing. (See video reference 8) Such visualized expressions somehow can be read explicitly as a kind of propaganda in communistic political culture and implicitly as a mythologized language operating in visual form.

It is convincing that the whole argument reflects the hidden position of the planner's view of this project and his purpose in the village. Yet the more complicated issue within this argument is if the solution for the future development relies significantly upon the internet or ICTs, then what is the implication when far-reaching, penetrating, and globalizing technology enters this remote, border village. Will the new communication technology truly lead the village in leapfrogging from pre-modern to post-modern, from physical-centred and territorialized to global-centred and de-territorialized, and if it does how will this transformation from old pre-modern connectivity into a new global linkage impact the villager's daily life? Is it just another technological ideology and developmental myth? Mosco once examined the myths of cyberspace to explore the ideologies constructed around the new information technology and why global societies are compelled to embrace them. (Mosco, 2004)

I am not arguing that the development of the village or the formation of the internet village relies on a process of demystification of people's mind. On the contrary, what is the issue is how to articulate 'modern technology' with the native's 'point of view' in a way such that the technology can survive in this transplanted society. In many instances economic development and technological innovation to some extent work through these effective mythologies no matter whether the development is in the East or in the West. In that sense, the native's point of view functions as a 'semiotic' power to cooperate with the 'material' force and make the transformation of a society workable in the hybrids of material-semiotic practice. (Latour, 2005)

According to my interviews, a computer mythology has already been built in the villagers' minds through a dramatic effort of the founders of this project, through a political process that absorbed this project as a right and beneficial plan, through a circulation of rhetoric regarding the internet as the only hope for the village and the younger generation. At least in the pilot village, the computer and the internet have been successfully articulated and associated with the future of the villager's daily lives. It has triggered a kind of primitive power and passion towards the new information technology all in just a few years. However, can this articulation really work on a daily basis for most of the village families? Can such a new belief really bring some tangible reward in terms of extra income and job opportunities?

Besides the subjective imagination and expectation of the benefits of change in the village I also searched for the broader social, economic, and cultural

environment of the village to find the relatively profane and secular sectors of the village. I wanted to see whether the infrastructure of the village society could support the mythological embrace of new technology or not, as well as experience the transition of the village from various perspectives.

## 4.3 The economic setting of Yellow-Sheep-River

During the period of my research, I found a relevant news report about this 'poverty-ridden' area: 'Most of the world's attention is still focused on China's economic miracle. The country's national growth rate last year of 9.5% has prompted several international aid organisations to scale back or withdraw their operations there. But for Gansu, congratulations about graduating from international aid are premature. In this vast area, the average rural income in 2001 was 1,500 RMB (£100) a year, less than 20% of the national average, and rates of illiteracy and tuberculosis were more than twice the norm. In the hills, the situation is far worse. Many villagers barely have enough to eat and children in some families have to take it in turns to go outside because their parents can only afford one set of winter clothes.' (The Guardian, 2005)

On the official website of this project it points out that such poverty is due to the remote geography and scarcity of natural resources: 'Yellow-Sheep-River Village is a remote and impoverished mountain village, situated at the "Great West" of China and bordering the desolate Gobi desert. Its annual precipitation falls below 300 millimetres. It is extremely difficult for any outside resources to reach this region'. (Yellowsheepriver.com) It is true that the first impression of

the area in which Yellow-Sheep-River is located usually is linked with harsh living conditions and circumstances. Yet the previous description regarding the difficult life in the village may be in part due to scarce and untrustworthy official data as well as the various approaches in interpreting the daily lives of the villager. I wanted in this research to provide a broad factual description of Yellow-Sheep-River in order to understand how the villagers perceive their lives and the hardships that they face.

Yellow-Sheep-River is a village town under the administration of Gu Lang County in the Wu-wei district of Gan Su province. The region is divided into 21 villages and several groups (cunmin xiaozu), which in 2003 totalled approximately 6,555 households and 30,368 villagers according to the village household registration. However the true figure should be higher as a number of the villagers did not record their children under the government's birth control policy as it is loosely monitored in the remote agricultural villages. The Gu Lang County is separated into three parts: mountain, desert, and plains. Farming is only suitable for the plain areas. The mountain and desert areas are harsh natural environments. In the mountain areas agriculture relies solely on the climate where the annual rainfall is less than 300 mm. Yellow-Sheep-River is located just in the mountainous area and farm land of around 40,000 acres or 1.4 acre per individual. The 1.4 acre per person ratio is high in China though the irrigable land is only a little above 7% of the total with the rest being dry land. Here the main crops are wheat, bean, potato and vegetables that are suitable for the cool, dry environments. The arable land is 89,940 Mu among the total 274 square kilometres of land.

Currently, grain yield is 199 kilograms per person. 30 to 40 kilograms of seeds are needed per half-acre for spring wheat which is higher than the 25-30 kilograms needed in other areas of regions that mainly produce spring wheat. Because of the relatively short growing season (140 days of non-frost) feeding crops for livestock occurs more in other regions. Thus, it is hard for farmers to survive if they relying only upon farming. In 2005, the average income per person was 1,123 yuan which was less than half of that of other country farmers. The average income for work outside of the farm was 500 yuan which accounted for 46.8% the local average per annum income. This indicates that local people must work away from their homes in order to make a living. In 2005, 15,000 worked away from the village with the total number of local labour force being 15,058.

In Yellow-Sheep-River, there are 2,311 people living below the impoverished line with annual incomes lower than 650 RMB. This number accounts for nearly 8% of the local population. If compared to the World Bank's standard of extreme poverty, which is US 1 dollar per day or approximately 2,920 yuan per year, then the villagers are experiencing extreme economic hardship. However the villager's life is not considered under the poverty line by the Chinese government which is 650 RMB per year, and the villagers themselves do not seem to experience the desperate hardship that such low levels of income would imply. Also the annual income in Yellow-sheep-river has been increasing rapidly. As an example in the main village of my fieldwork which is called Da-Nan-Chun, the villager's per capita income has risen from 500 RMB in 1990 to 1,450 RMB in 2003.

The statistical data that I collected came from the town government and while they were helpful in trying to give some evidence of the increase in income that had occurred after the project began the data is still unverified. For this reason there have been many researchers who have already questioned the accuracy of such information. (Judd, 1994) It is not difficult to question the statistical data from a small town as the reporting system is based on regular forms completed every half year by the local village secretary. These forms give details of household food production and income. The data is then used as the basis for agricultural taxes and is reported to upper levels of the government. The national statistics are therefore an aggregate of all of such data from different levels of the government. According to the officer who compiles these statistics at Yellow-Sheep-River, there will be a new national statistical system which will be implemented after 2007. After that the forms will be updated and 'it should be more accurate'.

It will take some time to develop a trustworthy system that generates accurate statistics in China. This will be especially true in the towns as there is lack of sophisticated facilities to help them build up more precise databases for social statistics. The previous data system relied on personal memory and was extremely sensitive to political influences therefore it is difficult to use such data as a strong evidence for social research. Therefore, in my research, the data which I collected from the town government and other organizations is supportive rather than evidential of my argument and certainly needs to be further verified. However the demographic and economic data of Yellow-Sheep-River still provides some evidence of the transformation of the peasant village under the influence of political and economic change. For these reasons some of

the most persuasive economic data may be more anecdotal rather than empirical and acquired more from observation than from the Guardian's report. For example children no longer take turns wearing winter clothes in order to go outside because now the family can afford for all to have winter clothing due to the household's increasing income. Also when I met a trouser vendor on the 'high street' of the town centre, she told me that a child's trousers that she had for sale cost about 2 RMB and was not expensive at all for a family. (See video reference 9)

After the reform there has been some research conducted at the village level that has explored the role of local cadres, township enterprises, and migrant workers in local economic development. In Yellow-sheep-river, the degree of rural industrialization is relatively backward and small with the government budget being less than 20,000 yuan every fiscal year. Most of the villager's rapid increase in income has been due to migrant work opportunities.

According to local government, almost every household has one labour force going out to work. The population growth of Yellow-Sheep-River in such an environmentally harsh region of China and in defiance of the one-baby policy also provides interesting insight into local needs and rural development. The growing population is due to the relatively loose control of the one-baby policy in agricultural areas where there is a preference and need for a male labour force working in the fields. Agricultural families therefore find it easier to get permission to have more than one baby. The development of TVEs (Town and Village Enterprises) in the 1980s as well as the booming economy in the coastal

areas in the 1990s also provided great opportunities for employment of the surplus of agricultural population and is the primary reason for the increase in rural income even in remote village regions such as Yellow-Sheep-River.

Agricultural production has also increased after the implementation of the responsibility system and most farmers have become more modernized even to the point of using motorcars to carry goods and tools. However there are still parts of the farming effort that rely upon pre-modern tools and methods. The ploughing of the field still requires a cow instead of a tractor and it is very unusual to see power tools used by farmers on their farms because the farmers can not afford such an extravagance on such small farms. The main production of the farm is wheat and the yearly crop yield can usually feed the whole family and bring some extra income if sold to food retailers.

## 4.4 Conclusion

In this chapter, I described the historical/social/economic conditions of the pilot village. It provided the general setting of a specific location for, in this case, the investigation into the effects of the domestication of the internet. The analysis of the historical formation of Chinese villageality in this sense serves as the basis of this investigation of the probable transformation and the enlarging connectivity of the pilot village. Such a process involves the reconstruction of the connectivity between culture, economy and politics with the implementation and operation of an internet village in the information society, all within the Chinese context of ICT development. This transformation and reconstruction process has quickly happened in the pilot village, taking only six years of effort to start the

implementation of computer education in high school. Through different fieldtrips to the village at different periods, I have observed the initial and rapid transition of such an impact on villagers' consciousness about ICTs.

Such a change cannot be over-optimistic and over-predicative because it is still on going and my observation is restricted only to the pilot village. There are similar stories of quick transition in other villages of this project, but they still need to be investigated in order to understand exactly how this transformation happened there and what opportunities and limitations they have experienced.

After a discussion of the possible and actual way of transition of villageality in this pilot village, I will further draw on the individual side of this transformation by investigating the personal experiences of different villagers and how their daily lives have been impacted by implementation of this project. In the following chapters, I will describe Yellow-Sheep-River individually and culturally through the observations of my field trips and through interviews with the villagers. I will describe in more detail these observations in chapter six and the way that the cultural influences of the village are related to the new information technology that was absorbed in this rural society and how this absorption occurred.

# CHAPTER 5. PEOPLE IN THE PILOT VILLAGE

## 5.1 Introduction: Indigenous Internet Villagers

*The term Community Informatics (CI) refers to an emerging area of research and practice, focusing on the use of Information Technology (IT) by human communities. It links economic and social development at the community level with emerging opportunities in such areas as electronic commerce, community and civic networks, electronic democracy, self help, advocacy and cultural enhancement. CI brings together concepts of IT and information systems with the concept of community development. As an area of research, CI is a growing body of theory underlying one of the most exciting phenomena of the last decade, namely the diffusion and use of Internet technologies within communities.* *Schmidt, 2000*[7]

This research primarily investigates the impact of the Town and Technologies Project on the daily lives of a focus group living in the pilot village. In this chapter, individual stories about both ideas of change and practical actions that were a result of the implementation of the project will be presented. The stories are illustrated from ethnographic interviews as well as participatory observations of my visits to the village.

[7] Quote from Day, P. ed.2004: Community Practice in the Network Society. 202. London: Routledge

The purpose of the ethnographic studies conducted in the pilot village was to observe individual and local community access of ICTs under specific social and economic conditions. Social networks and cultural backgrounds have been described as having a substantial influence on the coherence of computer technology and internet culture when it is integrated into the daily lives of villagers. It would be expected that their approaches to ICTs in their daily lives would be significantly different from those of users from developed countries or wealthier societies. Although the aim of this chapter will not focus on those comparisons, the differences in ICT approaches at the local, national or international level remains an important issue that should not be ignored. Distinctive local approaches to ICTs may lead subsequently to the formation of an alternative internet culture which can be identified as either an 'internet in a developing society' or as an 'indigenous internet'[8].

I prefer using the term 'indigenous internet' for it better describes the shortage of facilities in the village that restricts the availability of both locations and times to access the internet. On the other hand, the villagers counter limited technological resources by having enthusiastic attitudes toward both learning and accessing the computer for on-line socialising, posting product information for e-commerce, and inquiring about scholarship opportunities or contingency resources. The 'indigenous internet' has become a very important tool to the villagers for it not only provides an "open door" to the outside world it also engages the villagers in

[8] 'Indigenous internet' is the conceptual framework which suggests that the adoption and use of the internet should be seen within a local practice paradigm and from the indigenous point of view.

creating a collective consciousness of self empowerment, economic transition, and potentially, identity formation in the future.

Even though we both use the computer and the internet for many of the same reasons the differences between how I view the technology and how the villagers view it is vast. I am from Taiwan, a foreign student studying in Britain. Generally, I use the computer either in public access areas such as the Universities research room or in private areas such as my flat. For me, the computer is a convenient tool for on-line searches of personal and educational interest, as a tool to store video-footage and, occasionally, to purchase books from on-line vendors such as Amazon.com. For the villagers the internet is more than just a convenient tool. It is a window to the outside world, and a means to search for help from people that were inaccessible just a few short years before. The computer provides the villagers with a brand new vision of the future. A future where they and their children could have lives that were safer and better than what their parents and grandparents experienced. It has been speculated that the approaches to ICTs are different for rural villagers just acquiring the technology than for other Chinese who have already adopted computer technologies into their daily lives. Leung et al (1998) reported that metropolitan consumers tend to be more sophisticated and fashionable, based on data from individual ICT owners as well as internet related activities in Beijing, Shanghai and Guangzhou. Eight years after Leung first reported his findings the internet culture in urban China has become highly integrated into the lifestyle of the city users. (Lim, 2006: 187).

As described in chapter 3 there has been a powerful expansion of internet culture on the national level. Eventually, the life stories of rural villagers will indeed reflect an emergence of this powerful ICT culture as it spreads across China. Nevertheless, this chapter will focus upon the changes in the lives of the villagers that have accompanied the implementation of this project. Using a case study design, I have explored this topic from a local and regional perspective looking deeply at how this project has impacted on the villagers' daily lives since it was launched.

As part of the case study design a criterion for inclusion must be established for the formation of the focus group(s). The following provides the initial criteria for this research. Structurally, the composition of the focus group, as originally conceptualized by the researcher, needed to be representative of all possible stakeholders within the pilot village. Therefore, the focus group should consist of people from different political, economic, social and educational backgrounds with an even distribution in age and gender strata.

Practically, the focus group needed to be accessible to the researcher in the field. In this regard local authorities who are in direct or indirect charge of the social networking structures needed to be consulted. These authorities ultimately prioritized and decided membership in the focus group. Membership was primarily based on networking practices (practical guanxi) within the village. Even though the authorities had decisive influences on who should be involved in the focus group, the researcher still had some negotiating capacity on

informant participation, depending on the personal relationships (guanxi) that were developed between the researcher and the informants.

The optimal sample size and generalization of informants included into ethnographic research is always subject to debate. Extended efforts are needed to recruit sufficient numbers of informants with varied perspectives in order to provide an un-biased breadth and depth of experiences from the targeted group. One limitation of this research, as described in the methodology, is the underlying political ramifications associated with decision-making by the leaders in this small village. This is a small village in western China and for that reason there was substantial political pressure and sensitivity in the selection of informants from the villagers even though it appeared that the selection was open, natural and neutral. Ultimately, as in many studies of this type, this will have an impact on the generalizations and interpretations of the study's results.

When I was out in the field I lived at the guest house in the dormitory of the Convention Centre. While generally there was no county official or other government representative accompanying me during my time at the village I always assumed that there was some unit overseeing my activities. Within the village I usually met with people alone in their homes. The local staff at the Convention Centre as well as the village Secretary, Qi Tian-Long, graciously provided me with their time and helped me to understand the project and introduced me to the villagers who were selected as potential candidates of my focus group. I made three trips to Yellow-Sheep-River. One trip was for two

weeks in April of 2004, another one was for a month in the autumn of 2004, and the last was for three weeks in the summer of 2005.

During my visits, seven characters were identified for my focus group among the villagers. The seven characters were

1. Village Secretary Qi Tian-Long and his son Wang-Peng. The Party Secretary is the key political person in the village and is involved in the day-to-day business activities within the village. The Secretary is the gatekeeper for new projects or research launched in the village. This position is the lowest in the governmental bureaucracy, but is the most fundamental official position in communist China and handles the village's political and economic affairs. It therefore was naturally most appropriate that Secretary Qi was the first person that I contacted and was the person that I negotiated with in order to conduct my fieldwork. His point of view about this project reflected, to some extent, a clear 'policy direction'. I also chose his son as one of the informants though not because of the obvious "father and son" relationship. Rather, it was to investigate the guanxi in village politics. Wang-Peng, a college student, has become inspired by the project and is currently planning to open an internet café in the village. He is potentially to be one of the many of the young generation in China transitioning from a farmer to a well-educated entrepreneur who comes from an agricultural background and could stay in the village because of internet.

2. Hu Wan-Long, a teacher who is in charge of computer education for the project also owns an e-business and teaches local farmers how to use the internet.

3. Zhao Fei-Yan, a female student at the local high school.

4. Zhao Xiao-Ping, who gave up a university offer to support his sister's education, is now a trainee at the Convention Centre. His story is typical of many young and talented men. Unable to pursue a higher education due to the family not being able to afford the costs, and having to stay in their hometown, they are subsequently doomed to a life as a migrant worker. Now because of this project, Zhao Xiao-Ping may find an alternative way of life while staying in the village. These new opportunities have expanded beyond the males in the village. For example, Liu Hong-Yan, a female of the village is now a contract trainee.

5. Liu Hong-Yan, a graduate female student is now working at the Convention Centre of Yellow-Sheep-River. As she learns these new duties she wishes to become the first tourist guide in the village.

6. Lv Zhi-Chuan, a local farmer has acquired a computer and now is keen on developing a social network and starting a business as a sideline. He is a local farmer with a new spirit of entrepreneurship. He is a beneficiary of the reform policy and sees the potential opportunities from this project for the village.

7. Yin Jun, a local youngster, recently having returned to his hometown is beginning a digital centre with the project leader.

Ethnographic research encounters small numbers of people at a certain site over a long period of time. The research design, according to Kipnis, offers researchers a good opportunity to discover locally significant questions and to

develop corresponding strategies all within the context of the field experience. (Kipnis, 1997:19) It is a challenge to conduct fieldwork, find 'significant questions', and then discover the 'answers' for a remote society in a previously 'unexamined' geographic region. Meanwhile the study is circumscribed by a lack of archive and literature research in order to acquire sufficient references and background information needed for an investigation. Accordingly, there has been no previous research conducted on this village and therefore limited amounts of relevant and reliable information is available. For this research I used Fei Xiao-Tung's work as well as other pioneer studies as guides. From these studies a fundamental framework of the social structures in rural China can be established.

## 5.2 The Structure of Chinese Gentry Society

In China's Gentry, Fei (1953) described the traditional Gentry power of agricultural society based upon Confucian social classifications in which the scholar-official was ranked as the highest in a hierarchy followed by farmers, artisans, and merchants. Scholar-officials did not work on the land but hired peasants as tenant farmers. This provided the members of the Gentry with the resourses to pursue political and social power through education and training to be as Confucian gentlemen. According to Fei, the Chinese Gentry represented officials, their relatives or educated landowners. While they have no real power to shape policies, they tended to have strong social influences on village issues.They were also likely to be immune from political exploitation (1953: 32). The function of the Chinese Gentry was to maintain the imperial power under the control of official bureaucracy. This was so even though the local Gentry

often were considered as the lowest position in the empire's bureaucratic system. (p.7) Fei therefore identified two systemic layers of traditional Chinese social structure with the central government at the top and local Gentry class at the bottom. Legally, imperial orders passed along a single track, from the top down, and usually demanded only two things from the people, taxes and conscripts. (p.83-86) Most local affairs were directly managed by the Gentry and were hardly interfered with by the central government. In that sense, there was a de facto limitation on the authority of the central government because the Gentry possessed an important negotiation power between the imperial government and the local people. (p.84)

After the People's Republic of China was established in 1949, the social system that had been established over 2000 years before began to deteriorate. The landlords were forcefully diminished as part of the class struggle. Former village leaders were often stigmatized and persecuted. This cultural and social deterioration culminated during the Cultural Revolution. Intellectuals, including professionals, cultural elites, and technocrats, ultimately lost their social status and power and were organized into work groups and lived within the confines of the commune. Politically, intellectuals were Mao's "stinky old ninths", with the worst rank among the nine "black" categories.

The traditional Gentry power was rapidly replaced by party organizations at the local level across socialistic China. In villages a party member was placed in charge of political and economic issues. During the period of the Cultural Revolution, every village was reorganized into a commune system composed of

several brigades charged with fulfilling the objectives and goals assigned to it by the planned economy. The party leader of the brigade strictly followed the direction of communist ideology and underwent the practice of collective production. In many instances the old Gentry powers were transformed into the leading members of the party in control of the village though under a different national system. Schurmann stated that the Gentry disappeared from rural life in China and were replaced by the Communist Party as the dominant elite in rural regions. (Schurmann, 1968) Oi described this as 'the peasant in the powerful state' where every level of the party organization played a supportive role in order to help the socialist government in maintaining its dominance. (Oi, 1991) Although "cadre" and "worker" were crude status categories in the official coding system, they were considered two different groups. In the countryside, government-paid employees are recognized as state cadres while village cadres, though unpaid, had the political and managerial authority over ordinary peasants (Oi, 1999).

To Schurmann, party members were, in a sense, the heirs of the traditional gentry. These party members were the power-holding elites, dispersed over the whole country, and serving as the intermediaries between their own communities and the nation (Schurmann, 1968). Under the rein of the centralized communist party, they were called local cadres. However, it is controversial to view communist China, especially in the rural areas, as a type of Gentry society because the party members in the village, unlike their counterpart old Gentry, had tremendous political and economic power to control daily politics and agricultural production. Their powers came neither from the Confucian

disciplines nor was it inherited from previous class status. Rather, the local party members were more like agents of a modern partisan mechanism in China.

After the reform a responsibility system was implemented, this was a new political and economic system which pervasively emerged as part of the transformation of Chinese contemporary society. Lu (2001) investigated the stratification of rural classes in the post-reform era and defined eight emerging classes based on estimated rural population as registered in 1999. The classifications and their distributions defined by Lu were (a) rural cadres (7% ), private entrepreneurs or the new capitalist class (less than 1%;), managers of township and village enterprises (1.5%), household business owners and individual industrialists and commercialists, the petty bourgeoisie (6% to 7%), professionals, the new middle class (2.5%), employees in collective industries and migrant peasant-workers in cities, "peasant labourers" (16 to 18%), wage labour in local private sector, "new working class" (16% to 17%), and peasants who worked and lived on income from agricultural products (48% to 50%). Interestingly, Huang pointed out that the intellectuals became cheerful again in 1979 when Deng Xiaoping passed "working class" status to intellectuals so that they finally became a "revolutionary" class in the reform era. (Huang, 1994)

Under the stratifications of rural classes researchers have speculated that previous political status played a critical role in determining the economic opportunities and well being of the Chinese farmers. (Nee, 1989; Walder, 1996) Nee argued that the transitions of the market economy in China involved power and privilege shifts. As market allocation gradually replaced the redistribution

system, rural households reduced their dependence on the local cadres who previously were the powerful redistributors of resources, services, and goods. Therefore, Nee proposed that the local cadres lost their power to the market economy and that the re-stratification of the rural class structure has not followed the lines of the former political status quo. (Nee, 1989).However Oi has suggested that rural cadres still exert control over the new sources of power and continue to play a critical role in the process of economic and social stratification. (Oi, 1999)

Searching for answers to these controversial and complicated questions of social stratifications in rural China is beyond my research scope and while it is too soon to predict the effects of computer education on the transformation of social structures in the pilot village there is little doubt that consideration must be given to the scope of the potential for change in the social order that this project may have in the near and distant future. In the next section, as well as in the next chapter, through the interviews of villagers with various backgrounds (generations, genders and status), I will discuss how internet education and the implementation of this project has accelerated transformation of social structures and power relationships in the village. I will propose that the internet and new ICTs has helped to rebuild a new form of Gentry class in rural areas similar in manner to the emergence of rural entrepreneurship of TVEs as part of China's industrialization. Unlike industrialization, ICTs and the internet will have much broader opportunities and implications for younger generations as well as for intellectuals such as rural educators and entrepreneurs. This is an ironic result of the development of the internet at the village level, for while the internet was

presumed to be the engine of empowerment for local users to go beyond the control of 'middlemen', in actuality, at least within the pilot village, it is the "middlemen", like officials, teachers and peasant entrepreneurs, who have decisive power in defining and shaping the future direction of local internet culture.

This brief discussion on social structure and its transition in Chinese rural village areas has provided a structural point of view on how power, class, and cultural mechanisms might impact on a villager's daily life. It is in essence the social context of an 'indigenous internet' in the pilot village. However, this does not imply that the villager can be classified as subservient under this social structure. As Bourdieu stated, objectivism, which links human behaviour with objective structure, and subjectivism, which presupposes that an individual could transcend structural and historical restriction, are equally opposed to the practical mode of knowledge which is the basis of ordinary experience of the social world. (1992: 25) To better understand the life experiences of the indigenous internet culture in the pilot village, I followed seven main characters observing their life in the village and engaging in personal discussions so as to develop a perspective of the social structure that is 'conditioned on its history as it forges its future' (Kipnis, 1997: 9). Here are their stories.

## 5.3 The local actors of this project

### 5.3.1 Secretary Qi

Few village studies targeting the village leader have been conducted after the reform in China. This appears to be largely due to the fact that most ethnographic researchers of contemporary China, particularly Western scholars, had to rely on either the local cadres or their assistance for help in conducting their research. (Liu, 2000: 181) In this case study, the village leader, secretary Chi was the first person that I was introduced to and the first person that I interviewed. He was the most influential person in the village. It was only with his permission that I was able to conduct further investigations at the village.

There was great hardship for people who experienced the Cultural Revolution in the '60s and '70s. This hardship was most felt by those 'black' or 'anti-revolutionists'[9], for not only did they suffer but their families and their friends also suffered. Secretary Qi has served in the party organization of this pilot village for more than twenty years even though he was deprived of the opportunity to go to any junior high school during the Cultural Revolution. This was because his father had been a 'rich farmer' before the liberation of 1949.

Qi felt that he was treated unfairly and was angry while he talked about his experiences as a hard-studying and eager-to-learn teenager. "Most of my classmates at the elementary school had worse performance than I, they went to the local high school without any problem, but I was forced to work on the

[9] In the period of the "Three Anti Campaign and Five Anti Campaign" and "Cultural Revolution", all individuals and households were politically evaluated into revolutionary ("red") or anti-revolutionary ("black") classes. Reds were the forces of the communist party, while blacks were the party's class enemies.

collective farm. Even the leader of the production squad wrote a reference letter supporting me so I could apply to a school. My application was still turned down by the local school because I had the bad element in my family history." During the worst years of the ten-year turmoil when the agricultural production of the collective farm could not support basic demand, Qi was exiled to a neighbouring city where for two years he was a beggar. "I felt relieved to be away from the commune at that time even though I had to beg for food and I slept in the street of Lan-Zhou" Although enjoying that short period of spiritual freedom, his health began to deteriorate due to malnutrition which verged on the point of starvation.

Qi's political talent has eventually recognized after the Cultural Revolution. He was selected to be the assistant to the village secretary in 1982, when the system of responsibility[10] was formally implemented. Unlike farmers in the coastal agricultural villages who could benefit much from the system of responsibility, farmers in the remote agricultural villages in the western and northern regions, such as the Yellow-Sheep-River, could only enjoy minor gains from their efforts. Such regional inequality has been enlarged within the two decades since reform. (He, 2005) Qi teased himself as a double loser, "First was losing the chance of an education during the Cultural Revolution, and then losing opportunities to make more money and become a success like my friends who moved to the East for business. They have all become new-rich." He once

[10] "Household Responsibility System"(HRS) means that a household, or a set of households, assumes the right to lease land from state. The duration of the lease may be any number of years or, in principle, it may be in perpetuity. Ownership is not relinquished by the state, but the rights to use and to obtain income are exclusively assigned to the lessee. (Cheung, 1990: 22)

thought about quitting his political service to either join his friend's business or develop his own career, but still stays in the village where he feels he can do something and because most of the people want him to stay. Qi struggled in his choices and seems to portray a person in inevitable conflict between socialist morality and market incentive. As Nee & Lian (1994) predicted, rural cadres gradually give up their political commitments to the Communist party as they start to turn their attentions to market opportunities.

Perhaps due in part to this combination of misery and endless enthusiasm, Qi had the villagers' fully support for the project even to the point of providing their land for the site of the convention centre for free. In his house, the poster of the project is pasted on the wall beside Chairman Mao's photo and other party propaganda. A computer has been set up with a television and a DVD player in the main lounge, "The project leader gave me this computer but I can not use it because I still need to apply for a dial-up line to connect to the internet and the monthly fee is about 200 RMB". Qi told me that more than half of the households in this village had a DVD player in their living room. He also had a personal mobile telephone to contact villagers, especially when he was busy outside or working on his own farm. Even though the mobile phone was no longer a luxury for villagers there was as yet no any other personal computer in the village when I was there.

During the interview, Qi repeatedly referred to Deng's reform ideas. In accordance with Deng, he completely supported the notion that Chinese children should learn how to use a computer as soon as possible. It is conceivable for a

village leader to cite the party leader's statement as justification and backup for a personal policy. To me however, Qi's reiteration of Deng's ideas reflected his enthusiasm to create more educational opportunities for the next generation and fulfil what he in his early age could not obtain. It is a village version of the Chinese reform story. A version eagerly embraced with enthusiasm in response, in part, to the misery and mistakes that were made during the political chaos of the Cultural Revolution.

As a party leader of the central government, Qi represented, at least somewhat, political endorsements for the success of any reform project that he thought could improve the lives of the villagers. In order to support the computer education project, that is run by a private business from Taiwan, Qi needed to provide a large square of land to build the Convention Centre which had to be provided at no cost. This act was not universally supported by all of the villagers and therefore required a dynamic vision and bright promises for the future development of the village as well as the official backing for the policy. Qi became the key person in pursuing and winning the bid for the project. The project leaders finally chose the Yellow-Sheep-River as a pilot village because Qi successfully persuaded the villagers to accept all of the conditions in support of the project. It appeared to me that his wholehearted commitment to the e-literacy project was derived not only from Deng's reform policy but from a more fundamentally rooted belief in the deep literacy tradition of China. I will discuss this observation more fully in the next chapter.

A vision and the ability to persuade are not sufficient for a political leader in this remote agricultural village to lead a transition to modernization. A leader must have skills in estimating the potentials of the villagers and in motivating them to comply with the policy. Qi admitted that the people in his village were much like the typical peasant stereotype of being both stubborn and unintelligent. This stereotype was due to the fact that they were not well educated and that they lacked contact with the outside world. However, Qi knew how to inspire them with both the authority of party policy and promises of individual profits. For example, Qi said: "In recent years, I have successfully persuaded the villagers to raise cows to increase their household income and now almost every family has at least one cow in their courtyard." However, even in remote villages the process of oral communication is not necessarily less sophisticated. The party committee has to discuss all issues impacting the village from top to bottom including policy on social and economic affairs. Additionally, it takes time to undergo the necessary informal negotiations in order to sort out all of the barriers and resistance that exists for any new programme or reform.

Qi represents a new style of leader, one who integrates the different levels of responsibilities with the ability to lead his people through the challenges that they have faced after the reform policy was implemented and China moved towards its version of a market economy. Some researchers have attributed the success of China's open door policy to dynamic leadership, which in turn has created the rapid economic growth over the last two decades. (Goodman, 1997) This case study of village transformation, to some extent, supports the notion

that keen and smart leadership, as well as correct economic policies, were keys to the rapid economic growth in contemporary China.

Yet even in the small village, the transformation process is complicated and difficult especially if there is an element of business or profit involved. Qi's leadership has been challenged by the villagers in terms of the reconstruction and refurbishment of old small lanes into new business streets as part of the preparation of the project. The schedule has also been seriously delayed, not only because of funding shortages but also because of conflicts that existed between villagers. Qi told me that several years ago when he tried to implement the telecommunication policy to install a cable line in the village, "I was seriously attacked by some dissident villagers. My head was wounded and I was infected with hepatitis after the operation. It almost took my life and I stayed in the hospital over half a year."

In another case several years ago, the WHO tried to work with the Chinese government to set up a new health insurance system in rural areas. The Yellow-Sheep-River village was again chosen as a pilot location. Villagers needed to share some percentage of insurance burdens with the government in order to launch a much more workable health care system. The promise of better health care for the villagers was not enough as they refused to accept the scheme even after Qi's strong recommendation.

These examples reflect the difficulty in transforming old collective ideology into a new entrepreneurial system. It also indicates that the party power structures

have been further diluted after the reform. However Qi was still supported by many villagers in many ways, not only because of his political talent but also because of his selfless character. When I conducted the interview with him on his land[11] at the slope of a near-by mountain, I found that his farm land was dry and was located at the most distant and sloping side of the most arable land in that region. It is obvious that Qi chose the worst piece of land when the collective farm was divided for each household under the new responsibility system. It is because of such sacrifice and leadership, which emphasized the socialist ideal, won the support of the villagers when he proposed any new policy. I was astonished at the time that some of Qi's opinions reflected the same old communist spirit of sacrifice and unselfishness because the coastal and urban officials have become so easily corrupted in terms of using their political power in the pursuit of personal profit. Sun (2004) examined the relationship between market reform and corruption in China and suggested that corruption is a by-product of reform and is spurred by the economic incentives in an emerging market economy. Sun suggests that the steady retreat of the state has increased the mechanisms for cadre misconduct as well as reducing disincentives against it.

In that sense, it is not always easy to find a village leader like Qi who possesses a socialistic mentality and outstanding leadership abilities, because the general corruption has spread so very quickly to the local cadres in other agricultural areas. Besides Deng's ideas and vision of China's modernization, there will be

[11] Under the household responsibility system, a land has been classified on the basis of grain yields and field locations, usually with two different types: paddy and dry land. In Yellow-Sheep-River, the average arable land held by a person is 0.5 Mu paddy land and 2.1 Mu dry land which mostly locates on the slope.

no doubt that the successful transformation in the pilot village to a market economy if it occurs will be due in no small part to Qi's great leadership skills and abilities. Ironically, technological innovation in remote areas still relies on a combination of the cadre's old sacrifice morality and a new vision about the future. Whether this combination of vision and sacrifice can be traced back to the traditional Confucian sense of intellectual responsibility for the people or to the contemporary communistic spirit of cadre leadership can not be readily determined. However, no matter how it originates it is the key element to develop a market economy in the socialistic style. In some ways the transition of the pilot village is based on people who can inject a new way of business management into an old agricultural village rather than to the invisible hand of a free market.

"Developing e-commerce in the village is not a bad thing. Farmers can use the internet to decide precisely what and how much to grow based on market demand. Otherwise, the agriculture productions from village households usually follow the purchasing patterns of the previous year. If some products get a good price, then the villager would keep growing them next year. Sometimes this may end up with overproduction and falling prices." Qi realized that there was no computer in the party office to conduct e-business; instead they had to rely on the school system. "Unfortunately, there is only one teacher in charge of e-commerce in the school at this moment and he rarely comes to our village to collect our production information for posting." Qi thought that it should not follow the principle of 'school leads village' in developing e-commerce since the villagers would know better about "what they have" than the school does.

Yet the basic question still remains as to who has the legitimate authority to conduct e-business and how should it be conducted. According to the present system of political decision-making the county level government still holds the formal power on all village issues, yet in practice these decisions are an outcome of negotiation and cooperation amongst different local groups rather than from the 'top down'. For new issues such as proposing an e-commerce system for the village the old political system appears to be almost powerless.

Qi's leadership endorsed this project and presented a successful case for the importance of the project in the agricultural transformation to the decision-maker, even under the pressure of underlying local corruptions across China. Many researchers have considered decision-making as the main factor for the initial success of village reform, especially since the 1980's. Oi argued that de-collectivization and decentralization provide local officials with the incentive to cooperate with farmers and to promote rural industrialization. As a result, this rural-based industry and production has become the fastest growing economic sector, not just in China but throughout the world. (Oi, 1999) In Qi's case, I agree that his outstanding leadership is inherited from both traditional Gentry society as well as previous socialistic politics which helped him to shift manpower and resources within the village to make the most of opportunities. It was this Chinese and socialistic way of managing resources so as to bring the village into the market economy that has established the first step towards prosperity. However, even the most effective leader is challenged in trying to initiate a major change in a way of living and this challenge is magnified when

dealing with something as intangible as e-commerce. It is hard to envisage a way to successfully channel resources to bring the internet into the village and then persuade the villagers to invest even more resources into e-facilities and education.

Qi's primary contributions to this project were persuasion and negotiation. He was able to convince the villagers to supply all of the resources for the Convention Centre while provided the political justification and back-up. Qi's son Wang-Peng, on the other hand, had an actual plan to run an internet café in the village.

As a university student majoring in law in Lan Zhou, Wang-Peng recognized the potential of the internet. Qi Wan-Pong is the only son of secretary Qi. I met with him on my second field trip. His eloquence and sense of social justice seemed to be preparing him for his future wish to be a lawyer. As a college student, Wang-Peng said "I spend a lot of time sitting in the internet café chatting with friends and surfing interesting websites." Since he is part of the post-reform generation, and also with a remote village background, it is recognized that his higher education has come from family effort and the sacrifice of the other children's schooling due to a lack of family income. He has three sisters who are now all married and working in the field or in the factory.

When I visited secretary Qi on the second field trip, Wang-Peng stayed at home for his summer vacation. I found that his daily routine was reading a novel and watching TV and sometimes chatting with his girl friend on the mobile phone. It

seemed incompatible with the family, especially when his parents get up before dawn and were busy working in the field during the harvest season. In the meantime his sister needed to take care of the children and prepare the food. It seems that Wang Pong enjoys more privileges because of his education and his gender status. He left home to study in the city and had more leisure time as part of his campus life. During the summer vacation, he looked and acted more like a guest or outsider in terms of daily routine and lifestyle.

I observed that on the night when Qi's family reviewed the video footage from my previous interviews that Wang-Peng left his chair to smoke a cigarette at the moment that he saw his parents labouring hard in the field. It is conceivable that his action expresses a sense of guilt as well as a vague sense of social segregation which may still exist between the peasant and the intellectual in this new society, especially within this poverty-laden village. I am not sure if it is a sense of responsibility to his family that has driven him to do some business in the village such as the internet café. He told me "I am eagerly trying to start something so that I can help my family because it is really hard for my parents to support me for continuing my university education. An internet café would be quite lucrative here according to my observation, so I wish to invest in this business as soon as possible, and my father seems to agree with me." His initial plan was to launch a café with a service of 20 laptops. "It needs about 60,000 RMB for the investments in computers and 1000 RMB to cover the monthly connection fees. Other expenditures can be reduced because my sisters will look after the café and we already have a space in the town centre."

Wang-Peng believed that the young students and the migrant workers who came back home would eventually be the main customers for his café. Even during short visits the business should be enough to run the shop. "Most of them (the villagers) already know how to use the internet for chatting with their friends and playing computer games." Perhaps it is not a surprise that the village youngsters were more considerate in trying to relieve the household's economic burden. Most of them had to leave school to work in order to help their family at a young age. In Wang-Peng's case, he will not have to go out to find a job if his internet café is a success in the near future. More importantly, he will not have to work as a traditional farmer like his father had to in order to stay in the village. Instead of privilege or political patronage this is an opportunity that is part of the development of this project as well as the increasing internet population in China. Now even in a remote village like Yellow-Sheep-River one can stay at home and have the potential of not being forced to work on the land in order to survive. Service careers are booming in rural areas as Town and Village Enterprise have created so many peasant entrepreneurs over the last two decades. Eventually, the social structure in the agricultural village will undergo another phase of transformation as a new privileged class begins to emerge reviving the old Gentry society, though this revival will be with the new post-reform condition and rhythm.

This project has brought opportunities and hope for many of the young villagers who wish to stay in the village and have a career different from that of a traditional farmer or a migrant worker who must find work away from home. With these new opportunities, they do not have to rely upon labouring on the

farm in order to earn their basic living. Like peasant entrepreneurs, they have the potential and actual power to dominate village politics with their well-educated backgrounds. In that sense, the traditional Gentry society is returning. The emerging peasant entrepreneurs and intellectuals are becoming more and more important in the village. It is too early to predict the further challenges to the present power structure that these new entrepreneurs and intellectuals will face or how they will institutionalize themselves as the Gentry power had in the past. However, they have already functioned as a powerful leading force and in the mean time serve as the buffers for a village moving towards a market economy and a civil society.

### 5.3.2 Teacher Hu

Teaching, as a profession, has a long and rich history in Chinese culture since the time of Confucius who was praised as China's first teacher over 2,500 years ago. Since that time the intellectual has reached a high social status being highly respected by the ruling class for their knowledge and cultural temperament. Although scholars and the intelligentsia have suffered the most during the Cultural Revolution, the fundamental and secondary education system had been able to survive during the chaos (Pepper, 1984:13). After the reform, almost every village had an elementary school though in most instances it was small in size and had limited resources. It could take up to several hours for students in remote areas to walk to school. Most needed to get up before dawn in order to make it to school on time. Today in China elementary school is compulsory with virtually every child in all regions attending.

There were two types of secondary schools near the town centre; one was a general school and the other vocational. These two have become indistinguishable in their education as students from the vocational school now, like their counterparts in the general school, can take an entrance exam to attend the senior high school. In 2005, the two schools merged and moved to a new larger campus nearby. The training component of the Town and Technologies Project initially started in the vocational school where every student took two hours of computer training per week. The campus internet courses and classroom were available not only for the student but also for villagers who wished to learn basic computing skills. The course leader was Hu. He was a local to the region like many other teachers in this school. They grew up here and acquired a normal college education in a nearby city before returning home to become high school teachers. Unlike the stereotypical impression of a countryside 'barefoot teacher', under qualified and minimally paid, Hu was talented, eloquent and insightful. He told me: "Yellow-Sheep-River needs a kind of leapfrogging way of development to transform traditional village lives into modern ones." He thought that such a rapid transition could quickly become a reality with the implementation of computer education as well as the cooperation of the villagers themselves. "In the past people here liked to enjoy sunlight and chatting in their courtyard. They would rather leave today's work for tomorrow, and were happy to chat and gossip till sunset and then go home for dinner and then sleep." Now however, "Because of the internet, people are aware of the importance in keeping up and are more likely to send their children away to acquire a higher education". Due to this change in attitudes Hu was very confident and optimistic about the future of the village, "we expect to have more

than 1,000 students in professional training and in senior high school, they will be the first army in Yellow-Sheep-River for distant-hiring and high skilled jobs". Hu cannot predict how long it will take to fulfil such a distant-hiring target however, but "the younger generation will be totally different in the near future."

Hu was the representative of his school when he attended a meeting on the use of ICTs for education held at Zhejiang Province in 2003. Hu told me that a secretary from UNESCO who was also an attendee of the meeting was very interested in the 'Yellow-Sheep-River model'. "I believe that the model we created in this pilot village has won international attention". In the frequent receptions and meetings, Hu's well-organized presentation usually sketched a clear and vivid picture of the project to visitors. He was called the jack-of-all-trades in terms of his diversified performances.

In normal situations a high school teacher not only provides instruction on relevant courses but is also responsible for the student's daily activities. Sometimes their responsibility was more fundamental, especially in the countryside where teachers are not plentiful. Fortunately, Hu majored in computer engineering at the university and was therefore the right person to be in charge of the campus internet facilities and the computing training courses at the village. Hu and his staff operated two computer classrooms and one internet café that meet the requirements of the two-hour per week training courses for every student as well as providing night courses for the adult villagers. According to Hu, "within four years, more than three hundred farmers and thousands of students have joined in the courses and have learned the basic

knowledge of computing including using email and surfing the internet." Regular textbooks in the use of computers were not suitable for the villagers, so Hu designed a special curriculum mainly focusing upon practice, typing, and surfing the internet. Hu said "After training, 80% of the trainees learned how to send email. They not only got attracted to the computer, but some of them ultimately wanted to buy one". Hu said that he became much busier after the Yellow-Sheep-River Vocational Secondary School had a computer classroom in 2002, because both students and teachers were attracted to the almost magical power of the computer.

Another important task for Hu was to develop e-commerce training courses for local farmers so they could learn how to post their agricultural products on their own website. Hu explained, "e-commerce has a significant role for transforming the pilot village into an information society because it will provide a sustainable way to sell products without the need of middle retailers by putting agricultural production and distribution online". According to the seven steps of this project (see chapter three), the first stage, which was to establish village e-commerce, required the school to play a leading role in training farmers to develop their websites as well as maintain the quality controls needed for every transaction. In this role Hu had helped farmers to sell mushrooms and other medicines through the internet. "Villagers total trading was 260,000 yuan in 2002 which was far more than past years". With the help of the internet, "...we expect that e-commerce in this year (2004) could reach over 500,000 yuan". Hu was invited to talk about e-commerce in remote villages at the CCTV programme. He presented what had been accomplished in Yellow-Sheep-River. However, the

plausibility of the transaction figures he provided was challenged by a following presenter, much to the embarrassment of Hu. Most of the villagers themselves were also sceptical about the actual speed of e-business development in the pilot village. A student of Hu's told me that Hu did confess in front all of the students in his class that he had misrepresented the amount of revenue generated by e-commerce.

In later interviews, I chose not to challenge Hu about the misrepresentation directly. In my mind, his exaggeration of the number of business transactions on the internet was not derived from any personal interest or benefit, but rather giving audiences and outsiders more confidence in the development of e-commerce in the pilot village. Therefore, my focus in the interview was not about Hu's personality but rather the difficulties in developing e-commerce in the pilot village even as more and more people acquired access to the internet and posted their product information on their own websites. Hu told me, "The access and basic skills to set up e-commerce is not the major problem for villagers although the operation still relies on the staff and facility of the school". Then what was the bottleneck in this critical period of early development? Hu complained that the old teaching system took most of his time and effort so that he could not focus on the development of e-commerce sites or computer training for the villagers. He simply was too busy preparing for other courses as well as his general administrative duties at the school. "The school headmaster doesn't care about how much I have done to enhance e-commerce because this was not part of the necessary evaluation for my teaching work. He was only concerned about how many hours I taught and how long I stayed in the

school." Hu did not hide his strong feelings about the school headmaster on this issue and could not help but expose his frustration, "I cannot change the whole system and it just makes anyone who tries to do something different feel tied-up".

Although a more professional and focused approach will definitely help to speed up the development of e-commerce, I left my interview with Teacher Hu unconvinced that the problems in establishing e-business for the village at this stage in their development would be totally solved even if Hu had more time to devote to the project. I could see a structural issue that needed to be resolved which was who should be in charge of the e-commerce effort and how it should be run. As Secretary Qi commented to me previously, "I do not agree that e-commerce should follow the present school-led policy because only farmers themselves know what they exactly need in this business. Teachers can teach us but not lead us in how to do e-business". To some extent, Hu thought that the role of the school in the development of e-commerce was not just in training but also as serving as an information provider for both the farmers and the distant purchasers. Ultimately, Hu agreed that the villagers should be the ones making their own decisions in response to market information which they would use to adjust their productions. "We have no right or responsibility to be involved in their decisions." Hu admitted, "In Yellow-Sheep-River, we have not worked out a successful model yet to proceed in developing a new mechanism for village e-commerce. We don't know how to operate it and how to divide responsibility if there were different groups involved" Hu even expressed his pessimism with an unusual low-keyed voice "If we cannot find a good model, the villagers will

easily go back to the traditional way of production in which they grow food blindly without following current market needs. That is the key reason why the villagers cannot move themselves out of poverty." When Hu was asked how to break through such a vicious cycle in the village development, he felt even more frustration: "I know well about peasant life because I grew up here and I still work in the fields. I know the education system since I have been teaching for many years. So I know the problem, I know it deeply to the bone, but I cannot change anything. I am not the decision maker."

During my fieldtrips I discovered that Hu had posted a sad story on line asking for emergency help from the outside. Lee Xiao-Xie, a twelve-year-old female student, needed to have emergency surgery to remove a tumour in her brain. Her poor family could not afford the surgery and not even health insurance could cover the cost. Hu disseminated this message on the internet as soon as he was informed. "Sixty thousand RMB donations were received within just a few days that helped Xiao-Xie have her surgery immediately. The power of the internet is amazing." Although Xiao-Xie finally passed away two years later, the Yellow-Sheep-River website as an on-line charity platform was a big success. According to records, up until the beginning of 2007 this website had received 83,350 RMB for medical support, 1,015,787 RMB for school construction, and 648,094 RMB in assistances for 1,453 students. (Yellowsheepriver.com)

Hu had personally experienced the major changes in Yellow-Sheep-River from villagers who had reached the outside world through the use of the first computer that was acquired in order to do the planning and construction of the

hotel at the village, a project that created many job opportunities for the villagers. Indeed, a lot of changes had taken place since the project was launched in the village in which Hu summarized into three basic areas. First, the villagers had experienced changes in how they perceived the world. "Several years ago, if a foreigner came, it would be a piece of shocking news to all of the people, but now they have gotten used to it. Children even chat with foreigners in English". The villagers had also learned business practices from these new experiences. "In the past," Hu said, "embroidered shoe cushions were gifts to the visitors and the villagers were proud in doing this for them. Now the cushions have become a commodity. No one is willing to give them to you. I have helped them to sell their hand-made products on the internet". Finally the project had changed the lifestyle of the villagers. "In winter, people liked to chat and gossip inside the house. Now they are more active and try to grab all kinds of opportunities. Some work in the International Convention Centre, some do business in town and some operate recreational places like the small cinema and billiards room. Now I feel that I bear more responsibilities, not only for my students, but for all of the people in Yellow-Sheep-River. I expect more people will support what we are doing and will pay more attention to us. I believe Yellow-Sheep-River has a better future".

Hu's efforts on this project should not be underestimated or oversimplified as a story of a local teacher and hero who had changed his village by educating children on the use of computers and conducting e-commerce for villagers. Throughout all of post-reform China the indispensable grassroots contributions of local teachers or the local intelligentsia has been a vital catalyst in the

economic development of villages, regions and a country. The role of the country teacher in agricultural modernization has been ignored for quite some time as most researchers have focused on the role of policy making and peasant entrepreneurs in the process of rural transformation. In Hu's case, even with his sense of being trapped in the local power structure, he has proven that the local teacher acting as educator and influencer has an ever more important role in the rural development of China.

## 5.4 Educating the Young and Mapping the Future

### 5.4.1 Zhao Fei-Yan: a Female High School Student

Fei-Yan was a high school female student with an English name of Jenny. On my first field trip, I wanted to interview some local students and Fei-Yan and another girl agreed to participate. "Everything is different since this project came to Yellow-Sheep-River, especially for the local girls. In the past we had to go to work as early as possible to help the family." However more and more parents are willing to support girls in getting a higher education provided that they can afford it. The villagers have hope for the future though they cannot clearly see exactly how their lives will be improved or when this improvement will occur. They are inspired by the effort of this project and the computer has become no longer a strange thing for them.

Fei-Yan teased herself on her isolation and lack of awareness about the outside world. "We have no chance to contact the outside world in this village, so I once

thought that the visual images on television were faked. They were produced like paintings. It was not until I used the internet and really communicated with people from the outside that I realized that everything I watched on television was true. The internet breaks the mountain's barriers and helps us reach the world."

On the second day, I visited Fei-Yan's house which was just in front of the vocational high school. Because her father had died when Fei-Yan was five her mother was the family's sole provider and worked as a cloth vendor on a nearby street. "Our annual income is 2,000 RMB, so there is not much left for tuition for me and my brother." Her mother said to me that "Fei-Yan is very lucky to continue her education as a girl without having a father." Fei-Yan was an outstanding student at school and won many awards which almost entirely covered one of the shabby walls in their small one room house. However, she still could be forced to leave school due to the family's indigent condition even if she passed the entrance examination for senior high school which she would take in the next year.

When I visited her family again on my second field trip almost half a year later, Fei-Yan told me that another girl I met last time committed suicide a few months earlier because of a love affair with a construction worker at the Convention Centre. It was shocking to me for I remembered how that girl told me that she felt that the project was changing the future of the village and the lives of the girls in the village. As an outsider, I cannot understand all of the pressure that a young village female may have to face especially early in their life. On the other

hand, Fei-Yan was not as willing to be interviewed by me again because she was tired of being the focus of so much outside attention and reporting. In the past, television teams and visitors were arranged to meet with her in her house to conduct interviewers. Later she wrote me a letter to explain why she refused my interview. She also complained about the misconduct of some school teachers that made her feel very uncomfortable during that period. I replied to her that I fully understood her situation and her resistance to being in the media spotlight. I also told her that I appreciated her sensitivity about the complicated politics that can exist between teacher and student.

To some extent, her resistance to the interview was in my opinion a recognition on her part of the differences and the unbalanced relationships between village outsiders and village insiders. People from outside usually took a short visit and went through a quick interview in the village and then left. Although their intention was to try to help the villagers, their class position was obviously higher than the village insider. In the process of this temporary contact the villagers were expected to perform and conform with the outsiders expectations. After all of these years the villagers were no longer naïve about the motivations from visitors from the outside. For those sensitive and rebellious villagers like Fei-Yan this cooperation and performance expectation made them uncomfortable and those feelings are no longer acceptable to them. They refused to sit in front of the camera and talk about their personal story of 'poverty'. They began to not only tire of the attention but also to resent camera interviews as well as the intrusion from the outsider. No matter how I had tried to justify using a camera from the perspective of an ethnographic researcher, to her it was still

part of the power from the outside. Fei-Yan's resistance seems to reflect a notion of 'resentiment' —a Nietzschean term, referring to the transformation of a dominated or exploited state or condition into something positive or valuable. As Stringer suggested, 'resentiment' is not necessarily a negative and potentially at least may be a positive force especially for feminism as it provides a condition of creative affirmation. (2000: 10) Therefore, resistance may be the emotional beginning for developing a further sense of self dignity and identity, which in turn will contribute to breaking the previous sense of a humble and powerless helped/researched/interviewee in front of an outsider.

After that, I met her several times on the street when she worked at the cloth vendor store for her mother. Sometimes, I came across her in the restaurant where she had a part time job. She still remained silent about herself. One evening, when I walked across the high school exercise ground, I found that there were many students reading a textbook loudly without almost any light. It seemed that they were not allowed to enter the classroom and turn on the lights until the sky was totally dark. Fei-Yan was among one of these hard-working students experiencing obstacles to learning that I had never witnessed before. It is hard to blame the school for trying to save electricity given the relatively few resources that the school has. Yet it also seems ironic that in saving resources they were creating obstacles to those very students who most appreciated the school and who were willing to overcome those obstacles in pursuit of their hopes and aspirations.

On my third trip, which was almost one year later during the summer of 2005, I visited Fei-Yan again. She had just passed the entrance examination and her mother appeared to be able to support her so she could continue her higher education.

This project has had great influences on the village females. As teacher Hu told me "When we were high school students, less than 10% of the class were female. Now there are more female than male students." In most of these cases elsewhere, as in this village, education is the norm and is viewed as an affordable way to realize gender equality and empower all in agricultural China. However this empowerment can become uncontrollable and may be a risky journey where both the rewards and the risks become much higher than ever before.

### 5.4.2 Liu Hong-Yan

Uncertainty about the future as well as an eagerness to learn created mixed feelings among many of the young females in the village. Another female that I interviewed was Liu Hong-Yan . She had already finished her high school education and was a contract trainee at the Convention Centre during the time of the interview. She told me that she wanted to be the first tourist guide in the village. To help her practice I asked her to be my tourist guide and show me around during a weekend. I recorded her comments about the different aspects of this area's geography, scenery, and mythology, which I have included in chapter four. Through her detailed introductions about Yellow-Sheep–River, I became impressed not only about the social and geographic features of the village but also her deep feelings about her home. "I like country life rather than city life

because I can really enjoy the relationship that I have with families, friends, and the land."

Liu Hong-Yan had a full time job in Lan-Zhou after graduation but she disliked city life, unlike many female migrant workers who left home to work in the factories never to return. When Hong-Yan decided to come back she luckily found a chance to work at the Convention Centre. During her training period her main job was cleaning and learning the required skills for hotel service. "I felt bored sometimes, but this is better than working in the city." In order to prepare for the licensing examination to be a tourist guide she used her spare time on-line studying to acquire a degree in tourism. "I hope that I can pass the exam soon so that I can offer formal tour services for visitors and provide them with all kinds of information about my hometown."

Liu was very proud of herself being the second female with a high education status in her village and she also felt very lucky to work at the Convention Centre. "Usually, country girls my age are arranged to get married. Now, I can have my own job here and my parents are so relieved because I don't have to be a farmer like them and I seem to have a better future." She was one of the few local youngsters who remained to be a trainee at the Convention Centre. "Last year, there were more than twenty trainees. Most of them were dismissed because the hotel service had been delayed and it could not be started as scheduled. I learn many things here like reception skills and English. English and the computer were my favourite courses in high school." However the dismissal of the other trainees as well as the delay in the scheduled opening of

the hotel has increased concerns and uncertainty about her future, Liu hoped that "the Convention Centre will open as early as possible, not only for the benefit of the local workers but also for the visitors who will have better sense about the development of Yellow-Sheep-River."

On my last fieldtrip, I discovered that the grand opening of the Convention Centre was still pending and it was only providing some experimental services for certain visitors. Liu was deeply worried about this situation. A similar kind of worry was also haunting her female friends who had just passed the university entrance exam because they were not sure if their families could support the large tuition fees. They sometimes gathered together to exchange opinions, encourage each other, and ask the teacher how to deal with such uncertainty about the future. To some extent, their worries reflect the general feelings of rural educated females especially those who have become inspired by opportunities like this project. They are no longer satisfied with early marriages, quitting school to help on the family farm, or working at the factory. They desperately want to continue their higher education or find a better job and like Liu many wish to stay at the Convention Centre. Restricted by their family income and the Town and Talent Company's uncertain policy about further investment in the Convention Centre, they could only consider their future on a day-to-day basis. The uncertainty and the deep sense of worry was something that was becoming more and more common among these rural young females.

### 5.4.3 Zhao Xiao-Ping

From Qi Wang- Pong's case, I witnessed how the rapid development and usage of ICTs in daily communications had impacted younger generations even in remote places like Yellow-Sheep-River. As Haddon has pointed out, social networks can enable people to gain familiarity with technologies and provide practical support such as helping in setting up equipment and software or in solving technical problems. Moreover, the young's perception of what was an interesting website to visit could also be influenced by peers in their social networks (Haddon, 2004: 72-73). Here in the pilot village, the diffusion of internet knowledge among the younger generation has followed a similar pattern. Classmates began to learn basic computing skills together in school and then started to practice these skills in nearby internet cafés or by using laptops in the work place. They start to chat with each other and begin to share new information on interesting websites. They then exchange ideas about how to download useful software and sort through any technical problems together. These mutual exchanges and collaborative efforts continuously become a very important factor in shaping an emerging indigenous internet culture in the pilot village.

Zhao Xiao-Ping, Wang-Peng's high school classmate, was the first local young man that I met when I arrived at the village. He was assigned to help me in conducting interviews with the villagers. He was nearly twenty at that time and had just received job training in the Convention Centre. He would be transferred to the hotel if it opened, as expected, in 2005. There were more than fifty trainees like Xiao-Ping, but most of them came from other provinces. It was a

precious opportunity for local youngsters in the region to be able to work at the Convention Centre especially in such a remote area of China. Job options in these regions were often limited to local farmers or migrant labourers as there were no industry and service businesses nearby. Xiao-Ping was a very talented painter and once studied in the art department of Lan Zhou University but he had to discontinue his education after his first year because his family couldn't afford it.

Eventually, when the reform policy came to his village in the early 1980's, his father became a pioneer as the first farmer and vendor to rent a public allotment to grow vegetables and then sell the products in the main street of the town centre. Xiao-Ping was very proud of his father as being one of the first private businessmen to take the advantage of the agricultural responsibility system. However, his father's business had never been that successful even after almost twenty years' of effort, partly due to his weak physical condition and partly due to the lack of professional knowledge on business management and investing. The fruit and vegetable shop his father owned still looked shabby and small compared with other refurbished and transformed shops on the high street.

"There was not enough savings for me to complete my education; therefore, I had to suspend my school when my sister passed the high school examination. My family could not pay the double tuition fees at one time." So, Xiao-Ping sacrificed his university studies to support his sister. It was a great opportunity for a village boy to pass such difficult entrance examinations to go to the university. To some extent Xiao-Ping felt lucky because now he might have a

great opportunity to work at the Convention Centre even though the salary for a trainee at that time was 400 RMB (28 Pounds) per month. Xiao-Ping said "I don't have to go out to find a job in a distant city and I can make some contributions for my village by working here." I was invited to his house several times and he showed me his previous art works. I found it sad that this talented young artist had to stop pursuing his interests but, as he, I felt that the future for him could be much brighter if the Convention Centre opened as scheduled and was successful.

Although the training he had did not focus on computer techniques, Xiao-Ping still found the course very useful for it allowed him to begin to understand the ideas of modern service and skills. He was the first generation in his village to learn how to use the computer during his high school years. He graduated from the first high school in Wu-Wei city which is the closest big city to the village. He practiced key-in skills at that time, usually at an internet café near the campus. Like most students, he also played online games to pass the time. For him, there was another benefit to working here because the internet facilities were relatively convenient. Sometimes he chatted with his university classmates through the public computer in the centre. Sometimes, he came to my room to use my laptop. I found him to be very expressive when he indulged himself by chatting with high school classmates. "Usually, I am not a talkative person but I like to talk to my friends on the internet."

As I mentioned earlier, when I first began to conduct the interviews with the villagers he was assigned to be my guide. I found that he was a bit shy and

cringed in front of the other villagers. He finally admitted that he responded this way because most farmers in the village thought his job in the Convention Centre was somehow equivalent to a servant. Servants used to be classified as a female job in the traditional agricultural village especially when compared with the typical field labouring for the male. Xiao-Ping still struggled and suffered with this concept yet he hoped this would change after the project was launched. This project had already changed the villager's ideas about education and the computer. Furthermore, the new working opportunities that would soon be introduced to the villagers through the different types of services and jobs that would be available at the Convention Centre would give even more momentum to this social transformation. Non-agricultural income in the pilot village would no longer be earned just by working in the industrial factories but would soon also be earned by villagers joining the workforce and providing services at the hotel. All of these new ventures provided more job opportunities, especially for the young in the village and also required a re-adjustment in the traditional attitudes and values toward labouring. These new ventures and opportunities triggered another wave of transition within the peasant society. Over the past two decades the reform has already created a special business spirit and has paved the way for a rural transformation. This project and the opportunities that it has created continue to add to the momentum of the reform.

## 5.5 Business spirit, social networking and digital services in the village

### 5.5.1 Lv: The 'Ten-thousand-yuan Household'

Chambers has suggested that the elite in rural villages usually monopolize the time and attention of researchers. (1983: 18) According to Chambers, 'elite' is used to describe those people who are influential and often serve as the main sources of information for development tourists and rural researchers. They include progressive farmers, village leaders, teachers, and paraprofessionals. They are the most fluent informants and are much different than ordinary villagers who do not wish to speak up or who are reluctant to be interviewed. For this reason, unlike the elite, ordinary villagers are looked upon as being the "last in the line" and are the most difficult to find. (1983:18)

Chambers rightly pointed out that the 'elite bias' tends to exist in development studies, especially in a society like China where the Gentry and the intelligentsia are the dominant powers in the rural areas. As described previously, the elite are not only influential people for outside researchers but are also the actual middlemen who negotiate and make decisions on a variety of village issues. They therefore are indispensable in rural studies and their points of view have decisive significance when considering issues from a local perspective. Ordinary villagers and everyday farmers, as Chambers indicated, are usually quite invisible in research out in the field. It is difficult to find them in short visits and for that reason their voices are often unheard. In my trip to Yellow-Sheep-River, I tried to contact the farmers who were not classified as being "elite" according to Chambers. The story of Lv is a story of a rural farmer that I came to know

who most closely resembles the local common farmers frequently lost to researchers, although he was by no means either poor or powerless.

If Zhao Xiao-Ping's family represented the struggling agricultural household in a rural village after the reform then Lv Zhi-Chuan represented the successful household, especially in terms of social networking and information gathering. Lv, the 'Ten-thousand-yuan household'[12] in this village, appeared by chance in front of my camera when I shot the well scene during my first field trip to the village (See chapter 2). He owned a house that was just behind the main entrance to the centre of the village. His property allotment was located geographically between the village and the Convention Centre and because of this main route was easy for him to notice any strangers or other visitors who went from the village to the Centre especially when he worked in the field. I noticed that he paid close attention to the people walking by and therefore we naturally had eye contact when I entered the village. Gradually, he came up to chat with me warmly and told me that his daughter was working as a chef in the Convention Centre. That is the reason why he said to me: "I have already known about you, my daughter has mentioned you to me".

On my first impression, Lv was not as eloquent as secretary Qi or Teacher Hu, but he was very friendly and hospitable. I was invited to his house several times and it was hard to refuse his invitation because of his heart-felt insistence. "Come to my house and have a dinner" was the words he used every time he

[12] 'Ten thousand yuan households' represents the rapid transformation from the supposed backwardness of family farming to the enterprising achievements of profit-seeking peasants stimulated by market incentives.

saw me in the field. Kipnis mentioned that it is quite a common experience for researchers to engage in introductions, banquets, drinking, cigarettes, and participate in other so called "guanxi" producing activities in their fieldwork. (Kipnis, 1997) For Kipnis, the production and reproduction of human relationships through "guesting" and "hosting," attending and giving banquets, and the variety of other methods for socializing and building relationships, was a primary activity for most villagers. (Kipnis, 1997) In my case with Lv, building a new relationship through a meal was quite important. I found that it was easier and more natural to conduct interviews with Lv once we became friends. Friendship and gangqin (intimacy) is crucial to Chinese society especially for an outsider who wishes to be accepted into the domestic network. From the villagers' perspective making friends with an outsider can provide a privileged status for a villager in a guanxi society although such production of guanxi might not be directly linked to any economic or political benefits. As Kipnis pointed out, guanxi producing in the villager's daily life is based on neither the pure consideration of political connection nor the rational calculation of economic benefit. However, it would be naive to think that villagers are not conscious of these considerations when forming relationships. (Kipnis, 1997:8) As part of this acceptance process visiting the local's home and sharing meals often act as the starting point in this social and relational transformation that is called guanxi.

When I visited Lv's house, there were cows and boars in the front yard and even a harvest machine that I had never before seen in the village. Shortly after I arrived at Lv's house, the previous village leader Wang appeared. I recognized

him as the same person that appeared as part of the well scene that was shot during my first visit (see chapter 2). I never asked about this "coincidence" because I felt that I would not get a full answer nor did I feel that I needed or deserved one. Being with Lv was very warm and friendly as we chatted and ate local food, Lv talked about how hard he worked on the farm and even went out to be a part-time worker in other provinces to earn extra money. "Now, I can make more than ten thousand RMB per year" he said.

It seemed to me that this meal was well designed by Lv in many ways in order to make friends with me. While we were talking, Lv's wife prepared local specialities such as wild mushrooms and potato dumplings for me. Every dish was freshly made so it was a long and wholehearted feast for an outsider. Heavy banquets such as this represent how a host values the relationship with guests. The whole process of guanxi-producing does not have an immediate specific purpose nor is it a straight forward political or economic exchange. Rather, it shows and confirms that the new relationship is being established. Once established this new guanxi network serves as an "open door" where one can further visit and chat with the other. In Lv's own words, "Come to my house any time you want. We can have more talk-talk." Actually, the production and reproduction of guanxi is rooted in this daily practice of 'walk-walk', 'look-look' and 'talk-talk'. It is a traditional way for villagers to exchange information through such face-to-face contacts. The capability to practice and develop guanxi networks, no matter whether in conventional or in virtual forms, represents the personal potentials of social and/or economic returns in the future.

Guanxi in this sense is in itself informational for it contains within it implications of the nature of future potential returns.

Kipnis rightly pointed out that guanxi definitely has a positive consequence through the enhancement of network capital. Whether these guanxi networks can be traced back to Confucian tradition or it is the practical adaptation to the communist socio/economic structure, the practice of guanxi production is a cultural practice in China in which actors skilfully adopt strategies and draw on resources in the pursuit of contemporary ends. (1997: 7) Compared with other villagers, it seemed to me that Lv was more aware of the business opportunities and resources in large part due to information being exchanged on his political and social networks. He told me that he joined the rush to invest in gold mining after the reform although ultimately it was ended with the government prohibition. He was now involved in wild mushroom transactions. I viewed Lv as a villager with an ambition for pursuing wealth as an entrepreneur and he has been able to integrate this attitude into the household responsibility system that was implemented over two decades ago. Lv's networking followed somewhat the traditional way of producing guanxi which is still established through face-to-face contacts, and occasional daily rituals such as sharing a meal or exchanging gifts. The implementation of this project had provided him with opportunities to build new guanxi with outsiders, and my role as an outside researcher definitely had a part in his friendship with me.

Lv was able to use traditional methods in developing new relationships with outsiders as this was a primary activity for most villagers. His generation, after

experiencing the transformation of the rural society from the collective farm to the household responsibility system, were keener to produce guanxi and networks than traditional farmers. They were more flexible and benefit-centred and no longer just production-centred. They had become the peasant with a business spirit. The awareness of the guanxi network, especially with outsiders, resembles a huge transition in rural mentality. This willingness and increasing capability to socialize with non-villagers was, in a sense, a long-term outcome of the reform policy and was a positive benefit from this project. To some extent, as more farmers such as Lv learn how to use the computer and gain access to the internet, the traditional ways of quanxi building and networking in the emerging culture of rural entrepreneurship will be further integrated with the online socializing and the "virtual way". Peasant entrepreneurs will become more aware that the internet is an indispensable tool for them to mobilize all the possible resources that exist both inside and outside their personal networks to develop their businesses and quanxi, although such a networking method may not 'leapfrog' from traditional face-to-face relationship to entirely a virtual connection.

### 5.5.2 Yin Jun: The Returning Technician and Digital Middleman

On my first fieldtrip, I witnessed the non-stop construction of the Convention Centre (See video reference 10). In the initial project, the Convention Centre not only acted as a platform for villagers to gain access to the outside world but also served as the digital base for member schools and e-networks across western China. It was planned to be the Digital Centre of the Great West Development

with a large R&D group as well as an outsourcing centre which would handle the distant hiring of the villagers. In April of 2004, this project employed more than 100 workers in Lan Zhou which served as the first stage of expansion and was in charge of the construction of the Convention Centre. However, when I visited there again in the autumn of 2004, just a half year later, the Lan Zhou group had been dismissed even as the construction of the Convention Centre was nearly finished. Dr. Lin told me that the original plan for the outsourcing centre was very difficult to achieve for many reasons and so it needed some adjustment.

The new version of the Digital Centre, according to Dr. Lin, was to be relatively smaller but more financially sustainable providing e-services not only for the villagers but also for local businesses. Work with local technicians had begun and niche markets for e-businesses were starting to grow. In my third field trip in the summer of 2005, the Digital Centre had already operated for about half a year.

Inspired by this project, Yin Jun, a twenty-six years old local man had quit his previous job as a technician of the Petrol Company in Xin-Jiang Province and returned to Gu-Lang County to run this Digital Centre. "It is very touching for me that a Taiwanese has even put this idea in my hometown. After observing this project for two years and contacting the people who were concerned about the development of western China, I decided to come back home myself and try to start a digital services business." There were two key staff in this company and they aimed to provide networking and webpage-designing services for local

businesses. It was run like a local subsidiary of the Town and Talent Technologies Company because it was authorized to use its logo and the software of the company. "It will be a good challenge at this moment because local businessmen have no idea how to use the internet to create more profits. So, the main objective is to introduce local people to apply for the on-line jobs that are posted for eastern companies."

This project was called "Talent Mobilization from West to East". When I visited Yin Jun in his office, there were lots of parents with their children visiting to ask about the project. Some would pay 10 RMB as a registration fee to post their children's data to companies which are located in Guang-Dong Province and Tian-Jing City. Most of the cases would be accepted and Yin would then organize these young migrant workers and accompany them to their factories. The local government has already provided the same services in order to introduce farmers or their families to work in other areas because the household's income relies heavily upon migrant farm workers in this agricultural area. The increase in household income is counted as the official's contribution. However, local governments had few placement sources in regions of the country especially in the coastal areas. Currently the local government mainly introduced farmers to pick cotton for Xinjiang Construction Corps and plant melons in neighbouring counties. All of this is seasonal work lasting on average not more than two months. Since this private Digital Centre began to run, local people seem more likely to ask for information from it than from other government sources. "We only charge 10 RMB and our collaborated companies

provide better working conditions and salary. Most importantly people trust us and the project of the Town and Talent Technologies."

For example, Chengda Shoes in Dongguan offers a starting monthly income of around 1,000 RMB with free meals and accommodations. The worker also has four days off each month and extra pay for working overtime. It is a high wage for villagers and they can send a lot of money back home to help their family. Yin Jun told me, "Most importantly western [Chinese] people have stepped out of the west and have become industrial workers. In the future, they will bring back new ideas. I believe that some of them will become real talent and serve as the main force for western development." But winning the trust of villagers is not an easy thing, Yin said, "A lot of villagers came to inquire during the first days after the Digital Centre opened, but curiosity was gone in a very short time. I realized that I could not wait in the office for the villagers to come voluntarily. Thus teacher Hu and I began to visit the villagers in their homes by ourselves to introduce this project. After all it needed courage for those who never left home to work in such a distant place. This year, we have introduced more than 800 local people to work outside and the applications are still increasing."
For Yin, his work was not only to introduce the young labour workers here to work for coastal companies but also to make the villagers aware of the power of the internet. "It is the first time that villagers have applied for a job on-line and everybody thought that I am a magician." So, Yin believed this project was a good example of how to educate villagers about the importance of the internet although at this moment they still needed a technical middleman like himself. In the future, Yin hoped that the 'Western Talent for the East' project would not

only act as an employment agency but also would promote western development as capital, new business concepts, technology and talent returns. As elsewhere, China will benefit from the trend of going abroad and then returning home with enhanced skills and capital.

Not being able to create a large number of ICT workers to fulfil distant employment objectives has been a real and serious problem and has yet to ease the high pressure of western unemployment. Local farmers still have no choice but to find all kinds of opportunities to work outside. In that sense, hundreds of villagers have become industrial workers with the assistance of this project. It continues to be looked upon as a good way to reduce unemployment as well as a potential reservoir of talent for future western development. "Someday they will come back like me", said Yin.

It is not an unfulfilled wish or dream that these migrant workers might someday return to their villages. Yin is an example of the dream becoming a reality. Yin stayed in another city as a technician, but when he came back to his village to start his digital career he had the chance to do something different, run his own business as a manager and try to provide digital services for his fellow villagers in his hometown. "This is not just a service but a chance, especially when you find that there is always something to limit migrant workers in other places."

Some researchers have noticed the contributions of returning workers from rural villages (Murphy, 2002) though it is too early to predict if there will be a dramatic increase in opportunities available to them both in terms of distant

hiring or any other related work in digital business. In this village, the failure of the original idea of the software centre certainly slowed down the speed and scale of opportunities for returning workers who have already accumulated certain skills and capital from their coastal experiences. That is the reason why the strategy of this project was adjusted from distant hiring to the "Western Talent for the East", which follows more traditional practices of providing industrial migrant working opportunities instead of a local information outsourcing centre. The internet has created a new way of connecting migrant work opportunities between the east and the west. Villagers no longer rely on the old way of connection through government arrangements or personal guanxi. Now, they have a Digital Centre searching for migrant employment opportunities for them. In this sense, the Digital Centre has created another form of mediation and Yin another kind of middleman, providing better efficiency at lower prices. It is too early to know how many Digital Centres like Yin's that provide such on-line job services will open and how many will survive in western China. However, this middleman service which acts as a local platform for digital networking and connections with national or international businesses and organizations has already been successfully run in Yellow-Sheep-River.

While these services do not directly help to boost e-commerce by providing farmers with an alternative channel to sell their agricultural products as this project predicted, it definitely inspired villagers to take risks on investments into non-agricultural businesses such as communications and entertainment services. Main service business in rural China are still the responsibility of the city or county, however the booming consumption in the high street shops of the town

centre has created many new investment opportunities especially in communication services. For example, almost every grocery store now also provides national telephone services at low prices. Also a mobile telephone chain shop has begun to emerge in the region. In the village itself the first local DVD movie shop opened in 2004 and a private internet café began operations in 2005 after long struggles with the licence applications. The owners of these two shops actually were brothers who had been migrant workers for many years and returned to their home to start these businesses. To some extent, the sudden boom of these new businesses is in part due to basic but sufficient communication infrastructures that exist in the village. This infrastructure includes telephone land lines, satellite TV coverage, mobile transmitters, and cable lines. It is also interesting that while almost 50% of the families in the village had a DVD player, telephones and telephone service was relatively unpopular for villagers. This reflects the unique type of communication and entertainment development of 'late comers' and the way in which consumers embrace new products and technology in spite of the fact that older more established technology has been found to be in poor condition and wanting. The use of communication and entertainment media in the village is predominantly related to TV receiving as well as watching Hollywood and Hong-Kong movies on DVD/VCD. The mobile phone use, while increasing for business purposes, is still too expensive for everyday chatting for most of the villagers.

The internet café started to run almost secretly as the licence application was still held pending a fire security assessment. The manager wanted to take the risks "because lots of young students and local lads eagerly wished to use a laptop to

chat with their friends and relatives." Actually, this café once was forced to close by local government due to some parents complaining that the internet café would be harmful for their children. According to the BBC, in 2002 only at Beijing, there were around 2,400 internet cafés which were forced to close by the Chinese government, of which only 30 were reopened in late 2002. (BBC, 2002) Therefore, it was fortunate when the café re-opened as the chances were not good that it would. In the internet café, social networking websites like QQ were very popular with its members throughout China. One time I visited the café on a Sunday afternoon, and found it to be full of young students who were chatting on the QQ or playing online games. There were also some local girls just learning how to use the chat rooms to talk to their friends and relatives. Generally speaking, students there can use a laptop very skilfully though most of their time was limited to chatting and playing rather than surfing or searching for information. Sometimes they would read the online news that was provided by QQ but in most instances the use of the internet was basically for entertainment and connecting with family and friends.

The implication of this booming media consumption reflects the increasing numbers of new media users after the implementation of computer education as well as the affordability of relevant products including cheap online movies, low cost software and free membership for accessing the entertainment websites. There is no doubt that this type of consumption will continue to grow in the village as it has in other areas of China. As Zhu and He have pointed out, the growing penetration of the internet and its capacity to read online news, chat and play online games has become an alternative recreational outlet. (2002). Even

though the success of e-entertainment is occurring, developing e-business or distant hiring opportunities still presents a huge challenge for the village and remains perhaps the most difficult mission for the project. Although the e-phenomena has emerged rapidly and includes an internet café where people can gather to surf, play games and chat as a way to spend a weekend and fill leisure time, it is still a luxury and expensive for most villagers. To use the computer to develop a personal business that uses the internet would be even more challenging. Almost none of the villagers have either a laptop or a desktop computer in their family and they seldom have had the chance to use the computer in the internet café. Basically, the internet culture was not yet popular enough for these budding opportunities to reach fruition after the project was launched or even five years later when this research was being conducted. Yet even with these restrictions, the adoption of new technology continues. As an example, cellular phone users in the village have rapidly increased as it was considered to be a cheap alternative to the use of a land-line telephone, especially for long-distance communication. The computer and the internet have also been accepted by the villagers in part for these same reasons, a cheaper alternative to communicating with family and friends who are far away.

Significant evidences have been found that confirm that mobile technology is the first step for many developing countries to launch communication and economic transformations. (Castells, 2006) In Africa the 'mobile revolution' has already extended to distant business trading and has empowered the individual user to engage in the market without interference by middlemen (BBC, 2004). The same mobile effect can be seen in western China which implies that cellular phone use

may be integrated into the daily life of the villagers more quickly than the computer. This rapid integration may be due in part to the ease of use of the cell phone as well as its affordability when compared to the computer.

In reality, the internet has become a platform for communication between migrant workers. Yin told me that there was already a website run by migrant workers from Yellow-Sheep-River. In this local website, the posting of old memories about hometowns as well as mutual encouragement between migratory workers as well as from home has reflected a similar function for those who were working in coastal or southern factories far away from home. It would be hard to estimate how long it would take for these migrant workers to go back to their hometown and engage in village activities such as starting a business or being involved in local politics. Yin's case demonstrated that the road leading back to home was getting wider and the internet continues to play an even greater role in connecting different villagers across east and west. By keeping distant friends and relatives informed about all that is going on in their homes and towns, the internet is allowing people to maintain their identity. It is the creation of an 'indigenous internet culture'.

## 5.6 Conclusion: Indigenous Internet and the Changes in Yellow-Sheep-River

Due to the time limitations of a fieldtrip as well as the potential for 'elite bias' in interviews, the observations of the pilot village are inevitably full of shortcomings and oversimplifications. However, a clear picture of the transformation of the agricultural village as it integrates with the

implementations of the project has been illustrated through the individual life stories presented. More and more villagers were aware of the importance of the internet culture and more were willing to learn and use the computer as best as they could. The internet was no longer an alien technology for most of the villagers it was something available to all including the village leader, the county teacher, the rural student or even the peasant farmer. Internet cafés, e-commerce and local Digital Centres had begun to operate although they were still only in their initial stage. The villagers' different engagement in accessing the internet has lead to the foundation of an 'indigenous internet culture'.

Throughout my field trips I observed this project continuously evolving from its original design. For example, distant hiring shifted to introducing work opportunities to villagers for eastern companies e-business was alternatively transformed, at least initially, to an online charity service due to declines in social welfare which was especially pronounced in the remote western mountain villages. The modifications in the function of the Digital Centre reflected a different form of internet culture. It acted as the platform for labour exchange that was more efficient than traditional government managed placement services as well as an on-line charity service for national and international support. Those functions were not initially profitable nor did they support a long-term business model for the development of a permanent e-market. They did address immediate needs for basic social welfare especially as previous socialistic protections for the farmer continued to decline as party of China's reform and the initialization of social marketization.

The indigenous internet culture not only passively works as a compensation or substitute for the absent social welfare and education system, but it also helps to match surplus labour to better employment opportunities and consolidates the energy that has been generated in China's recent years of economic boom and innovation. In that sense, the indigenous internet culture in the village seems to be multi-functional and diverse in meaning in regards to education, social welfare, and business. It helps to bridge the village with the outside world and creates a platform for circulating information and inspiring social change.

The indigenous internet culture involves the domestic use of new information technology while still being deeply rooted in the traditional value of education as well as a social structure that has allowed for the emergence of a new gentry society in which 'opinion leaders' exhibit surprising power on local development. It is also based upon the economic transition that is occurring after reform. In the next chapter, I will elaborate upon this indigenous internet from a cultural perspective and examine the context of its formation and how this specific cultural background also generates certain limitations. Cultural context has been indispensable in shaping an 'indigenous internet culture' in the pilot village.

At the time of this research the indigenous internet culture was still limited to student groups and a small number of villagers and its functions were targeted upon the learning of technology, online charity or entertainment. The cost was not affordable for most villagers even though most of the infrastructure had already been developed and put in place by the government. This development

helped to reinforce information control and the middlemen's power position because of the limited, affordable access points. However, the argument of an 'informational gentry' should not be simply described as an extension of power by the existing local leading class, or that the information gap in the village will further enlarge and ultimately will be followed by political/economic development that is not equally available to all. Rather, the indigenous use of the internet lies at the heart of the struggle between different classes and local/national/global relationships, a struggle that I will also discuss in the next chapter. It has become a complicated and long-term information war.

The individual stories described in this chapter reflect how the lives of the villagers have been impacted by the adoption and use of ICTs and how the use of the ICTs by the villagers themselves has created a different culture, an 'indigenous internet'. The villagers have learned the basics of the computer in the classroom and then have practiced what they have learned at the newly opened internet café. Most of them still cannot afford to buy their own laptop or pay the internet monthly connection fee and so e-literacy relies upon continuing availability of public facilities which offer affordable access. It is only as the number of users increase that primary internet businesses like the internet café can become sustainable. This has begun to happen in the village and is a positive sign for the further development of an internet culture influenced by local values, norms and needs.

In China, the term "people's power" has been easily linked to its socialistic propaganda. Ironically, after the reform, "people's power" has stopped being

associated with the Cultural Revolution and rather is now used in describing China's rapid development as a market driven economy. This "people's power" now fuels the economic forces necessary to achieve China's miracle of increasing economic growth without the associated cost of increasing the 'blind shift' of migrant workers and jobless city vagabonds. Experiencing the villager's stories has echoed some of the "people's power" to change. Sometimes the individual effort on which the household labour division has been based has been able to overcome the resource constraints caused by the changing socio/economic conditions after the reform. In doing so a convergence of this new form of people's power and market opportunity has begun which in turn is fuelling a social transition, not only at the village but also at the national level. This chapter described this emerging people's power in terms of an enthusiastic embracing of new technology and innovation as well as the continuous effort in practicing the use of ICTs. In the next chapter I will analyse from a cultural perspective where this people power is originating from.

# CHAPTER 6. INDIGENOUS INTERNET: THE CULTURAL/SOCIAL/POLITICAL CONTEXT AND ITS LIMIT

The increasing availability of the internet, coupled with the implementation of internet training and education programmes created rapid growth in e-literacy, especially among the village's younger population. This project also inspired new types of business, for instance, the internet café, Digital Centre and e-commerce - although it is just in the beginning. With low communication costs as compared to the telephone or personal travel, the use of the internet and ICTs has created a new platform for information and communication resources. Villagers, particularly younger villagers, used the internet to socialize and exchange information, especially with families or friends who had left the village to work or study in the city. The internet has also become a viable way for farmers to market their crops as well as plan for future production. Businesses in support of e-commerce, such as internet cafes, continued to be developed in the village as a way to provide support and access to users. Yet even with the achievements of increased economic and social opportunities, the original goal to transform the village into an active participant in the information society still appears to be far away. In the previous chapter I used the term "indigenous internet" to describe the domestication processes and consequences of differential ICT approaches that are based upon local socio/cultural conditions. In this chapter I want to delve more deeply into how the villagers had been impacted by the project.

Unlike technological determinism, which emphasizes the dominant power of technology on social development, my studies of the transformation of the pilot village do not particularly focus on the technological or economic sector but rather address the transformation process from a political and cultural perspective. The research concentrates on how those factors impacted on and have been impacted by the technological and economic development in the village. The unit of research of this ethnographic study is at the micro level, or what Preston called the 'social shaping approach' of the technology/society/culture relationship. This approach rejects the notion that technological change is an autonomous process, an independent variable causing social change. (Preston, 2001:112) The transformation of the pilot village and the creation of an "indigenous internet" is multi-faceted and dynamic and not simply driven by the implementation of new technology from outside.

Raymond Williams pointed out that technology is a general human property and an extension of human capacity. The innovation of technology is to help facilitate foreseen or desired human practices. Often the original intent associated with the implementation of technology is impacted by a particular social group according to its relative power vis-à-vis other social groups within the society. Yet at many intermittent stages during its development other, less powerful, social groups may adopt and develop the same type of technology but for different purposes, functions or outcomes. In many cases these unforeseen uses and effects are contradictory to the original design of the introducing social group. Ironically, some technologies which were developed under the command of a ruling class or through an investment of a business enterprise ultimately

come to be used by a revolutionary group against that ruling class or by criminals against the business group. (2003: 132-33)

Williams disagreed both with 'technological determinism' and 'a determined technology'. He viewed 'technological determinism' as a questionable notion because it is substituted for real social, political and economic intention. Similarly, 'a determined technology' represented only a one-sided, one-way version of the human process. For Williams, determination is not as a single force, or a single abstraction of forces, but rather a process of setting limits and exerting pressure to change and to conform. It "neither wholly controls nor wholly predicts the outcome of a complex activity." (2003: 133)

Williams rightly pointed out that the development of technology involves a complicated process of confrontation and adaptation by different social groups. The original intention usually cannot be determined by its final consequences. In this sense, the use of ICTs in Chinese society is subject to changes according to the various backgrounds of the groups and their differing objectives. In general these differential ICT approaches describe the domestication of new media technology within Chinese social contexts.

In the third chapter, I outlined the intent of the project leader to introduce new technology into the pilot village as well as the background of third wave development in China. In the fifth chapter, I described different villagers' perceptions of ICTs and the emergence of an "indigenous internet" culture. In this chapter, I will describe further the recent changes that have occurred in the

village from a 'domestic' point of view. I will also describe the historical and cultural factors of rural Chinese society and how they operate within the process of absorbing new technology. I will particularly focus upon the decisive role that long and well-established village practices, practices that have been shaped at the micro level by Chinese cultural norms and social structures, have had on the village's implementation of ICTs. This description is in accord with modernization theorists who hypothesized that cultural values have an enduring power on the process of modernization in a particular society (Weber, 1978; Inglehart, 2005). Accordingly the development of the internet village in China will be shaped by its own social and cultural norms and attitudes which I will show are the main forces driving the villagers to adapt to the new technology and begin the process of social transformation. Remaining true to its own identity and heritage may have tempered the progression of social transformation caused by the adoption of the technology. Yet even as the practice of the technology is shaped by the villagers, so are the villagers' daily lives shaped by the technology. In this chapter, I will explore the effects of culture, from both a positive and negative perspective, on the development of an indigenous internet.

Culture is believed to provide a backdrop that influences norms and behaviours and creates an indispensable framework in understanding the mutually transforming effects of technology and society. However, this does not necessarily imply that cultural tradition is the sole determinant in the domestication of ICTs, or a "determined technology" as described by Williams. Rather, the breadth and depth of technological absorption is driven by multiple

social and cultural forces. With this in mind, the domestication of ICTs in agricultural China is a complex model of social and cultural behaviours that are impacted by change. To some extent, this study will follow the modernization theory of "challenge and response" in describing the villagers' approach to the new technology. I will view the impact of this project on the pilot village as a measured response shaped by local values and cultural practices. The development of the 'indigenous internet' will be considered as a complimentary alternative to the practice of internet villages in Chinese society. However, this investigation dose not attempt to answer the differences between China and the West or between modernization and tradition. Rather, the scope of this study is to focus upon the societal and cultural changes that this new technology has had at the village level by using a series of case study and extant theory.

## 6.1 Confucian Culture, Family Value and Economic Development

Fei suggests that culture is a set of material equipment and a body of knowledge. (1946:2) At the village level culture shapes daily economic and social lives by providing "local knowledge" to simple and complex problems that the villagers have encountered. The village is an agrarian based micro-society poorly described as a "peasant" village. It is a complex culture merging local knowledge with limited material resources to maximize benefits for all. Because the local culture in the village is directly related to subsistence, one would also expect that change would be met with resistance and suspicion.

The term 'villageality' is another way to express such a complex totality of village culture: the material operation and local knowledge as a whole.

According to Fei, it is the farmer who uses the equipment and the knowledge in order to live. Changes in culture are often made with a definite purpose. The transformative culture can best be described as an integration of past experiences, current circumstances and future expectations. (1946:2). A transformative culture requires a common understanding of what is needed so that a programme for change can be established. Once established this programme can then be organized into a collective set of actions to accomplish the goals and objectives needed for the transformation. Such preparatory activities generally take a linguistic form. (1946:3) They articulate a new "local knowledge" by leveraging old knowledge, existing material resources, and future vision.

Yet questions have been raised regarding where values and structures of these village "micro-cultures" originate and how they integrate into the national culture. Micro-cultures have long been a focus in Chinese village studies. Fei (1946) was the first sociologist to explore the social structure of Chinese villages, especially in agricultural areas, using modern social theory and ethnographic fieldwork. Fei's concept of a Gentry society as the basic social structure in rural China was derived from this field work and has been described previously. From this work subsequent researchers began to focus on economic and production issues. This new research concentrated on the theory of the "small-peasant economy" which was used to describe Chinese village society. However, during the Cultural Revolution, these small peasant households were transformed into large collective farms and communes. The Cultural Revolution stopped social research and stringently controlled travel and mobility between

rural and urban areas. After the reform, previous restrictions on travel and research were lifted and a resurgence of village studies, some of which included long-term fieldwork, occurred. Much of this research investigated the process of transformation and how villagers faced the challenges of technological innovations and adaptations within the context of political, economic and cultural change. (Walder, 2002)

Judd stated that the revitalization of the rural household was recognized immediately as having a critical role in village transformation (Judd, 1994). Households have long been viewed as central in rural China since the early years of the rural reform programme. (Judd, 1994: 164) However, the implementation of the Household Responsibility System set the stage for the recovery of the small peasant household economy, though in a completely different context. Croll observed that the relationship between household economy and rural development is reciprocal in the way that current reform policy allocates new responsibilities to the peasant household family. This new allocation system allowed households and villages to create strategies on their own to maximize resources within the context of reformed rural development. (Croll, 1993: ix) The household became the active unit of economic production and consumption in the rural village. The ultimate effect was that the peasant household virtually replaced the collective as the unit of production, consumption and welfare in rural China. (Croll, 1993: x), In addition to economic development, the household (or 'Chia') had become the social and cultural centre of the village. A village became a community characterized by the aggregation of households within a compact residential area which were separated from other similar units

by considerable distance and thus were organized into various social and economic activities as a group. (Fei,1946: 8) Therefore, the chia is the cultural/social/economic basis in the establishment of a village micro-culture within rural society.

Confucianism made an indelible mark on the daily operation of family and community. The Confucian ethics of 'three bonds' recommended the ruler to minister over the father, the father to minister over the son and the husband to minister over the wife suggesting a basic social order within the family and within the society. (Tu, 1999) For over two thousand years, Confucianism has been rooted in rural China. Previously I described how an indigenous internet culture was developed within the pilot village and how the local community acknowledged and received it. Here I will describe what the mechanism of acknowledgment and acceptance was and how it could be traced to the long-term formation of Confucianism in Chinese rural villages. I will cover the role of cultural traditions, which are articulated through prior local knowledge, and how these traditions guided the adoption of new technologies explaining both the economic development and social transformation processes.

Before I begin these discussions a brief background must be provided describing this "Cultural Economy" as well as the debates that this theory has created. Cultural Economy theorists describe economic development and activity from a cultural perspective. (Throsby, 2001: 9). The seminal work of Weber describes the economic actor as a cultural being who acts from 'the capacity and the will to take a definite attitude toward the world and to lend it significance' (Weber,

1949: 81). Weber (1964) examined Chinese civilization including the role of Confucianism as well as its economy from the perspective of his Protestant culture and found Chinese culture wanting as an enabler of capitalism. Weber asserted that Chinese culture failed to nurture the appropriate capacity and will for capitalism.

The explosive economic growth of Asia generally and China in particular over the past two decades has required that Weber's view regarding the role of Confucianism as an impediment to capitalism and economic development be reconsidered. No matter how controversial is the Weber's argument about the traditional Confucianism hampered the Capitalism in China, the relationship between cultural background and economic development has been increasingly emphasized. Harrison further points out that the role of cultural values and attitudes as obstacles to or facilitators of progress have been largely ignored by governments and aid agencies. He also indicates that the integrating value and attitude change into development policies, planning, and programming is a promising way to relive the poverty and injustice problem in most poor countries and underachieving ethnic groups (2001: 296-308)

The variety of cultural norms has acted the important role of 'active agents' in modernizing process is widely examined. Tu asserts that the success of Confucian East Asia in social/economic/cultural modernization without being fully westernized clearly indicates that transformation of non-western countries may assume different cultural forms. It is thus conceivable that countries in Asia and Africa may become modernized in its own cultural contexts. (2001: 256)

More current theory addresses the Asian "miracle" economic growth as being heavily influenced by cultural values that have Confucianism as its foundation which has served as the backbone of spiritual and moral principles that allows traditional society to influence modern society. Two different perspectives have been drawn on the effect of Confucianism in Asian development.

The first perspective is that Confucianism provides a foundation of political and social stability because of its emphasis on faith, loyalty, filial piety, and harmony. Confucianism advocates social order through the maintenance of a hierarchy in human relationships and conformity to prescribed social norms and rules of conduct. In this sense society is constructed by the various bonds of family, friends, and community. Such a form of Confucianism dominates Chinese political ideology. The cultural force of Confucianism is so deeply rooted in Chinese collective consciousness that it continues to provide guiding principles for Chinese behaviours and socialization. (Lu, 2002: 3)

These Confucian value systems also provided the ruling class with a mechanism to achieve political and social stability. For example, Confucianism has been re-emphasized by the Singapore government in recent decades and has contributed to the regions' economic rebirth. The significance of Confucian values in economic development has even been recognized by the Chinese government which ironically now proposes the general learning of Confucianism even after it was denounced and destroyed as a feudal doctrine during the Cultural Revolution. Today the Analects of Confucius has become a best selling book in

communist China with cassettes and DVD teaching Confucianism sold to schools and Universities throughout the country.

The government further spread Confucianism throughout the world through Chinese language teaching schools called 'Confucius Colleges'. The strength of Confucianism is further described by Rita Mei-Ching Ng in her studies of how Confucian values such as "paternalistic authority" and "the psychology of dependency" encourage the quest for material wealth while maintaining a respect for authority and authoritarian positions, a view endorsed by the Chinese government . However, Ng noted that a dilemma facing China as a result of economic reform is balancing the preservation of Confucian values respecting authority and hierarchical relationship with the growing influence of Western individualism. She asserts, "Chinese people will have to embark on another creative transformation, which may involve the flexibility of combining the old with the new values" (2002: 44).

The second perspective is that Confucianism provides a motivational drive and an aspiration for economic development. Researchers indicated that some core values of Confucianism have provided the Chinese with a cultural motivation and mentality which contributes to economic development (Tu, 1999). To some extent the two consequences of Confucianism, social stability and motivational drive, can be viewed as positive factors in East Asian economic development, especially in those countries heavily influenced by Chinese cultural and social values. (Peng, 1997) Due to its relatively conservative attitude towards pursuing profit and aggressive individualism it is still controversial to argue that Confucianism has been an economic driver rather than a cultural barrier in

developing modern capitalism in China. The emphasis upon the 'three bonds' in Confucianism -- ruler/minister, father/children, and husband/wife-- has been condemned as a moral obstacle in the development of individualism. (Chen, 2007:3) For example, in the period of the New Culture Movement of May Fourth in 1919, Chinese intellectuals vigorously attacked Confucianism for causing the backwardness of Chinese society. (Lu, 2003:3) During the Cultural Revolution Confucianism had been condemned and even purged as a subversive tradition and a product of landlord feudalism. (Rosenlee, 2006: 1) Therefore, the argument that Confucianism as an embedded cultural background that supports economic development after the reform is questionable. Some have theorized that the Confucian tradition itself was not primarily oriented toward the development of wealth and power but rather may have offered a setting conducive to the nurturing of such ambitions. For example, Confucian institutions appear to have fostered social and political attitudes that encouraged rapid economic development once the seeds of free enterprise were planted by some other means. (Tu, Hejtmanek & Wachman, 1992: 2)

Some scholars insist that Confucianism acts as a basic norm for people's behaviour and acts as a social/cultural ethic with other fundamental factors such as political economic systems even in communist China. (Peng, 1997) According to Peng, Confucianism has had a two-sided role since 1949. The first he calls 'Confucian communism' in which the Confucian tradition was combined with Soviet-style communism. In this period, Chairman Mao used Confucianism to control every aspect of society but replaced it with Marxist ideology, shifting the loyalty and respect for authority to the Party and to Mao himself. Although Mao condemned Confucianism, he actually knew and

practiced it to mobilize people in politics. Peng also feels that the second way Confucianism can be called 'Confucian capitalism' is in the Confucian tradition regarding work which has interacted with Western-born capitalism to create a socialist economy. (1997: 178-179)

Confucianism itself is also a generalized term to contain the different sets of ideas developed in Chinese philosophical history for over two thousand years. The practice of Confucianism has therefore changed and evolved during different periods of history, amongst different classes of people, and within between different geographic regions. The generalization of Confucianism therefore may not be applicable to everyone living throughout China. However it can be used as a hypothesis and a comparative factor for further investigation into various fields. For example, the distinction in Confucianism between big and little traditions represented by the different practice of intellectuals and peasants has fuelled the debate regarding the universality of Confucianism. (Scott, 1976; Johnson, 1985:7) Thus, the debate about whether or not Confucianism contributes to the economic and technological development of contemporary China should be further examined within specific contexts. In my case studies, family values and the emphasis on education in traditional Confucianism played a very important role in the development of the indigenous internet in the pilot village. However these two values were expressed in a folk-way rather than in the rhetoric of intellectuals.

Family values in the village are not represented in daily rhetoric or in philosophical argument, but rather in the practice of ancestor worship, household

routine, nonverbal communication and, in a more visual form, the family album. According to Kuhn, a family album is not only the visualization of the family record but also allows family members to share and express their own interpretation and memory about this record. For the researcher these memories make it possible to explore connections between "public" historical events, structures of feeling, family dramas, relations of class, national identity and gender, and finally "personal" memory. (Kuhn, 1995) Bourdieu (1990: 19) further states that family photography also serves to solemnize and immortalize high points of family life which reinforces a sense of integration especially in the rural community. (Bourdieu, 1990: 19)

The purpose of my use of the family album was not to explore the formation of family memory and personal identity in the village after reform policy but rather to use it as visual evidence of the re-emergence of family value structures in the Confucian tradition. In rural society, Confucianism is not embedded in 'written culture' but rather is embedded in 'practical culture' and 'picture culture'. In other words to recognize Confucianism and how it is expressed in the rural village one must look to the visual, and not the written, record. Cultural meaning can be elicited and reread from the pictures. For example, the family album of Secretary Chi caught his images in different moments: being a member of party cadres, getting married, becoming a father, playing with his children, and in family vacations and gatherings when his children were growing up. (See video reference 11) These pictures visualize almost every important moment of his life and his role as a family leader and in doing so also reflects the social norms and expectations of the times.

Photographs of entire families not only provide memories but also subtly describe familial hierarchy. This can be discerned by the arrangements of seat and the order of those lined up behind the father and mother. These generational, age and gender differences all follow patterns that follow the teaching of Confucius and Confucian family values. It would have been very interesting to compare family pictures taken during the period of the Cultural Revolution when Confucianism was condemned in far off and remote locations like the village with those taken pre- and post-Cultural Revolution. However there are no such photos remaining, all that are left are some individual pictures both in Chi's family and the other families that I visited and interviewed. Through the pictures that remain of Chi's family one can see that family values that are represented in this visual form reflect order and intimacy. In spite of all of the political turmoil and social upheavals caused by the Cultural Revolution, the family remains a robust social entity. Family values are still adhered to by the family. (Davis and Harrell, 1993)

The cultural meaning behind the picture in these family albums is not restricted to the re-emergence of Confucian tradition in the village. They are also abundant resources for further investigation of personal histories and collective memories of the family and to some extent the history of the village itself. Through the family album one can discern the state of technological development in a certain place at a certain time. In that sense, and given what we know about the village, it is not an exaggeration to predict the future family albums will be in digital form and will be placed as a file in the family laptop or circulated through the

internet between distant family members. It is too early to say whether technological absorption will enhance family values or reduce them. Given that the cost of communicating digitally between family members is reducing it seems reasonable to assume that more and more family pictures, emails and audio-visual footage will be shared and that this sharing will capture and reinforce a family sense and sensibility. When I burned a CD-ROM for Chi and shared it with his families, I witnessed that such a new form of family footage not only brought an atmosphere of fun and joy to the family when they viewed it but also provided a deep feeling of reflection about family, what makes it special, and why it is important. A sense of family is strongly linked to the family album and the feelings that family members have when they view it. The use of digital media to capture the family and then easily and cheaply share it with others, whether they are near or far away, should enhance and strengthen family ties and values even as distant economic opportunities threaten to tear the family apart.

However, even in the remoteness of this village family value structures and practices appear to be changing. In traditional Confucianism, the familial relationships are hierarchical, especially those relationships between parents and children. Children were taught to be obedient to their parents, a teaching practiced today as well though not as harshly or as rigidly enforced as in the past. I asked Qi if he supports his daughters acquiring higher education, he thought for a while and then replied: "I have supported my sister-in-law's pursuit of opportunities for higher education that I missed when I was young." Qi's attitude cannot be generalized though gender differences related to

education opportunities has been eased all over the village. More and more young females are going to school, an activity that definitely deviates from the patriarchal idea of Confucianism which proposed that "Woman without intelligence is a virtue". So, the practice of Confucianism in the villager's daily lives has become complicated and is changing with the social transformation caused by the opportunities available to the villagers. Yet no matter how it will be further challenged and diluted by new ideas about relationships, social openness and enlarging economic networking, at the heart of village life still lies a strong sense of family and family values as described by Confucius.

Davidoff and Hall's studies of middle-class English society and gender relations in the early period of industrialization also demonstrated that family values and meanings were narrated through family albums. (Davidoff and Hall, 1999) Smelser noted that there is a relationship between changing family values in this period and the development of industrialization. (From Davidoff and Hall, 1999: 22) Previously I described the macro theories linking Confucianism and Chinese contemporary development. However the role that family and cultural values have in economic and social development in rural China has not been well researched. Confucian based capitalism as described in the coastal regions of China may also explain the booming family economy and household business in rural areas though additional, more sophisticated, research needs to be conducted to investigate the phenomena. My research in the village indicates that family values as taught through Confucianism not only re-establishes the household as the social/economic foundation, but also helps to explain the

resurgence of family-based economies after the period of reform. In that sense, the return of Confucian based family values into the rural village revives both deeply engrained cultural values and practices but also provides an active code of conduct that is impacting the villagers' daily lives. Moreover, family values and the hidden current of Confucianism in the rural society, once forbidden during the Cultural Revolution, ironically is providing the cultural and mental drive to put the reform policy into practice. To some extent, Confucianism has successfully supported specific communist development plans even in distant rural areas. Family value structures lie at the heart of Confucian teaching and these values also are central to sustainable economic development in the region.

The rapid development of the rural household economy provides the resources for families to send more children to school which in turn increase the economic development of the region and increases in household income. In the pilot village, this combination of educational opportunities and economic rewards should be taken as the material foundation for developing an indigenous internet culture.

## 6.2 Local Enlightenment: Education, E-literacy and the Household Economy

The relationships between family values and social development have been well examined. Parsons (1964) argued that the modern family emerged from urban-industrial societies and are multi-functional playing social, political, religious and educational roles. He placed the family as a key element in the development of social order in the industrial age. (Parsons, 1964) Similarly, family and family

value structures in China have also functioned as the foundation for social order and education. In this section, I will investigate how attitudes towards education in traditional Chinese culture have impacted on the educational expenditure of rural household. I will also consider how this growing investment in education has supported increasing e-literacy and triggered the process of local enlightenment. Finally I will describe the potential rewards to the family from this educational investment.

The relationship between the industrial revolution in England and its transformation of the family has been well researched. Smelser (1959) found that factory production in the textile industry dramatically changed the previous family-community by removing workers from their families. A critical outcome of this change was the effect that it had on the control that fathers had over child-rearing. This control was threatened and ultimately ended in the segregation of adult labourers from the family as well as in the emergence of school systems. (Smelser, 1959) The separation of economic and educational functions from the family resulted in the general argument that the division of function between family, school and factory were a result of industrialization. (Davidoff, 1999)

Chinese culture has long emphasized the value of education, believing it to be critical for one's social mobility and personal development. (Lim, 2006) Education, and subsequently professionalism, is based upon improving ones economic status at the individual, family and ultimately societal level. In the previous section, I proposed a general explanation of Chinese contemporary

development from a cultural, economic and sociological point of view. I will now further refine these perspectives by providing more detailed investigations as to how these factors operate. I will describe how the indigenous internet in the village is intertwined with traditional educational values that created the potential for affluence for members of the household economy in rural China.

Chinese families place great importance on education and spend a large proportion of the family income on providing educational opportunities for their children. (Donald, 2002) According to Liu, the successful completion of a child's education is for a Chinese family not only an individual accomplishment for the child but also a shared accomplishment for the entire family. The desire for every child to be highly educated is a very important part of Chinese family culture equivalent to economic survival, filial piety, ancestor worship, and gender preference. (Liu, 2005: 126) However, in rural areas higher education can often mean family separation as children must leave home for advanced schooling in towns or cities. There are times, however, when the cost for a child to go to school is too much for the family to bear. In those cases the child will give up the opportunity and will go to work for the betterment of the entire family. Then, with the added income, another sibling may get the opportunity to go to school and acquire a higher education.

Earlier I described the harsh economic realities on a village household trying to send a child to school. Usually they cannot afford for all of their children to go to high school or college at the same time due to the limited income and the labour allocations that are needed for subsistence support. In a small peasant

economy household income, including grain allocations and cash, are determined mainly by the number of household labourers that are available, gender composition, and household age. In most instances the more labourers in a family the more work points are earned and the higher the income. (Meng, 2000: 22) In that sense, the opportunity for the children to acquire a higher education must be carefully considered and allocated. The effect of this is that some siblings in the family must stop their education to work which means that many youngsters must leave school at an early age and become labours. This does not stop rural families from realizing that higher education can lead to social upward mobility and therefore they make every effort to allow for at least some of the children to have the chance to go to high school and college. This effort continues even as the costs of education (both in the direct expenses as well as the indirect opportunity costs) continue to increase. (Liu, 2005: 7) In almost every interview that I had with parents, their attitude about their child's education was almost always the same, "I will support them to achieve higher education as best as I can". This common answer reflected the traditional view of the role that the family plays in the next generation's education for males in the past and now for females as well. Now, unlike the past, there are opportunities for females to acquire an education in the village, which is a vast improvement for them. In fact now the gender ratio of local high school students is almost equal which reflects a remarkable change from even ten years ago when, as a teacher told me, "...it was impossible to have a female classmate in high school".

While improving, if one were to look at the educational demographics in China one would still find a large gap between rural areas and urban areas. This is confirmed by examining data from the fifth census which showed that as of 2002, rural labourers had 2.9 fewer years of schooling than their urban counterparts (7.3 years to 10.1 years respectively). The level of illiteracy also shows significant differences between rural and urban areas. In 2000, the illiteracy rate among those 15 years and older was 4.6 percent in cities compared to 6.5 percent in towns and 11.6 percent in villages. These differences were due to the fact that few people in rural areas went beyond high school. Only 8.5 percent of all eligible children were educated beyond high school, a rate of education roughly 35 percent lower than in the cities. Rural areas have also been slow to achieve universal nine-year compulsory education. As of 2002, 15 percent of the rural counties failed to reach the goal, a failure that affected 108 million people in poor and remote rural areas or roughly 9 percent of the total population. In spite of these disparities, the literacy rate in rural areas has steadily increased and the improving household economy will continue to be reflective of reducing illiteracy which will continue to confirm the direct connection between education and economic well-being.

The theory concerning the relationship between literacy and economic development is not new. (Street, 2001) In my research I have also found that increasing literacy combined with family's value of education and commitment of household resources to support the acquisition of higher education for their children has contributed to the rapid growth of e-literacy and subsequently e-commerce in the village. This dynamic combination of a re-emergence of

enthusiasm for higher education and increasing family income committed to support the acquisition of education has provided both the cultural and the material basis for the embracing of the e-literacy project by the villagers as well as the development of an indigenous internet.

Yet the question still remains as to whether increasing e-literacy will help to improve the rural economy while reducing the information gap between the rural countryside and the urban areas. My research at the village has yet to find strong evidence to support the notion that the e-literacy project will provide economic opportunities to the villagers in the form of distant hiring within the next ten years. Most of the informants in this study maintain the belief that the project will lead to a brighter future, what I called in chapter four a 'mythical enthusiasm' about the new technology. This passionate support by the informants of the e-literacy project as well as their children's education is not just purely emotional hope for the future but also reflects a rational, though optimistic, calculation about the value of the investment of education in a family. Therefore, the explanation of the educational boom in the village, and the estimation of e-literacy reward, is in great part culturally based and intertwined with further expectations of social and economic development in the rural area. It is complicated, ongoing process.

This calculation of cost and benefit has also been found by other researchers who have identified in post-reform China a relationship between educational investment and its reward. (Meng, 2000; Hannam and Xie, 1996) They have found that the educational investment impacts the household labour allocation

that rewards the household for committing to this form of investment, or as described by Hannum and Xie (1996) a return on human capital. Meng (2000) further argued that rural agricultural labour markets are becoming more competitive and that there is evidence of increased rewards to higher valued human capital being found in changing wage rates, a circumstance that was not the case in the pre-reform era. In the rural non-agricultural sector, wages are more related to experience and firm tenure, therefore the results of the benefits related to education are less clear. However, for those finding jobs through market channels, education is rewarded. Meng also found that the average educational level of household labourers contributed positively to household income. (p.22) The gradual liberalisation of the TVEs labour market has allowed high-technology firms to hire more appropriately skilled employees. The education level of employees has, therefore, had a significant impact on the labour productivity of these high-technology firms. In turn, such productivity is rewarded. (p.52)

In the pilot village, the increasing household income and the implementation of this project have already had a positive effect in families committing further investments in education, especially into computer training. Although the actual reward for such investment has not yet been established in the TVEs labour market, the increasing numbers of local young adults who have higher levels of education and are now more employable at the Convention Centre, as well as in coastal industrial factory areas, will further enhance the belief in the value of education and e-literacy.

Besides the economic reward, the political and social implications of educational investment are also becoming significant. As discussed previously, the rapid growth of e-literacy in the pilot village might have helped to ease traditional gender inequality regarding educational opportunities as well as upon social status in the rural areas. Moreover, a process of local enlightenment both in terms of identity formation and a sense of community based upon previous traditions is not only growing but is also being empowered by the economic and corresponding social development in the region.

The internet will also be helpful in building an identity for villagers who work outside of their hometown. For those who must leave their homes to work, a diaspora develops when living in a different host working place. The internet can help them find ways to adapt to the new culture while still maintaining their local identity. Their access to the internet not only keeps them updated about their hometown but also provides them with emotional and moral support from family and friends as well as useful information for survival abroad. In that respect, the internet contributes to maintaining their local identity even as more and more villagers leave their homes as migrant workers.

Some scholars even argue that the expansion of e-literacy can create an environment in which a civil society can emerge. Bollier points out that e-networks will change the previous architecture of power and culture (Bollier, 2003). From a societal perspective, the increasing e-literacy and on-line use in the rural village indicates an emerging civil society which may have the potential to bring political changes more directly. Although it is still too early to

predict the political impact, the e-literacy and local enlightenment provided by the internet may have implications for societal transformation going beyond changes in the stratification order.

In conclusion, after the reform, the rural household (Chia) has been transformed into a multi-functional unit under the support of a responsibility system and a re-emergence of the Confucian value system of the family. Chia on the one hand is a successful basic work unit in the household labour system which has increased the income potential for the family. On the other hand, Chia supports the education of the next generation to learn computing and computer knowledge even though it cannot currently afford for every sibling to acquire a higher education. The economic return for e-literacy is expected for the households of the pilot village, and the increase in the number of rural on-line users implies further political and societal transformation in the future.

Yet one must still consider these predictions as potentially overly optimistic and so caution must be maintained. For while traditional Confucianism may provide a deep cultural justification in the domestication of ICTs in the pilot village, a Confucian based culture also promotes values that may possibly limit and hamper economic/social 'modernization'. I will next discuss these internal and external limitations that traditional culture and the global internet framework may have on the development of indigenous internet.

## 6.3 The restrictions of the Indigenous Internet

### 6.3.1 Cultural Limitation on the Indigenous Internet

In this chapter, I have shown that the indigenous use of the internet in the pilot village is based upon traditional cultural values and local practices which I called villageality. Village practices are rooted in an agrarian based society, a connection to the soil and culture that provides a mysterious, almost spiritual, drive in the development of internet capacity and capabilities. The recent economic and social transformation at both the local and national level has also helped create the infrastructure necessary for implementing e-education and further developing an alternative internet culture in China. While the potential for development is great there is still an imbalance of power in terms of both the level of understanding and the level of sophistication between the local indigenous users and the global internet player.

Most researchers of indigenous use of the internet or the domestication of media technology tend to investigate and understand the process and practice of how 'foreign technology' is transformed into 'domestic technology'. Some researcher have criticized and worried about the negative effect of domestication of ICTs in China. While traditional values may help adopt new technology into a domestic workplace these values may also limit the functionality and purpose of using the technology. Lim pointed out that Chinese parents seem to regard ICTs as an important tool for their children's social and economic advancement. (Lim,

2006: 196) Zhao and Murdock found that advertisers have capitalized on the Chinese belief that education is integral to a child's development to the point that even computer games and devices have been marketed as 'learning facilitating machines'. (Zhao and Murdock, 1996:206) ICTs have inevitably been linked to a child's future with the guarantee of future upward mobility because ICTs have become so important in building one's guangxi network and enhancing an individual's social advancement. (Lim, 2006:196) For Lim, the domestic use of ICTs in Chinese families restricts and compartmentalizes a child's leisure time. They therefore have a high regard for the potential educational achievement that ICTs may have, a belief that is rooted in traditional values. Therefore, the use of ICTs in social advancement, in building a guanxi network and in facilitating social inclusion emphasizes the growing importance of ICTs in China today. The domestication of ICTs is thus 'set against the unrelenting forces of modernization and the enduring values of tradition'. (Lim, 2006: 200) The effects that cultural traditions have in the process of technological absorption are two-fold, acting as a catalyst in some instances and a barrier in others.

To some extent embracing the use of ICTs as a vehicle to achieve upward social mobility seems inevitable, for clearly proficiency in the use of the computer and the internet within Chinese society seems essential in order to become competitive in today's global economy. This is particularly true in the highly competitive urban areas of the country. It is only natural to assume that the distant rural areas of the country also wish to adopt these new technologies in the hope that they too can escape the hopeless despair of poverty. Yet even while

the use of the internet creates the hope for upward mobility and increased individual freedoms, the patriarch and authorial tradition in Chinese culture also helps to legitimize rigid surveillance of the technology. In 2000 the Chinese government began to actively seek to control domestic internet development by creating its special Internet police at both the national and provincial levels. It was estimated that at the turn of the century there were 30,000 internet policemen involved in surveillance. (BBC, 2002) There is no doubt that the indigenous internet in the village is still strongly influenced by this 'visible hand' of the Chinese government especially in regards to the flow of political information.

At the village level this influence was seen in the types of available websites that the students could surf in the computer class, which were chosen and controlled by the teacher. The access and flow of information that was used in internet learning sessions was strongly filtered and restructured by authorities for security reasons. The private internet café has also experienced harsh intervention from county government for various reasons. Based upon this, it seems that free and open access to the internet will not be soon realized in China. The optimistic belief that the internet can be used in a subversive way by internal social groups against ruling classes or capitalists is also unrealistic. Yet it is also questionable to say that the development of an indigenous internet will be determined by the manipulation of the Chinese government or by the distant influence of global internet development.

In many ways, the internet has become a new hub of information exchange as well as a new battleground for confrontation between global players, national governments and local groups. The indigenous internet culture or the localization of information is a new way of enhancing a villager's position in the negotiation process of this on-going internet power struggle. In that respect, the emerging indigenous internet culture in the pilot village is not yet 'a determined technology' which is only shaped in a one-sided way by the government and the project leader's version of the information village. The development of an indigenous internet is more likely to follow along the lines described by Williams (2003), a process not wholly controlled by a single entity or individual but rather a process of complex activities that concurrently expand and contract technological formation. It is from this point of view that I will discuss the limitations of indigenous internet development in relation to the power of the 'distant on-line' world.

### 6.3.2 The Strength of the Distant On-line World in the Development of an Indigenous Internet

Previously, I argued that the use of ICTs has been domesticated within the pilot village and that such an 'indigenous internet' interacts with traditional culture and present social structures. However, this explanation and the initial success experienced by the villagers may not be as predictive for future internet development, both in the pilot village and in the other member villages.

In the future, the indigenous internet can either become more autonomous and sustainable or may be soon marginalized and relegated to a trivial position on the

global internet map. In my research I addressed both possibilities and have described a view that the development of an internet village will be determined not only by the aspiration of the villagers themselves but also by the development of the internet throughout China on a national level as well as on a global level.

As previously described, the Chinese government uses its visible hand to make the domestic internet development "controllable". Yet the 'invisible hand' behind the global internet market is also powerful and will have a role in determining and controlling local internet development and information flow. In the studies of the digital divide in China, Cartier, Castells and Qiu (2005) have voiced a similar argument although their research focused only upon the 'information have-less' which for them were the social, economic, and political disenfranchised millions of rural-to-urban migrant and laid-off workers in the city areas. Their studies found that there is a rapid growing market for low-end service providers as well as stratified patterns of information access and utilization within such "have-less" populations. They witnessed the formation of 'trans-local networks' of communication technology among the urban underclass. Relatively affordable technology and low operational costs have played an essential role in the commercial viability of working-class ICTs. Therefore, the "have-less" have emerged as a new informational class clearly recognizable in the ICTs marketplace. (Cartier, Castells and Qiu, 2005) However, how the media technologies can benefit the poor will be ultimately determined by how they are put into use and how power and wealth are

distributed throughout the process, particularly between the information haves, have-less and have-nots.

The emergence of the 'information have-less' as a consumer market does not mean that they have gained full urban citizenship with cultural and political power. It is true that 'have-less' users, and particularly providers, now have more control over parts of the hardware and distribution system but the technological pursuits of the 'have-less' are seldom connected to the state's modernization goals. As a result, there is little institutional support for development of low-end digital media. (Cartier, Castells and Qiu, 2005)

In the remote agricultural areas of western China the peasant villagers in the hierarchy of information classes are usually classified as 'information have-nots' which is a description even worse than the 'information have-less' in the cities. If the information power of 'have-less' are described as marginal to the state's goal and market priorities, these 'have-nots' in the rural area are even more marginalized in participating in the development of an information society. Although this project has provided a public access point through member school availability, internet access in the household is still unaffordable for most villagers both in terms of connection fees and hardware/software costs. Even as the use of the computer among the rural young has increased rapidly, the demographic diversity and geographic scattering of the user populations still undermine the influence of the 'have-nots' to influence decision makers to shrink the information gap. Therefore, the local indigenous internet in the pilot village still relies upon decisions from distant powers for its existence.

A similar marginalization of remote rural societies' difficulties in acquiring access to the information power structure exists not only in the practice but also is reflected in differences in theoretical discourse. Although the emphasis on the local practice and the domestication of ICTs has recently been noticed, the previous theory of an information society inevitably has been grounded in certain views and practices. In chapter one and three, I analysed this project from a global perspective as to how the use of ICTs can alleviate poverty as well as the local context of Third Wave development in China. The social impact of ICTs can be traced back to McLuhan's theory of the global village in which the world has been turned into a village through the use of electronic mass media. (1992) In that sense the global village, though even now only an imagined possibility provides a description of how an older segregated international society is integrated into a global network through the linkage of new communication technologies. Electronic communication collapses the time-spatial barriers between human communities, enabling people to interact and live on a global scale. Such imagination has been integrated into plans to reduce inequality and poverty as described in the Millennium Development Goals and the World Summit of Information Society. For Hassan (2004), this combination of trying to bring the market and new information technologies into every sphere of social and cultural life on a worldwide scale reflects the convergence of neo-liberalism and the ICTs revolution. (2004:24) ICTs have allowed for the interconnectivity of regions, communities, and individuals and enabled these groups and individuals to participate in trade, production and consumption within a networked society. (p.25) With the diffusion of ICTs, especially the

internet, this theoretical optimism has culminated in a "neo-developmentalist" outlook that views the spread of digital media as a panacea for poverty and inequality (Mosco, 1996: 130).

It is beyond the focus of this work to challenge the political implication and the potentiality of social solutions provided by the adoption of ICTs other than to add that in the Western version of a global village and network society, the 'local' has been imagined and determined by the powerfully distant 'global' market and politics. It is inevitable that the 'third wave' of the ICTs revolution was generated from the West and has triggered a serial process of global expansion especially in the developing countries. These developing countries have experienced both the challenges and the benefits of information flow, boundary penetration and cultural change. As Hassan points out, the diverse and pluralistic 'local' has being challenged and changed by the predominantly homogeneous 'global' as determined through a Western view and ideology. (2004:25) In terms of a geographic 'local' being rapidly merged into the global information society, the technological optimists, such as Alvin Toffler and Nicholas Negroponte, emphasize the process of decentralization and the individualization of social space. Alternatively, technological pessimists such as Jacques Ellul [13]stress that a global information society may accelerate the process of centralization and scale extension. (van Dijk, 1999:27) Dan Schiller also criticizes such expansion as a new form of digital imperialism as has been seen in the way in which the ICTs' dominant power groups can colonize other

[13] Jacques Ellul's critiques of technological determinism and the expansion of global information society are proposed in 1950s and 1960s, which pioneers the later reflection on the social impacts of ICT development.

territories through computer-mediated global networks. (2000) According to van Dijk, ICTs are more advantageous for advanced and intelligent forms of central control than old technologies. (1999: 222) The networks through these ICTs have centres, nodes, and relations between them, in which the dual structure of centre/marginalized and included/excluded are embedded. (van Dijk, 1999: 221) Lash describes that this new mechanism of exclusion and inclusion has been spatialized into live and dead zones, as well as tame and wild zones within the global information space. (2002: 28-30) The ideological response by the Chinese government to internet development reflects, to some extent, Schiller's scepticism towards foreign information invasion which generates a response that involves rigid control of freedom of speech.

My research considers the social and cultural issues related to the process of 'challenge and response' of ICT expansion within the pilot village. I have found that it is neither the smooth replication of Western information societies nor the non-negotiable controlled development managed by the Chinese government. Rather, it is a practice of this project that on the village level development is inevitably affected by the global ICT environment and government policy. To be sure China has benefited by being a late comer and its huge internet population will allow the country to become another dominant power in global ICTs development. For 'remote' villages in western China, the same optimistic argument about the construction of the internet village and leapfrogging agricultural areas into the information society is not as plausible. Easy access to the internet in this area is still unrealistic in terms of facilities, skills and language capability even with the progress that the villagers have made as a

result of this project. It is an over-expectation to assume that the villager can catch up to the high-speed competition found in the information society given the relatively limited resources and much lower position the village has in the global ICTs community. As my research progressed, I found a falling-off in the level of support for the project from the sponsoring company. This was in part due to the unexpected death of the primary planner of the project, Wen, and because the company had slowed down additional personnel and hardware investment in the expectation that the village was ready to be more autonomous in its development. This decision was made from distant managers and was contrary to the villager's expectations of more future support. Yet even in the face of these changes it would not be reasonable to classify this "indigenous internet" as merely a bubble in the life of the village and therefore unsustainable. The strength of commitment that can still be seen in the exchanges between the villagers and the outside continues to describe great potential for the use of ICTs in the village's future development. As long as this commitment and resolve remains, the "indigenous internet" should be sustainable. The indigenous internet in this sense no longer belongs just to the village users but has become a larger network, with more and more online support from distant sources which continually shapes and refines the medium and the people who use it.

## 6.4 Conclusion: Alternative Community Internet and People's Power

The cultural explanation of the development of an indigenous internet not only helps us to understand its past success but also the future challenges facing this project in terms of growth and sustainability. No matter how much future

influence this project has had in the social transformation of the village, this case has provided a unique perspective in understanding the development of alternative practices of community internet usage in rural China.

In the previous sections, I discussed how the cultural factors in rural China such as family values exist and operate in order to support both the household education investment and this project. Economically, the internet and e-literacy tend to have increased both social and economic capital for the villager. Although both the education and internet investment for the agricultural households in this village were substantial and burdensome, the potential benefits both in the present and the future appear to be high especially as the village enters into a more market driven economy. It is these future benefits which will be shaped by social context that drives the peasant family to eagerly support their children's schooling and training in how to use the computer. This is true even if the rewards are not as immediate as compared to the same investment being placed in developing further the established agricultural resources of the village. Yet it is the compatibility with traditional Confucian based values that has made the commitment by the villagers to this investment so powerful.

The use of ICTs for the domestic villager goes beyond just economic and social advancement. The internet has become a way for villagers to acquire information not previously available to them, to build viable identities for themselves within the world scene and to escape the social hardships that life in the village can often give to them. In that sense, the adoption of the internet is

facilitating the development of individualism which has been historically repressed by traditional Confucianism and yet is linked to the driving force of modernization and democratization. It can be stated that the domestication of ICT's are integral to personal empowerment and an enhancement of an individual's economic status. It is essential though that one also assess and interpret such domestication from other perspectives including the larger political/social context. The pervasive adoption of new technology in communication by villagers has the potential to both reinforce and alter their traditional values. It may also be used to allow for a transition and adaptation of a new, more outwardly focused environment.

Most importantly is the continuing recognition that the village and the villagers are forever connected to the soil. As Fei describes 'only those who make a living from the soil can understand the value of soil'. I have found that the adoption of ICTs and the formation of an "indigenous internet" have not caused the villagers to lose their identity or the connection to the soil or their homes. Rather, it has provided a platform that strengthens their identity by reaching out to those villagers who no longer work in the village but, out of economic necessity, must work abroad. The village identity is therefore not limited to a small geographic region. Further, the soil that connects the villagers has also gone beyond simply the earth in the fields. The internet, and most importantly the "indigenous internet" of the village have created "virtual" soil which connects all who have lived in the village back to the village. It provides them not only communication but re-connects them on as frequent as a daily basis with their heritage and their identity.

The development of an "indigenous internet" in the pilot village indicates that traditional culture can be compatible with modern new information technologies. The combination of passionate attitudes towards the internet and the rational allocation of household income into education investments have rapidly increased e-literacy among the populace, particularly the young, and has created an alternative use of ICTs in community practice. Although such initial success in the shaping of an indigenous internet culture has been subject to modifications that are based upon traditional values within the village as well as been marginalized by limited resources and support from the outside, the ICTs that have already been adopted have been transformed into an indispensable resource and an integral part of the villager's daily communications with the outside. The implications of this transformation process are complicated both in terms of the emerging on-line population in the local community and the local community's participation in ever larger regional and the global communities. It is uncertain whether these peasant users of the internet will retain their local identity or will coalesce into a larger community, perhaps a new peasant information army. If so what will this new internet society and peasant army do to the Chinese network society and what will it look like? The answer relies more and more upon practical observations as well as additional theoretical reflection. In the concluding chapter, I will further assess the future impacts of ICTs in the village and explore the implications of such developments both practically and theoretically.

# CHAPTER 7. CONCLUSION: TOWARD LOCAL KNOWLEDGE OF ICTs

*It will take years, possibly even decades, to determine whether these government or non-government attempts to address the problem of the digital divide will actually be fully implemented, or whether they will succeed. The question remains, will the advantages of membership onto online communities be limited to those who can afford it at market rates or will it someday be affordable to all of the people of the world? Is this a fundamental social inequality that must be addressed on all levels of community, society and nation-state, or is the idea of a "digital divide" simply a marketing device used to describe fundamental economic disparities in consumption of technology products? If our concern as a society is for the welfare of our poorest citizens then investments in food and shelter for the poor should have a higher priority on taxpayer money. Or perhaps, as Silicon Valley libertarians claim, the wealth creation of knowledge communities can create a rising economic tide that will lift all boats.*

*Rheingold, 2000: 379*

## 7.1 Introduction: Summary of Research Finding

In my research I investigated a project that was attempting to alleviate poverty in remote Chinese villages through the implementation of computer education and e-commerce. I wanted to explore not just the economic changes that the village was experiencing but also to consider this complicated process from different perspectives and levels. Because in my point of view, this process is not only about how to bring remote Chinese agricultural villages into the information

society, it is rather about providing a short cut for millions of Chinese farmers who are struggling with severe uneven development and facing even more harsh challenges in the globalization of China. Therefore, the study of the project in the pilot village involves a global/local dimension and finally should be concluded by describing the villagers' action to cope with these upcoming changes as well as to theorize about this process.

In producing this thesis I viewed this project as part of the emerging discourses regarding global poverty and the optimism that has been generated about how the use of ICTs could rapidly enhance economic development in these regions. I contextualized the project within the national background particularly focusing on the issues surrounding the booming Chinese economy, trans-national entrepreneurship, the Third Wave development in China, and the enlarging gap between different regions and classes. I wanted to consider how these factors are intertwined in the practice of this plan. Through my field trips to the pilot village Yellow-Sheep-River, I described the actual process of transformation that occurred in this small agricultural village due to the impact of this project. As part of these field investigations I focused on the individual stories of seven villagers who were of different social status, gender and age. I tried to understand how they viewed their future "internet village" as well as how this new form of their village influenced their hopes and dreams about their personal futures. Through their interviews I found that the use of the computer and the internet had given them hope for themselves and for their families. This hope for a better future developed a commitment by the villagers, which was sparked by the introduction of laptops into the local school and to become e-literate by

diverting limited village resources into computer-based education. Beyond increased resources in computer education I observed in the three years that I visited the village the creation of a privately owned internet café in the main street of the nearby town centre. Within the county a digital centre was also established under the co-operation of the project's Taiwan-based headquarters and through the use of local technicians. Clearly this project has advanced beyond being a novelty into something real and potentially sustainable.

In an attempt to explain how this could happen I considered both the prevailing theory and empirical findings of other researchers in describing how the introduction of ICTs into a remote, technologically unsophisticated area of western China could not only survive but could also potentially thrive. I found that this evolving "micro-culture" in Yellow-Sheep-River, while potentially new to the region, was still grounded in Chinese history and culture. These played a dramatic role in how this new technology was accepted and then shaped into an indigenous internet. Therefore, the development of this internet culture in the village provided an example of an alternative articulation of global ICTs under the influence of local and national Chinese traditions and culture. Although this new phenomenon is still far from the expectation of building up an internet village within ten years, the achievement of the project has moved forward, step by step, and has been boosted by the aspirations of the villagers themselves.

In short, this project was launched under the belief that the use of ICTs could alleviate regional poverty. It was developed within the context of Chinese economic and social backgrounds and implemented in a pilot village far

removed from the more thriving economic areas of China. As it developed it was merged with the local culture and was then transformed through this domestication process to become an indigenous internet culture that is unique to western China and yet able to successfully interface with the global internet community. Its success can, to some extent, be explained through the introduction of computer education programmes within the pilot village. The embracing of these programmes contributed to re-establishing the value of education as a way to enhance the value of the village's human capital which in turn offers both future rewards as well as social advancement. From a more practical perspective, the indigenous use of the internet provided the villagers with an affordable communications platform to contact the outside world and in doing so served as an online charity to acquire resources that they desperately needed. The use of the internet also provided an affordable way to socialize with friends and family in other parts of China as well as establish an unprecedented route to collect information and enjoy some sort of escape through online entertainment. This indigenous internet has extended to agricultural e-business with the pioneer experiment of the local digital centre. While both are still in their infancy together they describe a more immediate and practical potential of the internet. To some extent ICTs enabled and expanded economic and social development in the village. Yet it is uncertain whether the momentum that has been generated with this indigenous internet can help this agricultural village leapfrog into a full fledged member of the information society within the next ten years.

The village's use of the internet (indigenous internet) is supported culturally and infra-structurally. It is predictable that the local users will increase rapidly both in terms of population scale and sophistication and that the use of the internet will be further multiplied. However, ICTs may not provide a short cut or a way of leapfrogging into the information society because the future of the indigenous internet and village life will still be embedded in the contemporary political and economic development of China and the world. However, the increasing social energy generated after the reform has been so powerful at both the national and local level that it seems clear that the use of the internet and the creation of the indigenous internet will continue and be sustained in some form.

## 7.2 Further Assessment: Indigenous Internet, Social Transformation and Poverty Alleviation

Many governments and global agencies have recognized the growing issues associated with inequitable ICT access and have provided programmes that have been aimed at addressing these specific needs within nation states. However, some scholars have pointed out that there is growing evidence to suggest that many of these programmes have failed to deliver on their desired aims and that societal and community-based disadvantages resulting from uneven societal adoption of ICT continue to exist and grow (Castells, 2000; Howard, 2007).

Castells rightly has described the difficulty of making a social judgement of the impact of ICTs on the transforming of society because it is such a recent and ongoing process. (2000: 385) Compounding this difficulty is the inherent

complexity of dialectics between the new media and social transformation. In this sense, how to assess this ongoing process as well as the implication of this process in the social development in China is still uncertain. It is also uncertain whether this case is providing an alternative way of considering the relationship between communication technology and human society especially in this remote agricultural village. Whether it is in extending previous views of both the media and established users, or providing an opportunity to examine new approaches to and new combinations of theory building, evaluation, and practice this research has expanded our understanding of the power and effect of ICTs in social and economic development, especially in poor, rural communities with little previous exposure to this new technology.

Acknowledging such complexity and uncertainty, my research followed the on-going dialogue regarding Third Wave development in China. It contextualized the debate regarding technological optimism and social shaping theory in a Chinese context and traced the actual transformation process of the pilot village. In assessing this project three important issues must be considered:

1. The role that culture plays in attempts to bridge the "digital divide" and alleviate poverty.
2. The benefits of late-comer adoption of ICTs which has allowed for more rapid modernization but still has not alleviated surplus labour pools or gaps in income. This has led to the internet becoming the new hub in the struggle for power between the global planner, the national government and local groups, and has even led to confrontation between different peasant classes in the village.

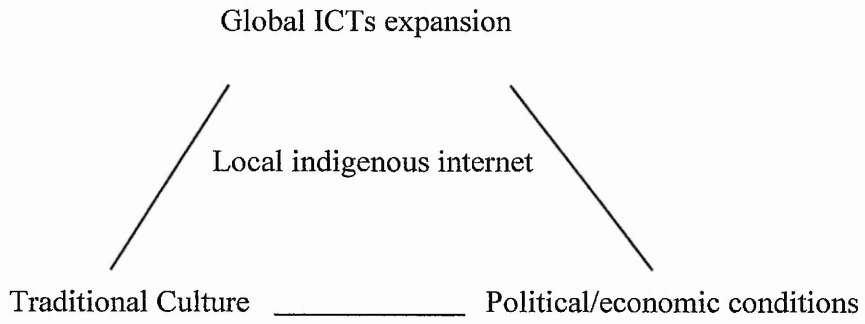
3. The effect of ICTs adoption on identity, attitudes and social behaviours.

In my view, the development of an indigenous internet has occurred within a complex background of social, economic, political, traditional/cultural influences. Global expansion, the power of the state, and local development are intertwined in this project and have impacted the nature of indigenous use of the internet even in a small, remote village. Therefore, this ethnographic study in the development of an internet culture in the village has actually provided an observation into new territory, especially the power struggle in information capital and the reconstruction of global/national/local relationships in the digital era. To some extent, this research provides a unique example of how a village reshapes itself in the internet era. Although it is still an initial finding, I will conclude this investigation by viewing this development from an alternative perspective in which the aspiration and social energy of the village played a major role in its socio/economic transformation and technological domestication. I will also discuss how the internet helps to mobilize and channel local momentum into the larger national and even global network. While it is very difficult to make specific long-term predictions regarding the ultimate consequences of this transforming village and the project, it has become clear that the potentials that this project has provided will not be soon forgotten or abandoned.

### 7.2.1 The Framework of the Indigenous Internet

It is my personal belief that the transformation of the village into an internet village will be much more difficult and take much longer than the ten years that

the project leaders predicted. Yet to some extent a metamorphosis of the local culture by the internet has not only begun but continues. The villagers view it as a kind of powerful cultural capital resource that will "probably" benefit their economic condition in the near future at least for their young. In that sense, most of the families willingly 'invest' in this cultural capital by finding ways to afford sending their children to school so they can acquire a higher education. In the previous chapters, I pointed out that just a few years ago such an increase in educational investment would have been unlikely because of the rational calculation of cost to benefit. The land responsibility system has helped to re-shape this calculus by providing ways to enhance the family economy. Perhaps even more important has been the revival of the education-value ideology which was a vital tradition in Confucian thinking. The indigenous internet emerges from the triangular relationship between global ICTs' expansion, traditional culture influences and domestic political/economic development. As the following diagram indicates:




My research verifies that the emerging indigenous internet culture has steadily grown in the pilot village under the support of such triangular interactions. Although there are concerns that still exist (see chapter 6), the use of the internet

in the pilot village has led to a process of domestication and expansion. As my research focus was only upon the pilot village, this finding cannot be generalized to the other villages that have membership schools. It is uncertain whether the same sort of development of computer learning and e-phenomena is occurring there. Most of the villages in this project to some extent share similar cultural, political, and economic backgrounds. However the development of an indigenous internet in different communities should be considered within the context of each village's reliance upon these societal back-grounds rather than taken as a universal process of replication as the project's planner initially described. My research was limited as I was not able to conduct long-term observations at these different villages. The only opportunity that I had to observe another membership village was Xi Da Tan. It is a village near Yellow-Sheep-River, but unlike Yellow-sheep-river most of the villagers in Xi Da Tan are Tibetans. I visited the Xi Da Tan junior high school twice and both times was only able to conduct short interviews with the teachers and the students. The computer learning courses and the use of internet in the classroom were very similar to the pilot member school in Yellow-Sheep-River. As yet there are no internet cafés in Xi Da Tan nor a digital centre. However, on the campus there was a telecommunication classroom with a satellite receiver and recorder which were donated by a Hong-Kong entrepreneur. This classroom can link and download educational programmes produced by government authorities which can then be used as audio-visual texts for students. In the interview with a student, Wang Zen-Chiao, he told me that he is not much interested in learning the Tibetan language or culture but rather fancied studying English and the computer. "The area of English and the Internet cover is so immense." (See

video reference 12) Such an attitude to some extent reflects a similar influence on the project's different membership villages as well, especially among the younger generation. It will be another ethnic and cultural background that will shape the way of using the internet there and subsequently a different indigenous internet culture will be developed in these other membership villages. The one consistency in the development, however, has been the positive attitude towards the computer and the internet that has been widely formed even under the implementation of different projects and relevant infrastructures. The booming household economy in western China, no matter through agriculture or pasturage, is the most important material foundation to support the development of the indigenous internet culture in these different villages. However, the Internet is not a cure-all or a miracle panacea for every development problem. It is not the solution for every village or community. As Day pointed out, the solutions to social problems cannot fully rely on the implementation of technology because 'technology might assist in conceiving and implementing solutions but it will not and cannot create the solutions by itself.' (Day and Schuler, 2004: 217)

As for the development of the indigenous internet as a way to shrink the information-gap and as a tool in poverty alleviation, there is yet insufficient evidence to prove or disprove a relationship due to the fact that the scale of internet use and e-commerce is still restricted, even in the pilot village. The problems of rural poverty and inequality cannot be solved by the development of an internet village but inevitably can only be solved within the complicated and

larger context of China's social development. Basically, the peasant economy has been relatively stable and most of the farmers, even in remote areas, do not have to worry about starvation nor require outside assistance in order to survive. The responsibility system has helped millions of western Chinese peasants out of extreme poverty within the past two decades. Today after the reform the number of people who live in poverty has been significantly reduced. Yet in western China this survival has in many instances been at bare subsistence levels and the hope of the village still reflects first and foremost a deliverance from the miserable conditions of most Chinese, especially when compared to the growing populations of the new urban middle class. To some extent, I agree that there are still serious problems of inequality that exist in contemporary China and it might become even worse after further globalization efforts such as China's entering the WTO. Therefore, the outcome of this project in the pilot village is not only about the achievement or failure of a technological plan, but is a microcosm of the thousands of remote villages in China and throughout the world and how they transform themselves so they can compete in today's global economy.

The positive fact is that another wave of transformation in the village has been triggered by technology allowing for more open access to the outside world. The first outcome of this access has been through on-line charity, which has benefited a number of students who needed financial assistance for their education and for other villagers who needed financial assistance to support health and public health issues. The internet café on the campus and high streets has also facilitated more opportunities for computer learning and use among the younger generation. Literacy and e-literacy have rapidly increased at the same

time. While the adjustment from an outsourcing centre to a small digital centre does not indicate that the original project has failed in its search for indigenous ways to develop sustainable and feasible e-business in the pilot village, it has shown that development opportunities do not always go according to plan.

The Convention Centre, in the project leader's original idea, was to function as an outsourcing and distant-hiring base for the long-term development of digital industries throughout western China. Now, the Convention Centre is being run as part of the hotel providing services for visitors rather than serving as the cornerstone for industrial development for locals. It helps shape a spatial platform of interconnection between villagers and outsiders and creates more working and training opportunities for local youngsters, but it has fallen short of what it was conceived to be.

The strategy of distant hiring has also been changed to one of bridging surplus western labour to work opportunities with eastern companies. This is contrary to the idea of physical immobility of an internet village. It is not surprising that this service has been extremely successful due to the huge surplus of young available labourers in the village. Even some contract trainees of the hotel were persuaded to join this new project in response to the unfulfilled job guarantees at the hotel. In fact the introduction of a clearing house for surplus labour to eastern companies ranks as an important policy accomplishment for the local government and therefore the local government periodically gathers the young workers to send them to their destinations.

However, such unwilling adjustments to the original plan, though based on reality, cannot prevent a potentially profound impact on the social structure within the village. The village has inevitably moved toward the direction of an informed society in which villagers will be expected to make more production decisions for themselves and will have greater contact with markets under the increasing influence of e-commerce. Croll (1994) argued that this combination of necessity and opportunity will result in a plurality of information exchanges. In Croll's view, the absence of market mechanisms in pre-reform communist China led to the condition of a lack of information exchange between production units. Therefore, the elites or cadres, had a monopoly on information from the outside, and utilized the use of information as a form of "gift economy" by which they secured political control. The process of informatization in the village will enable the farmer access to novel forms of information and reduce the level of dominance by elite groups, by providing alternative routes of mediation with the outside world. (Croll,1994: 126) Whether this process will allow these agricultural villages to "leapfrog" into a more advanced information society remains to be seen. My research showed the process is on-going and will inevitably continue to challenge the previous social/political structure in the village.

### 7.2.2 Rural Transformation: from the Agricultural to the Informational? Eradication of Inequality?

The internet has been successfully implemented and domesticated for indigenous use in the pilot village. However, it is still unclear whether this transformation

will lead the way in constructing an "internet village" or will be just a digitally based bubble of optimism in the lives of the villagers. Will this transformation trigger a kind of leapfrogging in development quickly transforming the village from an agrarian based economy to an information economy and an information society? China's coastal areas have benefited most as a technological late comer in both industrial and information development. The critical question for the rural western regions is whether by adopting and implementing new technology they can also experience such rapid growth and development in the next two decades as the coastal regions did in the previous two. No single study can give a definitive answer. In part this is due to the fact that China, particularly the government, is an enigma in its attitudes regarding the use and access of the internet, being at times encouraging and optimistic about its value and at other times discouraging and pessimistic. Change in the country is occurring at breakneck speed and in unpredictable ways, a simple conclusion as to what the future may hold is therefore impossible to make. My research echoes most studies about China's future development whether those studies consider the development from a micro or macro perspective.

Past studies in China often occurred in a twilight zone in which virtually all of the conditions being studied were too unstable to make any reliable predictions. A lot of research in contemporary China has been conducted using questionable methodology and while there has been much improvement in both methods and data reliability, research still lags behind the rapidly changing Chinese environment. What is encouraging is that unlike anytime before, improving methods and increasing availability is making ethnographic research in China

both viable and rich in value. Already much has been learned about how China has revitalised itself economically and in doing so is beginning to remake itself socially.

The achievement of the reform policy and the responsibility system and its role in lifting millions of Chinese farmers out of poverty is in itself a remarkable example of work and perseverance. After the reform policy, the villagers have been responsible for their production according to new contracts between themselves and the communist government. Unlike the collective farms during the radical Cultural Revolution, this land reform gave farmers incentive to efficiently grow their crops and then take them to a comparatively "open" marketplace. Although the scale of the agricultural market in these remote areas was relatively small, the pace toward creating a market driven economy was steady and further enhanced by the whole environment of economic prosperity especially the success of the Village and Township enterprises. Many scholars have given credit for this remarkable growth in agriculture in the 1980s to the land responsibility system which shaped the first wave of agricultural modernization of reform era. (Lin, 1988)

According to Lin (1988), it was the farmer who provided the impetus to shift successfully out of collective agriculture and away from state actors. Lin argues that there was no effective state monitoring of individual performance under collective agriculture due to the decentralized nature of farm work. Thus it was incentives at the societal level, rather than shifts in policy per se, which

accounted for increases in agricultural productivity following de-collectivization.

As the economy began to grow, the immigration worker from the village became a critical element in improving rural household incomes both directly and indirectly. In the 1990s peasant income grew but at rates much lower than their counterparts living in the cities in industrial areas. The income gap between city dwellers and villagers was triggered in part by surpluses in agricultural labour that ultimately moved into industrial areas. Although cheap migrant workers have helped to build China into an industrial centre for the world and, through the sending of money back to their home, enhanced the economic well-being of families in the villages, it has created a problem of social inequality which continues to exist and grow. (Murphy, 2002) In two decades almost 300 million farmers have been removed from their land and have looked elsewhere for their livelihood.

While this structural transition has created challenges for the peasant worker it has also generated opportunities, for now these workers are no longer limited to agriculture but can venture to other parts of China where the economy is more vibrant and the income from work more lucrative. More and more villages in western China, including the pilot village of my research, have experienced this shift of surplus labour to the east, especially after the restriction on migration had been eased in recent years. The shift to the household responsibility system enabled households to allocate labour autonomously. Families did so in a flexible manner, shifting labour from agriculture, which barely provided subsistence wages, to industry as these non-agricultural opportunities presented

themselves due to Township and Village Enterprises and then back into agriculture when demand for labour slackened. A flexible allocation of labour was beneficial to growth in rural industries and also meant that industrial growth was never achieved at the expense of agricultural production. In the two years of my field research I observed significant opportunities brought from the outside that helped to shape an agricultural/migratory labour economic structure in the region. The farmer still grows crops to make the most use of the land allocated to him and to guarantee a minimal livelihood. However the surplus labour force moved to industry in other parts of the country to create additional family income as part of China's cheap labour force.

The social impact of village migrant workers, as described by Murphy, was that "migration and return are strategies used by individuals for pursuing goals that are formed through continuous socialisation, and migration itself becomes one of the factors in the socialisation process." As a consequence, migration-induced social changes often defy classification as either modern or traditional. Rather, they "represent the adaptation of existing social practices to new contingencies, many of which are brought about through migration" (2002:18). According to Murphy (2002), migration brings about at least three kinds of change in the countryside. It intensifies conflicts over resources among family members, sometimes even within the same household. It attenuates the political control of local cadres, whose influence usually does not extend outside of the village. Finally it precipitates land transfers and the redistribution of both the income from and the burdens of agriculture.

My research to some extent supports Murphy's argument about the impact of migration on the hometown, especially in the effect of income increase of household and this is exactly acting as the economic basis for the investment of computer education in the village. On the other hand, this project has attracted and enabled more youngsters and returning migrant workers to stay in their hometown. The increasing repatriation of workers and the re-emergence of their local identity after their sojourn in the cities have also had the potential of further transforming rural society. The construction of the information village at Yellow-Sheep-River is part of such a transition of agricultural China.

Today these extra opportunities offered by the implementation of the internet, as well as the farmers' own hard work, have improved their daily lives. However the reduction of social welfare in agriculture, when compared to before the reform policy, makes the peasant not only responsible for production on his land but also his own welfare payment as well. In Yellow-Sheep-River, most of the families still cannot afford the huge expenditure of health care if some family member is seriously ill and needs long-term hospitalization. This is the reason why there are so many posts on the Yellowsheepriver.com website related to asking help for a villager's ailing family. And it is the microcosm of the reality that the peasant's livelihood in the whole of China is still faced with hardships even as China's economy grows. The WTO agreement has also affected agriculture by undermining existing domestic markets that are now faced with competition from cheap foreign products. Because the speed of agricultural modernisation in China is hampered by small scale land production, a vicious cycle of low income and increasing social welfare burden continues to plague

the peasant farmer. (He, 2005) This resulted in increasing income gaps between coastal and inland regions. New riches grew in coastal regions, but poverty persisted in inland areas. Overall, income inequality grew considerably (Hauser & Xie 2001).

He mentions the problem of the marginalized peasant and the vulnerability of the small farm. (He, 2005) Similarly, the humble internet users in the village cannot avoid the same sort of marginalization in the global ICTs structure. Smallness and remoteness will create more vulnerability in the villager's material lives even in the virtual world. It is estimated that there are 33.7 million Internet users in China of which only 1.9 percent are peasants or farmers. The domestic digital divide is thus characterised nationally by a few high-tech islands which stand isolated in what amounts to a vast technological wilderness. (Chase and Mulvenon, 2002)

While the current government's vision of the 'Third Technological Revolution' is not remotely comparable to the economic adventurism of Mao's Great Leap Forward, it can be argued that a high degree of caution should be exercised when it comes to assessing the impact of China's digital 'leapfrog' if the true problems of the digital divide are not to be overlooked. (Giese, 2003: 30). High costs remain the root cause preventing rural dwellers from gaining access to the Internet. Another contributing factor to this digital gap between the countryside and the cities is the low level of education in rural areas. The Internet in China still represents a medium that is primarily for young and affluent city dwellers (Giese, 2003: 42).

An indigenous internet cannot automatically shape a powerful collective strand of nodes in the information network if it is just a tiny atom in the global village. It appears that another vicious cycle for internet development is the way in which material power interlocks with virtual power. In Yellow-Sheep-River some policy and investments have been cancelled and delayed for this reason. Therefore, in response to this economic reality the project has adjusted and has currently become a platform for appeals for charity as well as for labour-migration. This means that the ten year plan for building an internet village will also need to be changed and this change will probably be dependent upon eastern industrialisation and how best to benefit from it. This is the reality in the Chinese political/social/economic context. However the development of an indigenous use of the internet in the pilot village has created a 'guerrilla-form' of internet nodes like the smaller scale digital centre and the internet café. Although they are not strong and lucrative enough to leapfrog an agricultural village into the information society, nor will they provide lots of jobs for local labourers, this internet culture has already become infused into the villager's daily lives and its influence will become more and more important in the future.

In other words the possibility of leapfrogging from an agricultural village into an information society should be examined within the special context of rural transition that has occurred over the past several decades. Its focus should be upon the potentiality and the nature of an indigenous internet culture in the village. An approach that specifically addresses the evaluation of the impact of ICTs on the development of rural areas therefore should be linked to the long-

term economic and social context of the Chinese contemporary transformation. The internet has a particular advantage in this area because it is associated with increasing social capital and household capacity that is necessary for such an empowering process. The internet has been presented and has been perceived as a shortcut for further capacity building and social enhancement for the villagers. The question still remains, what is the future of the indigenous internet culture in the longer term?

### 7.2.3 Internet Village: Identity and Information Network in Intranet China

The indigenous internet in Yellow-Sheep-River has been shaped by powerful governmental control (as described in chapter 6) and the village hierarchal social structures (chapter 5). This project has tried to break the vicious economic cycle of feast and famine that plagues Chinese agricultural villages both today and throughout the past. While the use of ICTs to empower these villagers seems plausible, ironically the technology is itself limited by factors beyond the control of the villagers such as the local and national political power structures as well as the global community itself. To put it simply, the future of an indigenous internet culture in the village will still be dependent upon, and therefore limited by, external politics and social structures.

In the pilot village, the development of computer education and the use of the internet are under the control of the project technician, school teachers and of course, the government's visible hand which regulates the registration process, access fees and covertly monitors internet usage. It is understandable that the

initial development of the internet in the village has been dominated by the elite and the government which have assumed the role of the previous Gentry class though in a different form. There are multiple factors that will determine the further development of this information medium. First of course will be the development of the basic infrastructure needed to access the internet as well as the corresponding costs that will need to be charged back to the village users. Beyond the infrastructure, general facilities will need to be established that will allow for access to those that cannot afford personal computers. Finally of course will be a corresponding increase in standards of living provided by the internet that will create incentives to labourers and skilled workers to build the infrastructure and facilities as well as the users to adopt the internet as an integral part of their economic livelihood. These factors have coalesced to create the beginnings of an indigenous internet in the pilot village and have begun the process of transforming the rural intellectuals and entrepreneurs into the information gentry of the village.

As the information power in the village increased there has been an accompanying investment in human capital and an increase in economic development. Yet these changes within the village have not eroded the state's power in controlling information access as the Chinese government continues to keep tight control of the internet's activities. The development of the indigenous internet in the village therefore is more dependent upon the macro political and social conditions in China than the micro economic conditions within the village. It is a dilemma for the construction of an internet village because, at least in the near future, there will always be strong external control that will

supervise unnecessary, or unsecured, use of the internet. This is the great paradox for while the government has been responsible for creating this open communication medium it has also been equally active trying to control and in some instances even close it to general users.

There is ever greater concern that continuing censorship of the internet by the Chinese government will ultimately undermine the development of an information society in China. The pilot village will become a very unusual form of internet village if it is confined within the firewall of the intranet infrastructure currently existing in China. However it is more likely that this project will create many more internet villages and more open access which ultimately could generate harsh responses from the current Chinese government to control of information flow. In China the ".cn" suffix to an internet address has more meaning than just a domain name and location. It also describes the control and the dominance of Chinese government in the access and use of the internet. A dominance and an intrusion into the digital information society that is totally different from the western version. As I mentioned in previous chapters, it is the dilemma between the idealistic vision of the internet and the realistic application of it. Perhaps the more important concern should be not on whether the current Chinese version of the internet fits a perceived universal vision but rather how the internet as it is practiced today in China will hamper the further development of an internet village.

Yet further development seems inevitable due to the increasing use of the internet in the village as well as the reality that more local youngsters leave their

homes to go out to work. This dynamic combination will continually enlarge the information network between villagers in different parts of the country. As I mentioned in chapter 5, there currently is a website launched by the migrant workers from Yellow-Sheep-River which has definitely helped to create increasing information flow across different regions of the country as well as contributed to a process of identity formation between villagers.

In the following sections I will reflect on how the ICT plan has triggered a fundamental transition of village life and has created a new platform in which insiders and outsiders can exchange information, ideas, product information, as well as how it has shifted the flow of the labour force. Although the scale of the changes in the village has fallen behind the structural or the substantive transformation that the planners predicted, the atmosphere within the village has drastically changed from what it was five years ago. The energy of the village has been revitalized. It has been mobilized and transferred into a new direction. It has morphed from a traditional rural society into a modern technologically-driven internet village. Only time will tell if a working model of an agricultural utopia in this era of the ICT has begun to be developed.

## 7.3 Remaining Issues and Problems: Collectivity in the Information Era

The indigenous internet in this case has provided a unique example for third wave development in rural China. This has been accomplished through a combination of top down direction of global ICTs expansion through the project implementation and by a bottom up reaction resulting in a local domestication of

information technology within a political, social and cultural context. In this sense, the development of an indigenous internet culture in rural China accelerates the process of convergence. It gathers different 'local energy' through information flow, material, and workforce mobilization. It also involves the process of social transformation, a process that I have directly observed in the pilot village. Technologically, the rapid information flow facilitates local downloading and uploading of information that is not restricted by geographic distance. Although the information flow between local and 'powerful distant' sources is still restricted and for that reason creates inequitable and hierarchical relationships, the internet still tends to 'leverage' these encounters to the benefit of the less powerful. (Rheingold, 2000: xix) According to Rheingold, the new information technology 'has the potential to bring enormous leverage to ordinary citizens at relatively little cost--intellectual leverage, social leverage, commercial leverage, and most importantly, political leverage.' (2000: xix) More people are becoming aware of this leverage and are learning how to use it. As they learn, local regions and individuals, including low-income even disenfranchised citizens, will become more and more active in generating information energy into internet space. (Mele, 1999) In China, the rapid growth of the on-line population raises questions about what will be the nature of this internet 'leverage' as well as in what form the energy generated under such a huge scale of users will assume. Finally through this growing mass of users, who will emerge as significant actors in shaping and influencing this information flow? Will it represent the people's power in a different form? Will a Chinese on-line army numbering in the millions soon emerge in internet space? If the massive reserve labour army from rural areas has successfully helped to build China as

the world's factory, will these new internet users change the whole landscape and power in the present internet space? Perhaps it is time to consider not just how the internet will change China but also how China will change the internet. A change in the internet that will occur through different modes of information mobilization, under different conditions of increasing economic forces and shaped by the powerful aspirations or governments, companies and individuals. The question was first raised in my thesis title 'The impact of ICTs in an agricultural village' as to how an indigenous internet will engage the internet space, both in terms of more and more rural internet users as well as in the different ways of using the technology. In the conclusion of this section I will consider the Chinese internet culture in a more collective way in which the internet serves as a conduit of information energy flowing from cultural forces and from "people's power".

### 7.3.1 People's Power in the New Mode of Communication

Chairman Mao said that the direction of the wind in the world had changed. In the struggle between the socialist and capitalist camps, it was no longer the West wind that prevailed over the East wind, but the East wind that prevailed over the West wind.[14]

The word 'wind' in Mao's speech represented the convergence of cultural and political power that strongly influenced the entire world. Mao's argument clearly and metaphorically described his view of how the Chinese communistic

[14] Extracted from Mao's remarks to Chinese students in Moscow, 17 November 1957.

revolution would change world history, a history that had been dominated by the West or in his terms, the 'west wind'. It was a romantic rhetoric in the heyday of the Communist Revolution but it also expressed the desperate wish of millions of Chinese who had suffered greatly for centuries as a result of the impact of Western civilization on China.

Ironically, Mao's political and collective mobilization of the Cultural Revolution has not created such an 'east wind' prevailing over the whole world. It has been the booming economy in China that has occurred after the reform that has given a more realistic basis for believing that an 'east wind' is blowing. Yet the east/west distinction has become relatively out of date in an era of globalization. The traditional notion of state, region and local geographic boundaries as barriers of entry is rapidly being viewed as unrealistic when one considers how these borders are being penetrated by global networking and the massive flow of materials, immigrants, and information that is occurring on a daily basis. (Castells,1996; Urry, 2000) Therefore, the emergence of a superpower from an open-door China cannot be described as merely an 'East wind'. It is interesting to note that Mao's use of the word 'wind' coincidentally could be used to describe the 'floating' nature of globalization as well as the Chinese view of 'wind' as it relates to the power that makes society change and move forward. Even more importantly was Mao's description of a rising East which, no matter how over-simplified or unrealistic at that time, foretold the current economic development in China and the increasing people's power rising up from the East. In other words, this expectation of a rising Eastern power occurring through political mobilization has been transformed into a different type of economic

development and a growing information society that has been able to adopt established technology from the West to leapfrog obstacles that would have impeded growth otherwise. In China, such a transition has been described as a market economy with a socialistic nature. In some ways, it is a combination of individualism and collectivism, market competition and state regulation. (Oi, 1999; Szelenyi, 1996) Yet incorporating Mao's thinking of an 'East wind' into the rise of an indigenous internet culture in rural China requires a re-thinking of the relationship between computer-mediated communications, cultural forces, mentality, and collective power.

The internet tends to change previous modes of communication and helps to circulate information on a large scale and in real time. (Castells, 1996) The emergence of an indigenous internet in rural China in that respect will benefit from these new modes of computer-mediated communication both in terms of speed and scale of information exchange. The rapid growth of internet villages in western China soon will become nodes of information energy gathering and disseminating into internet space. As I have previously argued the domestication of the internet in rural villages involves a process of cultural support as well as the aspirations of the local farmers. Therefore, the indigenous internet and the accumulation of information energy will not only reflect a technological, or an economic, benefit but rather will reflect the convergence of cultural forces and spiritual powers.

On the one hand, the internet accelerates the flow of information and distances traditional communities. On the other hand, traditional geographic land and

space in agricultural China has provided an 'anchor in the flow' of the real territory for virtual communications. In this sense, research into an indigenous internet cannot ignore the process of re-territorialization no matter if it is related to a physical body or a geographic location. One should think of the internet from the perspective of a human-media interface and a spatial-media continuum rather than just as a kind of new media with a single nature of virtuality. In my case studies, the material location was relevant to the development of the internet in the way that physical space in a rural village can generate a sense of security as well as a 'hometown identity' for the indigenous internet users working in different cities. The economically poor rural village turns out to be a rich resource for identity formation and for the aspirations of villagers. It provides the ontological security of working within a solid spatial basis. As Tomlinson argues, it would be a mistake to view ICTs as only providing the tools for the extension of cultural horizons; rather, they could be 'imperfect instruments' that maintain some sense of security and location in the de-territorialization of society. (Tomlinson, 2001: 17) In the first chapter, I criticized the concept that geography influences poverty in developmental discourses. Here, I try to point out further that locality can be a powerful node in a virtual network and can generate powerful information energy through indigenous internet use. Geography in that respect is not a disadvantage for development as previously thought but rather is an advantage for the indigenous internet culture for it provides a connective bond between villages and distant village members. Locality itself is the indispensable basis for indigenous internet culture. In that respect, villagers are not really 'poor' because there has already emerged different sources of energy (virtual, social, cultural, and natural) for

them to draw upon. They can have more 'spaces' for their daily life and search for the harmony between farming and the virtual world.

### 7.3.2 The Double Face of Information Power

Castells proposes the notion that the development of interactive, horizontal networks of communication has induced the rise of a new form of communication over the Internet and wireless communication networks. Insurgent politics and social movements are able to intervene more decisively in the new communication space. However, corporate media and mainstream politics have also invested in this new communication space creating inherent conflicts and competition for power and control. (Castells, 2007)

According to Rheingold (2000), the technology that makes virtual communities possible has the potential to bring enormous leverage to ordinary citizens at relatively little cost. This leverage assumes many forms and have been identified as intellectual, social, commercial, and most importantly, political. Yet the technology will not in itself fulfil these leveraging potentials. This latent technical power must be used intelligently and deliberately by an informed population. More people must learn about the internet and its leveraging power and then learn how to use it, while the media is still comparatively open to all and freely accessible so that the media can live up to its potential. The odds are always good that big power and big money will find a way to control access to virtual communities. (Rheingold, 2000: xix) The internet is still out of the control of these special interest groups in many fundamental ways, but it might

not stay that way for long especially in places such as China where the political leveraging power of the media is feared.

Rheingold also points out that telecommunication companies, television networks, computer companies, cable companies, and newspapers are simultaneously searching for a position in the "home interactive information services industry." (2000: xxvii) Corporations are emerging to invest in the infrastructure for new media in the hope that they will make profits out of it. This newest media convergence and the development of the infrastructure in information era will inevitably create a huge impact on people's daily lives. (2000: xxvii) The tendency of 'commodification of community' and 'commercialization of cyberspace' has been concerned by social critics of virtual community. (2000: 389)

> There is no guarantee that the potential power of many-to-many communications will make a difference in political battles about the shape of our future. Indeed, the odds are against a media-literate population seizing the opportunities the Internet offers. But I believe the opportunity for leverage is there, waiting to be seized, ignored, or mishandled. The hegemony of culture, power, and capital is a potent force to be reckoned with. But if we don't try to make a difference in the way tools are used and people are treated, we definitely won't make a difference.
>
> Rheingold, 2000:391

Rheingold rightly points out the double-edge of internet, while the Net enables the users in many ways; the potential for totalitarian abuse of that information web is significant. Enthusiasts who believe in the humanitarian potential of

virtual communities, especially those who propose electronic democracy as a potential application of the medium, are well advised to consider the shadowy potential of the same media. (2000: xxxi)

The development of the indigenous internet and the increase of e-literacy in the pilot village has on the one hand enhanced 'leverage', that is the social capital of the villagers; while on the other hand, created opportunities for further government surveillance and commercial penetration into this virtual space. Moreover, the indigenous use of the internet and its local information flow online could be commodified into a profit calculation which for Rheingold is a deviation from the public spirit of Net. (Rheingold, 2000) In this sense, the development of an indigenous internet is similar to the double-edge sword described above and that of course is the dilemma. This is the fundamental reason why researchers are puzzled by the "double-face" that is associated with Chinese contemporary development.

The development of contemporary China is intertwined with so much positive and negative forces. In China, the whole society seems to have been propelled by these tremendous, uncertain forces which could drive them toward either a better or a worse way of life. The story has just happened and is only two decades old. The outcome is still uncertain and the ending is still a mystery. For example, most scholars agree that China has enjoyed huge economic success over the past two decades. After a long period of difficulty, China clearly is the most dramatic case of economic growth in modern history both in terms of rates of economic progress, and the rapid improvements of social development.

However, according to Hutton (2006), Chinese growth is built on an unsustainable model requiring impossibly high levels of export growth largely driven by assembling half-completed imported goods. Most capital accumulation is driven by the state and while labour is cheap and plentiful it is also plagued by low productivity and by low quality. There is as yet limited technical innovation as well as an absence of an appropriate business culture or legal structure. (Hutton, 2006)

In my opinion, any discussion of where the development of China will end up must begin with a macro level debate of Chinese political economy after the reform and ultimately return to the need for further academic investigations to try to discern this future uncertainty. Yet again and again, the question returns to the 'China complex' or 'Chinese dilemma syndrome' the way in which one phenomenon triggers another that may be in the opposite direction of development. This phenomenon seems always to make what was thought to be known trivial, inefficient, and insufficient. When a society, even a small one such as the pilot village, undergoes such rapid and significant transformations, social conditions are such that the daily way of living previously is no longer viable even while the new structure of rural life is not stable yet. That is the reason why transformation studies struggle with such uncertainty and ambiguity.

What happens in this case study is important; it is still possible that the internet can enable indigenous use of ICTs in the Chinese agricultural villages. It is equally possible that the greater political and economic powers will ultimately control the internet, ration it, and use it for surveillance and benefit. These two

aspects of the impact of ICTs on the pilot village that my research has identified have unfortunately not been fully explored in previous internet studies. In my research, I found that the internet has become a new hub in the struggle for power between the global planner, the national government and local groups, and has even led to confrontation between different peasant classes in the village. I also found that the importance of the mentality and materiality associated with information development should be considered in conjunction with the technology being adopted. Such an approach involves new ways of thinking from different perspectives and is worthy of further investigation. This research has set the stage for studying these questions through actual experience in the pilot village, although there is still not sufficient information to adequately answer these questions.

## 7.4 Conclusion: A New Village -- Internet Village or Millennium Postponed?

The indigenous internet can be described as the domestication of ICT use by groups of people for various purposes under different political, economic, and cultural contexts. Yet this local autonomy in technological adoption still operates within the larger structure of global market forces and national environments. In many ways, this indigenous internet lies within competing information flows battling amongst themselves for local, national, and global space. It triggers further conflicts between informational centralization and decentralization,

autonomy and surveillance, grass-roots and commodification as well as increasing the divides that exist amongst different social groups.

Although, as Castells and Rheingold note, this battle is ongoing, in the pilot village, the developing indigenous internet is relatively powerful in terms of the cultural and infrastructural support it receives. The online platform has been successfully created which enables villagers to mobilize resources from outside and facilitate their use for education, socializing, entertainment, contingency, e-business, online service and identity formation. In many ways, the development of the village's indigenous internet is just beginning and still remains marginalized in terms of its scope and scale. However, such marginalization is advantageous due to the fact that it has managed to allow the village to shy away from the more stringent political control or market penetration of other internet communities in China. Therefore, information continues to flow and the different uses of the indigenous internet gain more autonomous space and function as the networking and empowering platform for the villagers develops, expands, and strengthens. Nevertheless, this emerging platform of online people's power still has to negotiate with the local information gentry and political leaders.

The development of this indigenous internet by no means could be recognized as a leapfrogging progress from an agricultural village to an information society. On the contrary, it is culturally and historically rooted. It's a reciprocal relationship between local and national economic development and is particularly significant in this case study. Contrary to the period of the Cultural

Revolution, the physical mobility of residents of the village has been increased by the easing of restrictions on rural to urban migration and by the booming economy in the coastal areas. This migration and flow of labour forces have contributed to the village development although the gap between rural and urban is continuously enlarging. Village incomes have increased and economic activities in both production and consumption are now more active. Under this project and the infrastructure of ICTs in the village, villagers can now contact the outside world and exchange information, ideas or products through the internet.

The internet project in the village created a new platform allowing the villagers to link with the outside world in a much more affordable way and at much faster speed. Indeed, the internet and the emerging indigenous use of the internet has empowered the villagers to be more open through the virtual network and has created an affordable method to contact the outside without physical migration or through a controlled media reception. The long-term history of enclosure of village life in geographic remoteness with the subsequent market marginality may have come to an end. Villagers are now engaging in more information consumption and reception and will have more production capabilities in the near future. Such engagement and awareness of information power will lead to even more profound changes in the villagers' daily lives and the construction of new village micro-cultures in contemporary China.

The greatest implication of this project therefore has been making the internet available to the villagers as well as to a potentially large portion of China's rural

population. This development is still under control of the Chinese government and therefore may never become another production tool for the farmer as the project predicts. E-commerce and distance-hiring may not be as lucrative in this internet village, yet the engagement of rural villagers and their young with the internet world does mean something important for the villagers, for globalization, and for the internet itself. This process may or may not dramatically change the world, but it will change it never the less.

The future development of the pilot village and thousands of villages in western China still relies on the larger social, economic, and political network of China. The internet on its own will not automatically serve to provide the ultimate solution for bridging the gap between east and west China, empowering villagers under the social/political restriction of the existing regime and creating a sustainable way of life for future agricultural China. It requires an effective system to channel social momentum, ease contradiction and shape local identity. The internet is only a part of that system construction. The burning question is how these new village micro-cultures will develop and will these new social systems change political and economic systems at the national level so as to accommodate the increasing people's power and boost social energy. In that case the argument that poverty can be alleviated on a local and global scale may not be too unrealistic. It can go beyond plausible optimism and technology determinism, and can develop a culture that combines people's empowerment, technical innovation, and energy generation while enhancing social welfare and political stability.

As I mentioned in the first chapter, mainstream thinking promotes an agenda of using ICTs as an empowerment process applicable in the economic and social development for almost all of the world's developing countries. This project presented a similar version of that agenda. These views and practices have been disseminated from the United Nation's MDGs to different NGO agencies and have reached many developing countries including China though caring little for the micro-effects that these ICTs may have on the people that they are supposed to be aiding. My research has been concerned with the cultural importance and the local difference that occur in the process of ICTs domestication and I have found that these considerations are as important to viability and sustainability as national acceptance and implementation. Therefore, future studies of ICTs projects will need to concentrate not only on 'trickle down' effects but also on effects from the 'bottom up'. For different cultural backgrounds will decisively impact the absorption and assimilation of ICTs as well as the effectiveness of these ICTs in social transformation. My research has followed critical and ethnographic attitudes towards the impact of ICTs project in the pilot village. Although I have tried to analyze this process from both a discursive and practical level in order to shape a thorough critique on this specific case many crucial questions still remain. This was partly due to the fact that the time frame for this study was not long enough for more detailed discussions and observations about the impact of ICTs in rural China. Also the ever changing power relationships regarding the use of the internet in China added a local and national political context as well as complexities in interpretation of results. For example, if ICTs development represents a process to transform the previous socio-cultural structure (the former Gentry society), could peasants really transcend or

cooperate with village cadres and local intellectuals to gain more autonomy through an internet based direct link with outside markets? Or would the indigenous internet more likely benefit previous dominant groups because they have more power in terms of policy making and information control which in turn would only further marginalize the peasant population. Yet another question and concern is whether ICTs tend to trigger the development of civil, more open, societies as many scholars have suggested and if so then how will China respond to these potential challenges to its existing power structures. Will China allow for even more open access or information flow in the face of the rapidly advancing economy or will it introduce even more repressive controls on these peasant populations access to the outside world? Can an internet village develop only socially and economically without the accompanying political empowerment and if not what will be the future of Chinese version of this information society?

Certainly it is not a purely utopian dream to consider that someday in the remote western areas of China a peasant farmer will have the ability to manage their agricultural production on the farm, and then be able to go home and check e-mail or conduct e-commerce through the internet. This kind of life may not leapfrog the Yellow-sheep-river into Western information society nor is it a perfect harmony between the natural landscape, peaceful peasantry and effective virtual exchange of the internet. However at this moment it does not look so unreachable and unsustainable especially within the Chinese context and under the efforts and practices of the villagers themselves. This process has led the villagers into the global engagement of information contact and the experience

of an unprecedented displacement of time-space extension (Giddens, 1991). The internet has paved the way for a traditional agricultural village to exist in a floating, networking society where the process of production and consumption are no longer restricted by certain geographic boundaries. Therefore, this new village has been formed on a remote plain in western China is somehow like an 'Internet tribe' or 'globally floating village' in terms of the information flow it can reach. Yet such a transformation is post-traditional rather than de-traditional, because the villagers are still rooted in the land and in their agrarian lifestyles. They have a solid home territory which is surrounded by abundant natural landscape. In this way they will increasingly take advantage of the richness of their land, their aspirations, their future opportunities and the cultural identity that gives them uniqueness, value and identity. In essence as they become more residents of the virtual community they will do so under their terms and conditions, they will do so while still retaining their traditional culture and values, their natural material and their territorial community.

Yet residence in this virtual community with all of the opportunities that it may offer still comes at a price. Some villagers must still sacrifice some of their children's education to be able to afford for others of the family to continue in school and develop the skills needed to survive and thrive in these new virtual communities. They will need to find the money to buy a private laptop, to pay the basic connection fee and the monthly bill for using internet. They are also likely to be marginalized as a peripheral node of the internet lacking autonomy and dominated by the central hegemonies. The villagers have already benefited from internet access to the outside world, and will keep their advantages in

geographic remoteness so as to preserve a traditional way of life in its natural surroundings.

The entry into the information society has not always been smooth for the villagers and challenges will continue. Marginalization due to social and/or economic inequality as well as technological backwardness will always threaten. Commercialization and 'bad' culture influences from outside through the internet and into village will also be unavoidable.

It is still hard to predict the final result of this struggle between indigenous internet and global ICTs expansion. Surely, indigenous users will rapidly increase in other agricultural villages of western China due to the further implementation of this project. While it is still optimistic to say that the political, economic, and cultural conditions will continue to be supportive for more indigenous internet users in the near future, the question of the scale that the indigenous internet will need to be in order to shape a sustainable business network still seems vague and a distant dream.

I wish to conclude this thesis with a quote from a girl that I interviewed who described with deep emotion her feelings about the village: 'After this project, we see that the hope is there.' Seeing hope is already a huge accomplishment especially in a community where hope is to often a rare and precious resource. That alone has made the project a success and transcends any attempt to objectively or even scientifically justify, aggrandize or trivialize its important in the development of a global internet society. For perhaps the true value of an

information society is not the potentials that it may provide for improving ones economic way of life but rather in the potentials of improving ones spiritual way of life. Of looking at tomorrow as not another days struggle to survive but rather as a day filled with hope.

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