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By

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ABSTRACT

ZAPOTEC USE OF E-COMMERCE:
THE PORTRAIT OF TEOTITLÁN DEL VALLE, MEXICO

By

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This dissertation research explores the intersections of economic development, indigenous art commercialization, and globalization in Oaxaca to better understand the electronic commerce of indigenous art as a contemporary development issue. For this research, the Zapotec Indian rug weaving community of Teotitlán Del Valle, Mexico, was selected for study. Subsequently, an extensive web search provided a picture of the existing commercial websites in the village in 2001. Weavers residing in the village who were willing to discuss their commercial online presence were contacted. Residents who agreed to an interview conversation about their e-commerce activity were videotaped or tape recorded during eight weeks in 2001. Open-ended interview questions were crafted to explore the history, nature, and impact of e-commerce activity for those weavers who have an online presence within the community of Teotitlán Del Valle, based on the guiding research question, "*How has e-commerce activity emerged in the context of the indigenous weaving community of Teotitlán Del Valle, Mexico?*"

This question emerged from exploratory field research between 1996 through 2001 in Oaxaca, Mexico, and was crafted to better understand globalization issues facing indigenous communities in this important region, recognized as one of the most diverse and populous indigenous geographies in the Americas. Guided by this question, this research utilized Portraiture methodology guided by the ethos of Participatory Action

Research (PAR). These paradigms of methodological inquiry offered a more holistic approach to answer the research question. If the question is the frame for the portrait, the answer is the image depicted within that frame, and the methodology of Portraiture is the type of lens used to zoom in on the Portrait, which in this case is the booming indigenous art industry that surrounds this region and its online counterpart. The ethos of PAR guided my position as portrait artist in respect to those portrayed, as well as guided the use of tools employed to create an authentic portrait from a resilient and emergent core theme.

For my Great Grandmother, Belva Marie Waddilove, Munsee-Delaware/Chippewa of the Thames, for imparting her love, her faith, and her warrior spirit.

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Introduction

The sale of indigenous crafts on the World Wide Web is a remarkable aspect of globalization. Web sites selling indigenous art—often referred to as handicrafts, hand crafts, or simply "crafts"—appear to be sourced from the mountain villages of Thailand, cooperatives in Africa, Native American reservations of North America, and even the most remote villages of Latin America. This type of development is occurring directly from or on behalf of indigenous artisans. Such web sites demonstrate, albeit subtly, agreements between individual artisans, communities, cooperatives and organizations in cooperation with non-governmental agencies, non-profit organizations as well as with various other intermediaries. These websites, ranging in quality and characteristic, share one thing in common: the sale and promotion of traditional crafts. Such websites reflect the phenomenal possibilities offered within the ever-changing, technologically-mediated landscape of our global day and age.

Commercial websites selling indigenous art are growing in number and may reflect a promising new venue for economic development. For this reason, the online sales of indigenous art to a global market can be understood as a potential vehicle for appropriate economic development, sustainable development, and a means to continued or renewed self-reliance of indigenous culture. Alternatively, it can be understood as displaying potential characteristics of cultural domination, even exploitation, of culture for sheer commercial gain. Details of this nascent market are unknown and, therefore, are not truly understood beyond the assertions of the website projections themselves. In this way, exploration of what lies behind the well-groomed facades of the electronic

marketplace, i.e., e-commerce, will illuminate the underpinnings of this market. What has not been known is how this type of development is occurring, how these websites are conceived, or the details of how they are brought into the global economy via e-commerce from within traditional indigenous communities. Understanding what has taken place within these communities in order to launch commercial web sites is critical to understand the nature of development and to ascertain existing development needs. For this reason, this research peeks behind the glossy virtual fronts projected online and travels to their grassroots parallel behind the screen—seeking to better understand the real, on-the-ground, case specific nature of the actual players performing on the online stage of indigenous art sales.

It is necessary to understand specific aspects of globalization, narrowing the broad, transnational megatheory into the actual realm of communities. Globalization scholar Saskia Sassen advocates for a place-based approach to understanding globalization, emphasizing the need to understand the details of geographic location in the economics of globalization. She explains that, "...to recover place in analyses of the global economy...allows us to see the multiplicity of economies and work cultures in which the global information economy is embedded" (Sassen, 1998, p XVI) Sassen elaborates this further.

> ...dissecting the economics of place in the global-economy allows us to recover noncorporate components of economic globalization and to inquire about the possibility of a new type of transnational politics, a politics of those who lack power but now have "presence." (Sassen, 1998, XXI)

The Importance of Place: Oaxaca, Mexico

Globalization is understood as having an unknown range of power, ranging from the potential to destroy traditional indigenous societies to the potential to carry them toward new heights of empowerment. Therefore globalization, bolstered by technological advance, is an area of significance in development. *In The Old Grandparents: Our Indigenous Roots* Guillermo Marin, captures the modern dilemma of technological advance faced by the Mestizos of Mexico, heirs to the Olmec culture, understood as one of the six oldest civilizations on this planet.

> We are, unquestionably, a mestizo people that cannot continue to deny its indigenous roots.... At the beginning of the third millennium, globalization, new technologies and communication lead to the dehumanization of peoples and the homogenization generated resulted in the loss of regional and national identity. (Marin, 2002)

Mexico is relevant to indigenous research as it has the largest indigenous population among the Americas. (Patrinos, 127) The states with the largest indigenous populations are Chiapas, Oaxaca, Quintana Roo and the Yucatán, the highest and most diverse of which is the Southern state of Oaxaca (pronounced Wa-ha-kah). Within a mestizo nation, about half of the three million Oaxacans still speak among 14 indigenous languages, of which there are 90 dialects. Among the 16 different indigenous groups represented in Oaxaca, the Zapotecs are the most populous indigenous group in the state. (Instituto Nacional de Estadística Geografía y Informática, 1993). The Zapotec Indians of Oaxaca, Mexico comprise the third largest Indigenous group in Mexico and are the dominant linguistic group in eastern and southern Oaxaca. (Beals, 1975, p. 317) Importantly, the ancient Zapotec people were among the primary groups to settle in

Central America. The Zapotecs, who refer to themselves in Zapotec as Ben'Zaa, or Cloud People, arrived in Oaxaca in 1500 B.C. (Whitecotton, 1977) Shortly after the Spanish conquest, Zapotec origin legends were transcribed. These documents identify Zapotecs as the first inhabitants of the Valley of Oaxaca. (Whitecotton, 1977, p.23) Nevertheless, within a mile of another village, one dialect of Zapotec is so indiscernible from another it may as well be another language. Dibble's account of Oaxaca captures this reality:

> Oaxaca's cultural diversity rises directly from its fractured landscape. Spreading out from a mile-high central valley, the ranges of the Sierra Madre break the state into thousands of isolated enclaves. Every village is a world in this rugged countryside; every town is a universe. Over the next ridge, around the next bend, across a few dry rocky hills—that's someone else's universe. (Dibble, 1994, p. 42)

Today the dominantly Zapotec Oaxacan Valley is a part of a global tourist economy, with most tourism centered in the capital City of Oaxaca. While Oaxaca's rich indigenous heritage is promoted to attract tourism, it is apparent that the indigenous communities themselves are not the primary economic beneficiaries.

> The state of Oaxaca is touted in political speeches, in the press, and by the tourist industry as a wellspring of the nation's indigenous cultural patrimony. Among Mexico's states it has the largest variety of indigenous ethnic communities, and is perhaps the richest in traditional and quasi traditional crafts....Paradoxically, Oaxaca's peasants, the source of all this national pride, are among the poorest people in the nation. (Waterbury, 1989, p. 246)

While Oaxaca is home to some of the finest indigenous artisan communities in the world, they seem to be robbed of the rich, ancestral inheritance that is ironically being capitalized upon by others. In this light, the commercial production of indigenous art is a modern development conundrum. The growing number of commercial websites selling indigenous art from this region may reflect a promising new venue for economic development. However, it is unknown whether online marketing of indigenous art from

Oaxaca is actually beneficial to indigenous artisans or if it is yet another form of marketing the indigenous Oaxacan identity by external entrepreneurs.

This dissertation research explores the intersections of economic development, indigenous art commercialization, and globalization in Oaxaca to better understand the electronic commerce of indigenous art as a contemporary development issue. For this research, the Zapotec Indian rug weaving community of Teotitlán Del Valle, Mexico, was selected for study. The research method of Portraiture helped answer the question, "*How has e-commerce activity emerged in the context of the indigenous weaving community of Teotitlán Del Valle*, Mexico?" This question emerged from exploratory field research between 1996 through 2001 in Oaxaca, Mexico, and sought to better understand globalization issues facing indigenous communities in this important region, recognized as one of the most diverse and populous indigenous geographies in the Americas. Guided by this question, this research utilized Portraiture methodology guided by the ethos of Participatory Action Research (PAR). These paradigms of methodological inquiry offered a more holistic approach to answer the research question. If the question is the frame for the portrait, the answer is the image depicted within that frame, and the methodology of Portraiture is the type of lens used to zoom in on the Portrait, which in this case is the booming indigenous art industry that surrounds this region and its online counterpart. The ethos of PAR guided my position as portrait artist in respect to those portrayed, as well as guided the use of tools employed to create an authentic portrait from a resilient and emergent core theme.

This research began with an invitation from Latin Americanist Dr. Diane Ruonavaara, my mentor and guide to this region, who introduced me to the Seminar of

Resources for Rural Development. i.e., *Seminario de Gestion sobre Recursos para el Desarrollo Rural,* a multi-disciplinary rural development program of the National Autonomous University of Mexico, i.e., Universidad Autonomia Nacional de Mexico (UNAM), centered in Oaxaca City. Continued engagement with this seminar was made possible with funding from the MSU Center for Latin American Studies under the directorship of Dr. Scott Whiteford; as well as with the support, gracious hospitality and generous intellectual assistance of Dr. Miguel Sekely, director of the seminar, and his thought-provoking interdisciplinary team. This research became more focused with funding from the Ford Foundation to pursue pre-dissertation questions that explored how communication technology was being used in indigenous communities in Oaxaca as a tool of development.

Through this seminar, very real community and economic development problems are approached with community members from various Oaxacan villages. Working together with experts from various disciplines and fields of expertise, seminar participants initiate and engage in dialog, extensive roundtable conversations and community visits. Community representative, acting as participants in the seminar, are comprised of *campesinos,* i.e., rural indigenous people living in close relationship to the land, many traveling through difficult terrain for days to reach the seminar and participate in the shared dialog. Here the campesinos are a part of an international interdisciplinary team that gathers to explore potential paths of community and economic development that may be taken to successfully resolve community problems.

Ultimately, former participants of the seminar— members of the weaving cooperative *Sarapes Art and Tradition* (Sarapes Arte y Tradición), a men's cooperative

seeking to reintroduce authentic, traditionally produced rugs into the marketplace—invited me to their village to begin my research quest. During extensive interviews in 1999 with *Sarapes Art and Tradition*, I noticed that a women's cooperative emerged as a theme in the interview process. After two years of working with the men's cooperative, *Art and Tradition,* discussing e-commerce and co-developing an experimental web site, I was introduced to this related cooperative *Women that Weave*. This led to further inquiry and dialog with these women and, subsequently, arrangements were made so that I was able to have several conversations throughout the summer of 2000. By working with both cooperatives I began to understand the gendered, yet interdependent, work arrangements in Teotitlán Del Valle. Through candid conversation, structured interview, immersion, and observation, interaction with these cooperatives formed the foundation of the conceptual framework of this research regarding issues of importance to weavers in Teotitlán Del Valle.

Based on the specific data gathered from 1996 to the year 2000, it came to my attention that Internet sales were of great interest to many weavers and, therefore, became the most resilient core theme regarding how communication technology was being used in Teotitlán Del Valle as a tool of development. Open-ended interview questions were crafted to explore the history, nature, and impact of e-commerce activity for those weavers who have an online presence within the community of Teotitlán Del Valle, based on the question, "*How has e-commerce activity emerged in the context of the indigenous weaving community of Teotitlán Del Valle, Mexico?*"

Subsequently, an extensive web search provided a picture of the existing commercial websites in the village in 2001. Weavers residing in the village who were

willing to discuss their commercial online presence were contacted. Residents who agreed to an interview conversation about their e-commerce activity were filmed during eight weeks in 2001. The cooperative members who extended the initial invitation to the village and offered continuous dialog were among the 12 filmed or recorded interviews informing this research. The final portrait of the history of e-commerce in Teotitlán Del Valle is based upon these interviews and the previous exploratory research that led to them.

Chapter One: Web Surfing in Oaxaca
The World Wide Web, the Web of Life, and the Weaving Community

The concept of a global web connecting all of life is not new to indigenous mythology. In many indigenous cultures a web is a symbol which relays great importance, representing the web of life itself. This respect for the web as a cosmological concept or relayed as symbol can be found in different ways among different indigenous and other mythologies, especially among ancient and indigenous weaving societies. Native American origin stories of Grandmother Spider originated with the Anaszi people and spread throughout Native American societies such as the Navajo and Hopi. Grandmother spider is attributed with creating people through word and song and it is she who helps them through life "...with her magical and practical tool, the web, and her deep knowledge of and reverence for the power and possibilities of matter." (Bergman 2000, p. 3) Weavers of these societies believe that they weave to create the world in honor of and in association with Grandmother Spider. "In the Navajo tradition, these magical qualities are also ascribed to the spiritual and practical art of weaving, which in turn creates the world and the patterns of the world." (Bergman, 2000 p.3) (see also Newcomb, 1967; Mullet, 1979; Patterson-Rudolph, 1997) Likewise, the palm mat weavers of Tongaris of Western Polynesia say that "Humankind is like a mat being woven," (Weiner, 1989, p. 33) sharing some similarities to stories of the Hopi and Navajo and even aspects of Tibetan Cosmology as revealed in Tibetan textile design. It is speculated that Tibetan textile design elements "...are related to sacred cosmograms, the means by which people visualize and engage their own numinous essence as well as that of the world." (Cole, 2004, p. 48) The Zapotec Indians of Teotitlán Del Valle in Oaxaca,

Mexico claim a belief that they are literally weaving "so that life continues." (Fonaes, 1998) Schneider elaborates upon the power of cloth:

> ... spinners, weavers, dyers, and finishers harness the imagined blessings of ancestors and divinities to inspire or animate the product, and draw analogies between weaving or dyeing and the life cycle of birth, maturation, death, and decay...and as a great connector, binding humans not only to each other but to the ancestors of their past and the progeny who constitute their future. (Schneider, 1989, p. 3)

In this way, symbols, stories and significance within the art form of weaving are shared throughout many indigenous cultures and hence the concept of a global web connecting and mediating life activity might be less foreign to them than might be initially presumed.

Many weaving societies revere the spider for its weaving talent. Like a weaver, a spider weaves a web as a self-made product to capture sustenance. Web pages, like spider webs, exist only as long as they have to and are then torn down, reworked, and recreated whenever needed or desired. Like a tapestry, The World Wide Web (WWW) is made up of a matrix of cross threads [warp and weft] upon which is built a unified field of synchronized Information Communication Technologies (ICT). It is upon this temporarily cohesive pattern of knowledge that knowledge workers fabricate more elegant, streamlined and saleable patterns between the rhythmic warp of economic demand and the weft of productivity. The name World Wide Web is therefore a direct metaphor evoking the image of how this technology works.

Access is the key to obtaining all that is offered within the virtual realm of the World Wide Web. This realm is a matrix of various types of web patterns accessed through technologically mediated gateways, i.e. portals, which allow willing and able participants to be more mobile, more communicative, and transacting more in the

moment, i.e., in "real time." These portals are the axis of efficacy whereby those with certain identifiers are granted entrance into the webbed structure. Introduced by the Coseil Europeen pour la Recherche Nucleaire in the late 1980s, the Web was inspired and developed by knowledge workers. Today, Knowledge workers are the weavers that artfully create the Web on techno-powered looms, so that we can do more with space and time, albeit in an ironically distant way. Ultimately, the web is a collection of economic patterns and "stories" of human desire [marketing, advertising, demand] to create a more unified dreamfield [a created world]—to conquer not only the restrictions of Mother Nature but also the restrictions of space and time—with the vision to be more or less limitless ourselves. In this way, a parallel [non-physical/knowledge based] world is being created, a.k.a. virtual reality, accentuating and serving as a prosthesis to our physical experience. In this way, technology has been widely accepted as a positive aspect of development.

According to Mander, assuming that technology is beneficial or even neutral is an act to our disadvantage. Such an assumption does not allow us enough foresight in planning our own developmental course.

> Our assumption of technology's beneficence, combined with our passivity to its advance, has permitted certain technological forms to expand their scale of impact, and to interlock and merge with one another. Together, they are forming something new, almost as if they were living cells; they are becoming a single technical-economic web encircling the planet, megatechnology. Among the key components of this invisible apparatus are computers, television, satellites, corporations and banks, space technology, genetics, and the alarming new "postbiological" machinery: nanotechnology and robotics. Holistic critiques reveal the role of each in the big picture, as well the inevitable direction of the whole process. (Mander, 1991, p. 52)

Surely with ICT we have defied traditional laws of space and time and broken new [non-geographic] ground. Whether or not this is possible or even desirable to be

equally utilized by all is a valid question to explore. For some, almost all daily transactions have been impacted while for others such changes may have very limited impact. Without a doubt, the available modes of economic transactions have rapidly changed and expanded due to technological possibilities. Expanded options and access ability create variance in technology use. The World Wide Web continues to be spun into a stronger, more captivating tapestry by the engine of globalization, the Knowledge Economy. What threads exist for indigenous artisans to enter into the global landscape mediated by ICT?

In *The Lexus and The Olive Tree*, Thomas Friedman explains how globalization is reweaving our world via the Web, which to exist demands a level of connectivity. According to Friedman the most frequently asked question from the globalized worldview is, "To what extent are you connected to everyone?"

> The globalization system...has one overarching feature—integration. The world has become an increasingly interwoven place, and today, whether you are a company or a country, your threats and opportunities increasingly derive from who you are connected to. This globalization system is also characterized by a single word: the Web. So in the broadest sense we have gone from a system built around division and walls to a system increasingly built around integration and webs. (Friedman, 2000, p. 8)

In summary, the Web is woven by the hands of globalization, which today is reaching with agile fingers into almost every aspect of daily life for those living within technologically-mediated, or, modernized societies. Threading the web concept among many paradigms and cultures, we can pursue the importance of connection, modern technology, and indigenous tradition surviving in a modern world. Like the spider mythology, the leading thread of the Internet may (or may not) be the perfect trail for indigenous communities to track into a webbed world.

E-Commerce and Indigenous Populations

Indigenous populations are recognized as the poorest populations in the world, lacking comparatively in education, resources, and economic opportunity in comparison to other populations. However, much is unknown about the needs of indigenous populations due to the overall lack of research information or concrete details available to depict the reality of the indigenous plight. According to researchers, a greater amount of research exploring details of indigenous life is necessary to understand the actual economic situations faced by indigenous people and to provide factual evidence that would point to development problems. While it is known that indigenous people are the most impoverished with the least resources among the world's populations, there is an absolute dearth of information about their exact position in reference to the mainstream. (Patrinos, 1994, p. 1) Western development strategies have had serious impact upon indigenous peoples and their cultural sustainability. Throughout history, indigenous people have suffered residuals of development designed to the benefit others. Subsequently;

> They have been separated from their traditional lands, and ways of life, deprived of their means of livelihood, and forced to fit into societies in which they feel like aliens. (Burger, p.7)

In the last 20 years, more than 1,000 indigenous organizations have been established world wide, forming the global trend, and attempted network, of the Indigenous Movement. (Burger, p. 138) Efforts of these organizations range from local to global contexts. At the global level, United Nations covenants and international law have been transformed to recognize indigenous issues regarding the right to self-determination and problems of genocide and racial discrimination. Clearly, the quest for self-determination is the main development mission emergent from within the Indigenous Movement front. In fact, indigenous people have identified consistent development concerns. (Ridley, 1997)

> *First people aspire to self-determination. They want to regain the right to develop their societies according to their own needs. (*Burger, p. 140)

To gain greater self-determination, indigenous communities have chosen to utilize various technologies as development tools. Communication technology is used, among other things, for purposes of education and dissemination of cultural issues. (Burger,148) As communication media is theoretically and empirically recognized as determining individual, community, and public reality--indigenous choice for communication technology development is a legitimate community development strategy. Therefore, communication technology could play a significant role in reversing negative consequences of Western development in indigenous communities as a means to establish self-determination.

Ironically, it appears that indigenous communities throughout the word are successfully selling indigenous art on their own commercial websites—selling traditional and modernized versions of their material culture that reflect ancient knowledge, culture and traditions attempting to survive on a modern economic platform. What is ironic about this occurrence is that many of the villages from which these web pages are sourced are among the most remote and exotic locales in the world. Web sites selling indigenous art—often referred to as handicrafts, hand crafts, or simply "crafts"—can be seen for sale online from the mountain villages of Thailand, cooperatives in Africa, Native American Indian reservations, and even the most remote Indian villages of Latin America.

What is so intriguing is what may lie behind the façade of these online presentations. This type of development is occurring directly from or on behalf of indigenous artisans. Such web sites demonstrate, albeit subtly, agreements between

individual artisans, communities, cooperatives and organizations in cooperation with non-governmental agencies, non-profit organizations as well as with various other intermediaries. These websites, ranging in quality and characteristic, share one thing in common: the sale and promotion of traditional crafts to sustain the production of indigenous material culture for the purpose of economic development. Such websites reflect the phenomenal possibilities offered within the ever-changing, technologically-mediated landscape of our global day and age.

In this way, commercial use of the web by indigenous people is both a real world (geographic and material) and virtual (cyberspace) dynamic impacting their communities. It is importance to understand the relevance of New Media or Internet Communication Technologies (ICT) and how they are impacting or being impacted by indigenous community as discussed in telecommunication, development, and cultural studies. The boundary transcendent nature of globalization—deterritorialization—redefines development realms previously limited to geo-political boundaries and recasts the understanding of local, global and community boundaries. In light of globalization, ICT used for economic development by traditional indigenous communities is a new domain for research inquiry. Of particular interest to this research is the potential for traditional indigenous artisan communities to use the Internet as a commercial tool to achieve endogenous economic development, greater self-reliance, and cultural autonomy with the ultimate goal to persevere in a global economy.

By integrating technological vehicles of economic development, technology becomes appropriated [internal] even though it may be alien [external] to a particular indigenous community or culture. Within the grounded milieu of place, technology takes

on unique, context rich form in the particular cultural expression of a geographically-bound community. Understanding particular indigenous adaptations of technology in this way, this research elaborates on how use of commercial websites, i.e., e-commerce is being culturally re-calibrated to specifically suit indigenous communities seeking autonomy and endogenous development. This is to say that indigenous use of e-commerce, due to culture and context, may be different in some way than the general use of the over culture. In indigenous communities where e-commerce is being adopted as an economic development tool, social and cultural tradition may or may not diminish, or may be in the process of change. These communities may create patterns on the web unlike other communities or may create similar patterns to like communities. Much is unknown about how the effects of Internet economic development or electronic commerce will come to bear on traditional indigenous communities. A better understanding of context-specific importance, patterns of use, cultural impact and social importance of technology would be informative to the knowledge base.

Not only will place-based specificity assist us in understanding the details of culture specific indigenous problems it will also help us to dissect the colossal aspects of globalization into understandable parts. Globalization scholar Saskia Sassen advocates for a place-based approach to understanding globalization, emphasizing the need to understand the details of geographic location in the economics of globalization. She explains that, "...to recover place in analyses of the global economy...allows us to see the multiplicity of economies and work cultures in which the global information economy is embedded" (Sassen 1998, p XVI) Sassen elaborates this further.

> We need to dissect the economies of globalization ...dissecting the economics of place in the global-economy allows us to recover noncorporate components of

> economic globalization and to inquire about the possibility of a new type of transnational politics, a politics of those who lack power but now have "presence." (Sassen, 1998, XXI)

Balancing Cultural Preservation with Global Acculturation

Indigenous knowledge (IK) has been furthered through Internet use in various ways. Mowlana this opportunity with a more critical viewpoint, clarifying that with mainstream communication development theory. "...the newest communication technologies can be molded into their users' images. Rather than replacing indigenous communications and culture, they can exist side by side with them. These new communication technologies can encourage increased participation and equality. By creating an alternative to the temporarily dominant mass media channels, these forms of communication offer the promise of preserving indigenous culture in a new form, rather than simply replacing it with an inappropriate new Western paradigm." Maybury-Lewis asserts concern for indigenous people balancing the duality of "...their interaction with, and participation in the wider society with their desire to maintain a vibrant and separate culture." (Maybury-Lewis, 1998, p.3)

Like other marginalized groups struggling for preservation, Indigenous groups are using the Internet, among many other telecommunication devices, as survival tools. For example, in the book Fax from Sarajevo, comic artist Joe Kubert captures the true survival account resurrected from hundreds of faxes from Ervin Rutemagic while Sarajevo was under an 18-month siege by Serb forces in 1992 and 1993. Rutemagic's story was communicated to the world via fax, his only connection with contacts outside Sarajevo. (Kubert, 1996) This exemplifies a simple use of telecommunication used by

minority groups faced with oppression, domination and crisis. Such use is considered phenomenal since groups identified as outside of the mainstream are also correlated with the lack of power, be it social, political or economical. Due to many variables, such as the affordability of global communication through new communication technology systems vs. mass media message making, the dialog of such groups at the global scale is not only possible, but extraordinary. What is extraordinary in indigenous use of telecommunication may lead us to understand new media in society in ways that cannot be explained by established theory.

Delgado and Becker (1998) provide a profile of the various situations in Latin America, with special attention to Mayan on-line activism in Guatemala, the global environmentalism of the Kuna nation of Panama, and the mobilization of the pro-Zapatista movement connected with Zapatistas in Chiapas, Mexico. The authors also discuss some of the shortcomings of such activity in the Andes and the Amazon basin. Nelson asserts the concept of the "Mayan Hacker" in the documentation of her primary research in Nebaj, Guatemala, geographically central to civil war violence. Nelson (Nelson, 1996) compares and contrasts local, cultural, and geographically bound traditional reality with the use of virtual reality. Recognizing technology as a tool sought out and adopted by Neo-Mayan activists resisting assimilation, collecting concepts from computer science, science fiction, virtual reality and cyberculture to relay how Mayans were appropriating technology. Like computer hackers, who deploy intimate understandings of technologies and codes working within a system they do not control, the Maya are appropriating so-called modern technology and knowledge while refusing to be appropriated into the ladino nation." Stephen Wray, citing the on-line pro-Zapatista

activity, emphasizes that cyberactivism is the latest and most conducive form of civil disobedience. "As hackers become politicized and as activists become computerized, we are going to see an increase in the number of cyber-activists who engage in what will become more widely known as Electronic Civil Disobedience...we can actually see that incipient electronic civil disobedience has started to be practiced. One site for discovering such practice is within the pro-Zapatista movement that has come into being since the January 1, 1994 Zapatista uprising in Chiapas, Mexico. Since just days after the emergence of the EZLN onto the global scene, computers, and more specifically, computer-based communication over the Internet, primarily and originally in the form of email, have become key and central to the existence of this global Zapatista inspired movement against neoliberalism and for humanity. With each passing year since 1994, the level of computer sophistication has increased. What began as mere transmission of EZLN communiqués and other information over email became also a network of hypertext linked web sites. (Wray, 1998)

According to the World Bank, there are many examples of indigenous people "taking control of and using technology to benefit their communities in accordance with their cultural preferences." For example, the Cree of Canada own and operate an airline company; the Aborigines of Australia broadcast television programs in their language; the Blackfoot Indians of the United States established the fir indigenous financial institution; the Cordillera people of the Philippines are managing their own development projects; and the Shuar people have produced educational radio programs since 1972 in Amazonia Ecuador. (Patrinos, p. 4)

To summarize, indigenous communities have used communication technology as a means of self-empowerment and development. In this way, they are adopting a non-traditional tool from the outside world to assist them in their cultural survival. Many indigenous communities produce art as a means of cultural survival. Coupled with the Web, this form of economic development for cultural survival is creating new areas of interest. Investigating the impact of the broadest communication tool of our time, the World Wide Web, as a development tool in the context of the indigenous art market would help us to understand new dimensions of development for indigenous communities.

In other words, communication tools, such as the World Wide Web, are not automatically tools of development. Internet use by indigenous people may or may not be assisting them in cultural survival, self-reliance or economic development. In this sense it may or may not be a modern tool furthering indigenous knowledge. Indigenous Knowledge is the contribution of indigenous peoples to help provide a better understanding of sustainable development in the global knowledge system. "The challenge in this era of globalization—for countries and individuals—is to find a healthy balance between preserving a sense of identity, home and community and doing what it takes to survive within the globalization system." (Friedman, 2000, p. 41)

Indigenous Art Production in Oaxaca

Mexico is an ideal country to explore the creative tension between local and global, ancient and modern, especially when seeking to understand indigenous art—i.e., crafts, hand crafts, or handicrafts— in a global market. "Nowhere are the crafts more integrated in a culture and economy than in Mexico...an estimated ten percent of the

population, approximately eight million people, are employed in the craft industry." (Imhoff, 1998, p.78) With a capital city that is understood not only as the largest in the world but also as a Global City— i.e., among the urban power engines of globalization that grid the planet—Mexico is an engine of globalization set in motion before our eyes.

The City of Oaxaca, Mexico, the namesake capital of the State of Oaxaca, is an especially fitting Mexican city to explore the nature of traditional indigenous art industries surviving in a modern, technologically-mediated global market. Indigenous art production is a main part of the indigenous contribution to the city and state economies. Like Mexico City, albeit on a much smaller globally-present scale, Oaxaca City can also be understood as a "Global City" producing indigenous art for a largely foreign tourist-driven market. This market is comprised of educated world travelers that frequent this part of the world as tourists, oaxacaphiles, ex-patriots, indigenous art buyers and collectors that have made the art of this region a primary commercial focus. These are the "cultural creatives" that support the indigenous artwork of this region. This "globalicity" of the Oaxacan Valley may explain a predisposition for emerging commercial websites selling art from this region.

R.H. Ray identifies one-fourth of baby boomers— those that have experienced a value shift—as cultural creatives. (Ray, 1997) The research of Litrell and Dickson found that this sector of consumers seeks authentic handicrafts and products made by indigenous groups. These consumers and world travelers are guided by values of community, ecology, sustainability, non- violence, and for the exotic, which is fulfilled by the adventure of travel. (Dickson, 1999) According to Stephen, "Part of the appeal of buying handicrafts is knowing that they come from a part of the world where old ways

live on. For consumers, buying the 'old ways,' the traditional culture, is often as important as buying the products themselves." (Stephen, 1991, p. 382) Also, according to typologies asserted by Richard Florida, Oaxaca can be viewed as a knowledge economy, a hub to the domestic and international "creative class." (Florida, 2002) While cultural creatives are identified as world travelers that purchase handmade goods no longer present within their own, more "developed" nations, the Creative Class is identified as a highly mobile educated population that seeks hip, global regions that support the arts and diversity.

In sharp contrast to the shared global identity of foreign supporters, Oaxacan identity is geographically anchored, based on village location more than other factors. "Oaxacans are typically more loyal to their hometown than to their state or country or even to their ethnic group. People find their identity in the way they glaze a pot, embroider a blouse, or play a piece of music." (Dibble, p. 42) Most of the art producing villages surrounding the city of Oaxaca have become tourist attractions, or, support the production of those art producing communities open to tourism. According to Beals, Oaxaca's peasant communities are culturally closed but economically open systems that are primarily agricultural but also involved in other industries such as labor, services, trade, and handicrafts. (Beals, 1975) Generally speaking, the indigenous art producing villages of Oaxaca are like those throughout the world, carrying forth a rural, craft-centered culture.

> ... the rural carriers and creators of craft-focussed culture... situated in relatively underdeveloped, socio-economically differentiated agrarian communities. In such communities, peasant-artisan households produce crafts as a supplement or alternative to agriculture for satisfying their subsistence or capital-accumulation needs. Simply put, craft production in present day capitalism serves peasant-artisans as a means for meeting their ubiquitous need for cash. (Cook, 1993, p.60)

However, this growing sector of culturally rich, time-intensive art production is ironic, being valued so highly throughout the world by an affluent market, yet not receiving appropriate economic reward. Regardless, the production of indigenous art is increasing to supplement rural incomes, providing the second largest form of rural development after agriculture. Understanding indigenous art as a global commodity, Stephen emphasizes that "The international market for crafts is built on an elite consumer ideology contrasting manufactured, mass-produced, internationalized modern objects with hand-produced, authentic local crafts." (Stephen, 1993, p. 27) However, the production of indigenous art for this elite market is often not enough for indigenous artisans. It has become increasingly difficult as young people leave their families to work in the United States, gaining financially for their families or for short-term financial goals while sacrificing cultural norms to acculturate to a transborder way of life. In this way, according to Imhoff, certain elements of globalization threaten the survival of indigenous communities." Artisans are drawn away from their community and traditional work by the promise of higher wages. Globalization and industrialization increasingly impact the artisan. Consistent work in sweatshops in cities and special economic zones casts a potent lure, drawing artisans away from cottage industries and farm fields." (Imhoff, 1998, p.76) Nevertheless, there are those communities that model how indigenous art production is an effective form of economic development. "Highly successful examples of self-managed indigenous craft production enterprises in Ecuador, Mexico and Panama prove that indigenous values are compatible with commercial success without assimilation or dependency on the mainstream culture." (Patrinos, 1994, p. 4). With the rise of this industry, competition has also risen from a threatening nemesis: cheap, factory look-a-

likes that seem authentic to the untrained eye. (Dickson, 1999; Durham, 2000) This provides a challenge to indigenous artists who strive to produce authentic art based on the traditional heritage of their ancestors. Therefore, understanding how indigenous art producing villages are surviving in a more globalized economy is important as a way of understanding the complexities of cultural survival. According to Nash, it is understood that,

> Where production is still tied to the household unit and skills are transmitted from mother to daughter or father to son, there is greater continuity in traditions than in capitalized production. In the production of traditional crafts, households reproduce themselves in an ongoing tradition. (Nash, 1993, p.4)

In this way, indigenous communities can utilize traditional art as an appropriate form of economic development that may successfully assist them in passing on and maximizing their cultural traditions, instead of encouraging their forfeiture. (Dickson, 1999; Durham, 2000)

Indigenous communities in Oaxaca that have attained success or are still struggling to succeed in the art production market are of key importance to comprehend this dynamic. The Zapotec weaving village of Teotitlán Del Valle is understood as one of the most successful, if not the most successful, art producing villages of Oaxaca. Today, the rugs of Teotitlán are prominent in the world rug market. (Stanton, 1999, p, xvii) Scott Roth, one of the original foreign rug buyers from this village who has worked in the village since the 1960s, speaks to how these rugs meet the needs of and therefore appeal to foreign buyers:

> ... unlike other rugs that seem almost too 'perfect,' Zapotec weavings hold the charm of springing from a life lived close to nature and close to community. No wonder they touch something in so many of us who are used to living cerebral lives in high-tech societies where we feel disconnected from the origins of most

> everything we use and where we pursue work that sometimes seems lacking in human scale. (Stanton, 1999, p. viii)

Teotitlán Del Valle has been one of the most politically favored communities throughout regional history. This can be explained in large part by the powerful role of cloth production in Teotitlán Del Valle Among all the indigenous art forms, cloth, in particular, is a craft of historical power. [1]Woven fiber arts, i.e., textiles, are more than a commodity as they are often understood in indigenous societies as a form of currency referred to in the literature as "cloth wealth." In the context of Pacific societies, Weiner explains that "...'hard wealth' is made by experts, often with imported materials, and thus it is rare. Cloth is locally produced and as 'soft wealth," far more abundant." (Weiner 1989) According to Schneider,

> In addition to its seemingly endless variability and related semiotic potential, ...Cloth has become a standard of value, circulating as money. So it should come as no surprise that cloth wealth has enriched the treasures of many kingdoms and chiefdoms, conferring credibility on political elites along with gold, silver, jewels, and exotic shells. (Schneider, 1989, p.xi-2)

The history of weaving in the village of Teotitlán Del Valle can be tracked as far back as 500 B.C. At that time, Teotitlán's early weavers used cotton and the back strap tension loom, and were later introduced to the treadle loom and wool fiber by Spanish monks. (Stanton, 1999, p. 1) Historically, the weaving village of Teotitlán Del Valle (Te-o-tee-TLAHN del VAH-ye) has held an esteemed position as the legendary root

[1] Power can be attributed to many modes and definitions. James Hillman in *Kinds of Power* (1995) explores the myriad of languages and modes that we identify with power such as control, prestige, influence, leadership, authority, charisma, tyranny and others, the most abstract being subtle power. Hillman, J. (1995). *Kinds of power.* New York: Doubleday.

community of the Zapotec Valley. [2]The village, 17 miles/ 29 km East of Oaxaca City, is located amid the ancient Zapotec ruins of Mítla, Monte Alban, and Dainzu. [see map] While many weaving communities and other artisan communities have abandoned the production of crafts, this village maintains their traditional culture, keeping the customs of their ancestors with select adaptations of the outside world. Today, Teotitlán Del Valle remains a leading producer of indigenous art.

> The industrial boom of the 1950s around Mexico City led many weavers in those locales to abandon their craft for better wages. Consequently, Teotitlán remained the only major colonial-period blanket weaving center in the country to survive into modern times, subsisting in an essentially pre-industrial economy into the 1960s....The irony is that Teotitlán now has the highest standard of living of any native village in Mexico. (Stanton, p. viii)

According to Stephen (1991), politically, the village of Teotitlán has been a power hub since it was the district seat for the Oaxacan colonial government of Oaxaca as well as designated as a post-independence municipio, an administrative equivalent to a county seat. (p. 280) "This important position has made the community a political as well as economic center for a long time." (p. 84) Religiously, Teotitlán Del Valle has served as a ceremonial center for the Valley. Since pre-colonial history, the village was believed to host the sun god in their sacred mountain.] notes that Teotitlán had a shrine that attracted people from all parts of Oaxaca." (p. 83) Since colonization and establishment of Catholicism, the religious power of the village continued after the conquest as an administrative center for Dominican brothers during the colonial era and as a Dominican parish seat from the 1600s to the mid-eighteenth century. Reflecting both ancient ceremonial and Catholic religious influence, sponsorship of cult celebrations for local

[2] "Burgoa discusses a legend claiming that Teotitlán del Valle was the first Zapotec capital. This claim never has been demonstrated to have any historical basis, although [Alfonso] Caso, 'The Mixtec and Zapotec Cultures: The Zapotec,' BEO , NO. 21 (1962), 4-5 contends that it may have been the Zapotec capital before Monte Albán." (Whitecotton, p. 296) (see also: Burgoa, 1934:2:119)

saints and virgins, Mayordomías have contributed to the ongoing ceremonial dominance of the village as part of the civil or religious government, known as the cargo system.

> Today Teotitlán continues to be a major ritual center in the Oaxacan region, with its annual July festival of Nuestro Señor de la Preciosa Sangre (Our Lord of the Precious Blood) attracting people from many surrounding communities and bringing back hundreds of Teotitecos who have migrated to the United States. (Stephen, 1991, p. 82-83)

To summarize, Teotitlán Del Valle is a seminal Zapotec village that has demonstrated leadership in traditional art production as well as culturally, politically and religiously within the Oaxacan Valley, making it an ideal location for studying a surviving indigenous community engaging in e-commerce for the sale of traditional art.

The Problem Statement: Is it Development and for Whom?

Representations of indigenous artisans on the World Wide Web for the purpose of electronic commerce may, or may not, reflect fair trade, authentic voice, or appropriate access and representation. As artisans are increasingly represented on the Internet for the sale of their traditional handicrafts, it is critical to better understand the process by which they become electronically engaged as a development issue. Representations of indigenous artisans on the World Wide Web for the purpose of electronic commerce may, or may not, reflect fair trade, authentic voice, or appropriate access and representation.

Generally, the growing presence of indigenous populations on the Internet is cited as relevant to globalization, economic development, sustainable development, and endogenous development. (Cisler 1998; Maybury-Lewis 1998) Women have the highest population among indigenous artisans in developing countries and therefore can be impacted greatly by Internet development strategies. From a development perspective, on-line handicraft sales could potentially impact the lives of indigenous women all over

the world. According to the United Nations, 90 percent of all women in the developing world are engaged in some form of craft production. In Latin American alone, some 25 million individuals are engaged in craft production, 70 percent of whom are women. (White, 2001)

Electronic commerce has taken indigenous art sales to a global, real-time realm. A variance of commercial websites exist that claim to sell authentic, indigenous art. The sheer volume of existing commercial websites that appear to be owned by traditional artisans, families, or groups in remote, third world settings is astounding. The impression is that web business is booming for artists and that they are mainstreaming their business transactions successfully into cyberspace. Also, there are online businesses and merchants selling products on behalf of individuals and groups from indigenous communities. Third, there are merchants who do not assert the identities of the artisans or that give them subtle credit as do online boutiques or galleries.

Representations on commercial web pages are agreed upon or how authentic they are, being that they are often not fully owned or created by the indigenous artisans themselves. Authentic representation of indigenous artisans on commercial web pages is an important aspect of participation and control in e-commerce development. The use of power in how the transaction comes about, the nature of the conduct of the parties involved, the structure of relations as well as the various impact upon indigenous culture need to be better understood. The significance of this issue cannot be underestimated. Cultural misrepresentation, is a farce akin to associated with economic exploitation and at the extreme, identity theft. Such activity could attribute to the economic demise and lack of economic power sourced within indigenous communities, perpetuating dysfunctional

reciprocity or dependency relationships with those holding more power. Additionally, tarnishing the confidence in the veracity of authentic goods, fairly traded or direct from the source, may call to question the integrity of online transactions. This dilemma could lead to cheap, inauthentic handicrafts succeeding while the authentic pieces fail to succeed. However, due to the lack of control over product development and market expansion "Artisans, desperate for income, are vulnerably positioned for potential exploitation in the process of product commercialization." (Dickson, 1999, p. 12)

Of particular interest to this research is a local context of e-commerce activity taking place in the famous Zapotec rug weaving village of Teotitlán Del Valle. The weavers of this village have been weaving since their history was recorded, long before the Spaniards colonized the area. Today, Zapotec rugs from Teotitlán Del Valle are purchased online from various commercial websites that appear to be sourced from the village itself. As of 2001, more than 3,000 websites existed about the village. Of these, 15 websites were found to be commercial. That is to say, 15 websites appeared to be sourced from the village with the purpose to commercially sell rugs online. Are Zapotec weavers of Teotitlán Del Valle selling to rug buyers all over the world as online merchants? If so, what was their path in harnessing this new communication mode in business and how are they using this medium?

Communication development theorists recognize that different views of development lead to different understanding of the role of communication, development and subsequent strategies. (Opubor, 1976) "The way and manner in which development is conceived has over the years, had an over-bearing impact on how we in turn conceive communication, how to use it and [in] relation to other social institutions and processes;

especially the process of social change." (Oso, 2002, p. 1) Many theories and approaches abound for both development and development communication. While the way we conceptualize both is evolving, essentially what underpins development is an attempt at change for the better. Moemeka emphasizes that:

> ... development is a multi-faceted concept. It generally means different things to different people.... development, though seen from different angles, means one basic thing to all people, a change for the better in both the human, cultural, socio-economic and political conditions of the individual and, consequently, of the society. It is not solely a matter of technology or of gross national product. More importantly, it is a matter of increased knowledge and skills, growth of new consciousness, expansion of the human mind, the uplifting of the human spirit, and the fusion of human confidence. (Moemeka, 1996, p.3)

According to Richard Sandbrook, it is important that technological development is 'appropriate technology', "one that is more congruent with a societies needs, resources and physical environment than an alternative." (Sandbrook, 1982 p. 10) Furthermore, Femi Sonaike emphasizes that technology must "grow with, and function as, an integral part of the larger society rather than operate as a loosely-attached appendage grafted on by some foreign country. (Sonaike, 1988, p. 160).

Therefore, in the case of e-commerce being sourced from indigenous villages, exploring how these web pages were developed helps us to understand the nature of adaptation of this technology. The story behind how these pages were developed in Teotitlán Del Valle may reveal the origin and introduction of e-commerce and how this technology unfolded within the context of an indigenous village. This approach may help us to acquire an intimate view, behind the curtain of the global stage, of how e-commerce is engaged in with indigenous communities.

Research Question

According to Nash, how the artisan, "... may continue to be the agent, along with the museum exhibitors and collectors who make their enterprise viable in transmitting the program of the ancestors....will depend on the nature of the relationship existing among the artisans, the intermediaries, and the consumers." (Nash, 1993, p. 20) Since cultural survival can be so significantly impacted by the various actors involved in the sale of indigenous art, it is important to understand the nature of their relationship and how this potential tool of economic development is being carried out today.

Is it possible that Zapotec weavers of Teotitlán Del Valle are selling directly to rug buyers all over the world as savvy online merchants? If so, what was their path in harnessing this new communication mode in business and how are they using this medium? The research question, "*How has e-commerce activity emerged in the context of the indigenous weaving community of Teotitlán Del Valle*, Mexico?" is asked to explore the history, nature, and impact of e-commerce activity for those weavers that have an online presence within the community of Teotitlán Del Valle. The answers to this question are hoped to explain the emergence of e-commerce in this rural village. Using the methodological inquiry of Portraiture framed in the ethos of Participatory Action Research, the e-commerce activities of this village are explored. It is the hoped that this research informs future development initiatives in indigenous handicraft communities, the plethora of Oaxacan craft villages of similar circumstance, as well as, and most importantly, the community of Teotitlán Del Valle.

Chapter Two: Literature Review

Literature from several academic fields illuminate core issues that come to bear upon indigenous communities facing globalization and the growing sale of indigenous art from their communities on the Web. This literature review provides an overview of scholarly perspectives that inform this phenomenon and include foundational perspectives from the fields of anthropology, communication, development, communication development, sociology, mass media and new media studies, political science, and institutional economics.

Global Consciousness: Thinking in Circles

According to Wolfgang Sachs (1994), our worldview was shifted when Neil Armstrong landed on the moon on the 20th of July in 1969, relaying images of a never-before-seen "Blue Planet" via communication technology, and leading us to the development of a global consciousness. According to Sachs, "The journey to the moon led to the discovery of the earth...Shimmering blue...like a spherical jewel in pitch black space...Earth...has...become a dominant contemporary image...Like the cross in earlier times...It has become an icon for our age. (Sachs 1994, p. 170)

Sachs portrays this transcendental human unearthing as the dawn of global consciousness. Truly, the same technology that took us to the moon allowed us to see our planetary reflection and caused us to reframe our understanding of reality. It was at this point that social imagination changed at a global level. According to Sachs, this scientific vision and technological wonder caused us to collectively redefine reality itself by

leading us to reframe old paradigms. When we saw ourselves from the more "galactic" perspective, scholars were inspired by the hermeneutics of connection as can be evidenced in many fields such as community development, ecology, and quantum physics. This visual power of our symbol, Earth, helped us to see our connectedness. Earth became a simple and elegant logo. This image of our planet shifted the global worldview from spatially disparate territories to the realization of a shared globe. "The icons of the blue planet, the foetus and the cell can be seen to represent an emergent universalism we describe as panhumanity, illuminated by a specific way of seeing life ...." (Franklin, 2000, p.26)

In a similar vein, Donna Haraway (1997) discusses the image of the earth as synonymous with the fetus as a life symbol. Haraway stresses the importance of these life symbols in a "cyborg culture" that increasingly merges biology and technology.

> Both the whole earth and the fetus owe their existence as public objects to visualizing technologies. These technologies include computers, video cameras, satellites, sonography machines, optical fiber technology, television, microcinematography, and much more. The global fetus and the spherical whole earth both exist because of, and inside of, technoscientific visual culture. (Haraway 1997, p. 174)

Since for many "seeing is believing," technoscientific visual culture has been evolutionary in its ability to shift consciousness and to assist us in understanding ourselves and our connectedness as beings. As technology expands our basic abilities, our perceptions shift as far as the current reach of technology. According to Duden (1993):

> One of the most fundamental but least noted events in the second half of the twentieth century is the loss of horizon. We live somewhere between satellite TV, which knows no skyline, and the telephone, which allows us to reach beyond our line of vision to connect with any number we chose. (p. 10)

In this way, our own human development is in a parallel lockstep with our own creation of technology. As we use technology as an extension of or prosthesis for our own development we also display evidence of Marshall McLuhan's famous quip "The medium is the message." (McLuhan, 1967) Namely, the phenomenon is that the message and the medium cannot be extrapolated from one another. The organic/human message is not inherently durable or unaffected by technology. It is changed with whatever medium within which it is integrated. It is a cyborg message composed of organic and inorganic elements, each impacting one another. Thus, from the cellular level and from within the womb (micro level) to outside the earth looking beyond as well as back (macro level), we are exploring and seeking knowledge of life itself, as well as altering life as we know it, through technology. The Web, a created scape, is yet another domain, territory, and non-geographic turf of our technoscientific visual culture used to seek understanding of life.

While this consciousness of circular connectivity may seem like a breakthrough and a new level of consciousness to many, indigenous cosmology has long taught of the multidimensional connectedness of all of life in webs, within sacred circles and hoops, through layered portals, within mandalas and as the oroboros extending into infinity. Black Elk was a great Sioux shaman (visionary, curer) who dictated his life story to John G. Neihardt in 1931. Neihardt (working through an interpreter) recorded, rearranged, and edited this story, publishing it as *Black Elk Speaks*. In this book, Black Elk summarizes the circular cosmology at the foundation of Native American teachings in his discussions with Neihardt. "You have noticed that everything an Indian does is done in a circle, and

that is because the Power of the World always works in circles...and so it is in everything where power moves." (Neihartdt 1932, p. 194)

Like indigenous knowledge (IK) is the foundation for indigenous cosmology, knowledge is the foundation of the Information Age and is therefore a multi-dimensional and complex resource of what has become known as the Knowledge Economy. Various levels of information create meta-systems such as the Internet. Furthermore, the Internet can be understood as a new system that exists upon the foundation of previously existing systems and concepts. Like the dynamics of a new universe, the Internet takes within its broad structure the older technological systems and absorbs them into another level of product use. Technology is parallel to and integrated with how life on earth is evolving. Our manmade creations reflect their origins, and, in this way, mimic organic systems.

Manuel Castells, in *The Rise of the Network Society,* clarifies this type of revolution.

> A technological revolution, centered around information technologies, is reshaping, at accelerated pace the material basis of society...a new communication system increasingly speaking a universal, digital language is both integrating globally the production and distribution of words, sounds, and images of our culture, and customizing them to the tastes and identities and mood of individuals. Interactive computer networks are growing exponentially, creating new forms and channels of communication, shaping life and being shaped by life at the same time. (1996, p. 2)

Communication, an aspect of knowledge and information in motion, follows within this circular pattern and is also said to be circular, dynamic, and ongoing. (Hiebert et al., 1985) In this sense, information itself is a multi-dimensional and complex resource with many support systems and associated links. Information in our Information Age is routed through the World Wide Web, a new system of resource use that relies on the materials

of previous systems, yet transforms old systems through absorption, like the dynamic of a new universe.

Today, the global connectivity made possible through the prostheses of technology is expressed in the term globalization, whereas previously it was a delineated mosaic of geography, travel, or trade, to name a few dimensions. In this way, globalization has taken place for millennia and has become omnipresent due to the many new ways we are rediscovering it and renaming it once again; renaming it according to its latest manifestation. Therefore, globalization is not a new phenomena, but a phenomena with a *new level of operation* and understanding due to new advances in information technology.

The Actual and the Virtual of Geographies: Scapes of Globalization

Previous technological innovations laid the foundation for what is today's interwoven Web of megatechnology. We have taken the simple technologies of our origins and honed them as we have progressed. Newer technologies often are made to improve or to accessorize their predecessors. At the foundation of megatech are the basic technologies of electricity and the telegraph, which themselves built upon the existing pathway of railroad technology. Once a precedent is set, such as the use of the telegraph, other technologies are created to support and maximize those technologies. For example, the railroad led to the highways of today and these highways shaped the concept of the Information Superhighway. Today, previous technologies have melded into one another with unexpected modern synergy. Digital technology has allowed us to begin to broaden our understanding of planetary connection into a Zen like virtuality: almost anything can

be converted into bits and bytes, at least when it comes to information. Binary code is the foundation of these changes. (Gay, 1996 p.5) According to Negroponte (1995), this is "the DNA of information."[3] Hence, we are creating new reality scapes by moving bits and bytes as we once were limited merely to atom-based matter. Increasingly, information along this front is being extended into new venues. Boundaries between technology and biology are dissolving, while the collapse of space and time into virtuality increases. At the same time, locality and identity are being both challenged and strengthened, minimized and maximized. According to Apparadai (1996) "... we have entered into an altogether new condition of neighborliness, even with those most distant from ourselves." (Appadurai 1996, p. 29)

Globalization, made possible by quantum leaps in technology, puts into motion a whole new understanding of culture, community, economy, and geography. Globalization is the fusion of multiple realities that were previously separated by space and time and grounded by what science has called natural law. The tensions of the various impacts of globalization impact the field of development, and other academic fields, in new ways. Scholars of globalization define the concept in relation to the local, since the idea of local helps to define global, and vice versa. Not only does the idea of the global intrinsically link to the local, it is also an active, dynamic, and systemic relationship. Therefore, in understanding globalization, one cannot understand local and global without the other. According to Grewal and Kaplan, divisions of local and global are not the discrete categories. "...the parameters of the local and the global are often indefinable

[3] Negroponte describes how bits and bytes are the basic building blocks of information and hence can be understood as the DNA comprising information, creating a boundless variety of media possibilities.

or indistinct—they are permeable constructs. How one separates the local from the global is difficult to decide when each thoroughly infiltrates the other." (Grewal, 1994, p. 11)

The traditional lines between the two are less clear, while a new understanding is emerging. This is what has become known as deterretorialization. According to Kearney;

> Globalization...refers to social, economic, cultural, and demographic processes that take place within nations but also transcend them, such that attention limited to local processes, identities, and units of analysis yields incomplete understanding of the local. In other words...'the intensification of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.' (Kearney, 1995, p. 548)

Anthropologist Arjun Appadurai in *Modernity at Large: Cultural Dimensions of Globalization* (1996) delineates globalization in a theoretical construct of five dimensions of global cultural flows. Appadurai identifies flows among *ethnoscapes* (unprecedented movement of tourists, immigrants, refugees, exiles, guest workers, and other individuals), *mediascapes* (unprecedented movement of production and dissemination of information that includes images), *technoscapes* (unprecedented movement of fluid high and low technology across geographic boundaries), *financescapes* (unprecedented movement of global capital), and *ideoscapes* (unprecedented movement of post-Enlightenment ideological and political elements). Discussing the historical and the contemporary perspectives of reality, virtual reality, and even hyperreality, Jennifer S. Light (1999) discusses our cultural journey from cityspace to cyberspace by providing an historical perspective of how technology has been theorized in regard to cities. Highlighting discussions among scholars regarding the fantastical nature of cyberscapes as well as their exclusivity, Light describes that not only cities are disappearing, but reality as it was previously defined is disappearing. Light emphasize that cyberspace, like cities, is not

necessarily a reality accessible by all, emphasizing asymmetry and access issues. In her review, Light emphasizes the importance of understanding context specific effects and differentiated aspects versus the employment of sweeping categories. Her analysis, like that of Apparadai and others, centers upon the local and the specific. Therefore, like other authors, she emphasizes the need to be context specific extends from the natural boundaries of geography, community, and culture as these reach into the created domain of cyberspace.

Addressing the Digital Divide: Bridging Asymmetry with Access

Clearly, in light of globalization, the local and the global are being understood in new ways due to the influence of technology and globalization. Geographic structural power, previously associated with the extension of the metropolis, has been further extended into what Jacques Ellul (1964) called the technopolis, which like cities are nodes of power on the virtual dimension. One of the most important fronts for development in this arena will be bridging the digital divide. According to Arne Fjørtoft (1999), the digital divide is a dilemma that we must address in development.

> Today, we are entering the communications and knowledge age—a new and unknown era is just around the corner... Do we know, though, where to go, what to achieve in terms of real human development? The affluent part of the world is hit with an unprecedented overflow of information that is fast increasing day by day...This development is breathtaking, but the corresponding lack of access to information in the poorest countries represents a growing world problem of dramatic dimensions. (p. 403)

In response to Fjørtoff, we may not know where we are going, but we are scrambling to find out the appropriate direction in development terms. We are "minding the gap," so to speak, as the convergence increasingly permeates contemporary reality, but persists to leave many populations out of this new world order.

The National Telecommunications and Information Administration of the United States Department of Commerce published the report *Falling Through the Net: Toward Digital Inclusion* (October 2000). This report showed, in almost all categories studied, that there is a digital divide in the United States, albeit with an upward trend. The report showed that income level, education, race, and geography are large determinants of who has access to the Internet. Higher income households in urban areas are more than 20 times more likely to have home access. While almost 60 percent with an income of $75,000 and above frequent the Internet from any location, only 16 percent of those with an income below $10,000 use the Internet. Individuals with an income of $25,000 and below cited income as the main obstacle to Internet access. Households in rural areas are significantly less likely, sometimes half as likely, to have Internet access as compared to those in urban areas. About 60 percent of individuals with college degrees use the Internet, are ten times more likely to have Internet access at work, are 8 times more likely to have a computer, and 16 times more likely to have Internet access as compared to those with less education. With income held as a constant, Black and Hispanic households were the least likely to have access to the Internet, shown to be 2/5 as likely to have access than White populations.

While Internet use around the world has more than doubled since 1998 from 2.4 percent to 6.7 percent in 2000, according to the 2001 UNDP Human Development Report *Making New Technologies Work For Human Development*, access and use is clearly concentrated. Though data are limited on the demography of Internet users, Internet use is clearly concentrated. In most countries, Internet users are predominantly urban and located in certain regions, better educated and wealthier, younger, and male. However, in

the United States, young women lead Internet use at 51% of total Internet users. (p. 40) From the approximate 313 billion existing web pages, English is the dominant language. 68.4% of web pages are in English in comparison to 5.9% in Japanese, 5.8% in German, 3.9% in Chinese, 3.0% in French, 2.4% in Spanish, 1.9% in Russian, 1.6% in Italian, 1.4% in Portuguese, 1.3% in Korean, and 4.6% in other various languages. (Vilaweb.com, as quoted by eMarketer 2001)

In response to this asymmetry, the Okinawa Charter on Global Information Society (IT Charter) was adopted at the Kyushu-Okinawa Summit of July 2000. During the Summit, the G8 decided to establish a Digital Opportunity Taskforce (dot force) to devise strategies to eliminate the digital divide to be summarized at the next Summit to G8 leaders in Genoa, Italy in 2001 because, according to the dot force: "The digital divide is threatening to exacerbate the existing social and economic inequalities between countries and communities, so the potential costs of inaction are greater than ever before." (www.dotforce.com)

The dot force released *Digital Opportunities for All: Meeting the Challenge* May 11, 2001, a report about the digital divide that includes a proposal for a Genoa Plan of Action. According to their report:

> One third of the world population has never made a telephone call. Seventy percent of the world's poor live in rural and remote areas, where access to information and communications technologies, even to a telephone, is often scarce. Most of the information exchanged over global networks such as the Internet is in English, the language of less than ten percent of the world's population. The "digital divide" is, in effect, a reflection of existing broader socio-economic inequalities and can be characterized by insufficient infrastructure, high cost of access, inappropriate or weak policy regimes, inefficiencies in the provision of telecommunication networks and services, lack of locally created content, and uneven ability to derive economic and social benefits from information-intensive activities. (Dotforce, 2001, pp. 6-7)

Also conscious of the digital divide, the United Nations created a 37-member Task Force on Information and Communications Technology on February 22, 2001 to assist developing nations. The impetus of the task force is "...to help form partnerships between developing nations, international organizations and private companies to accelerate the expansion of information technologies." ("U.N. Report on bridging digital divide", 2001)

Gender, ICT Development, and Sustainability

Clearly, empowering disenfranchised groups in a globalized environment is at the center of development, especially the empowerment of women. Providing IT opportunities to women around the world is becoming increasingly at the center of discussion of policymakers, planners and the implementation of action. An empowerment approach in development is therefore appropriate to build their capacity. Serageldin and Olawaye explain empowerment in relation to resources. Serageldin relates empowerment to voice and access to resources while (Serageldin, 1991) Olawaye relates it to advantages and opportunities (Olawaye, 1999). The empowerment concept is important in application in development because development itself is uneven. Margaret Schuler notes the uneven quality of development at large, especially that of women. (Schuler, 1986) Likewise, Saskia Everts (1998) identifies economic empowerment as important for development planning in addressing the needs of women and especially their economic needs.

Importantly, the contemporary focus on gender is not concerned with biological differences between men and women but rather the social relationship *between* them. Moser (1993) delineates the Women in Development (WID) approach and the Gender and Development (GAD) approach, emphasizing that even although both are oftentimes used interchangeably, they have different histories and orientations. Whereas the WID approach tends to focus on inclusion of women, the GAD approach focuses on the

subordinate status of women in relation to men. Current academic research elaborates the necessity of focusing on the GAD approach.

According to the United Nations, information communication technology (ICT) is the third most important issue facing women globally, ranking only after poverty and violence against women. Hafkin and Taggart in their June 2001 USAID report, *Gender, Information Technology, and Developing Countries: An Analytic Study,* discuss the current global situation for women and ICT. The authors stress that gender is a consideration that must be taken on early in the ICT development process. The authors also argue that the debate between basic needs and ICT development is moot since ICT is an important tool leading women out of poverty by providing access to resources on many levels.

> More and more concern is being shown about the impact of those left on the other side of the digital divide—the division between the information "haves" and "have nots." Most women within developing countries are in the deepest part of the divide—further removed from the information age than the men whose poverty they share. If access to and use of these technologies is directly linked to social and economic development, then it is imperative to ensure that women in developing countries understand the significance of these technologies and use them. If not, they will become further marginalized from the mainstream of their counties and their world. (Hafkin, 2001, p. 1)

On the other hand, it is very important that we do not overemphasize the necessity of ICT as another extension of the linear modernization paradigm of development (economic growth/wealth= more of everything=development) in new abstracted economic terms. For example, instead of measuring GNP we are measuring connectivity to the Internet. Furthermore, we need to question whether ICT development will further dependencies of developing countries. In other words, will ICT development be sustainable? Finally, it is important to be conscientious of hegemony in the very

assumption of development. (Escobar, 1994) The outsider privileged perspective of development professionals may assume worldviews that are not shared by insiders and only exaggerate the importance of an issue to a population of concern. (Chambers, 1983) The importance of equity and participation in development needs to be emphasized if ICT development is to be effective and appropriate. In this way, participation and collaboration play an important role in the sustainability of any development initiative. Axinn and Axinn (1997) elaborate on the outsider/insider relationship in development and the importance of equity.

> Many people failed to recognize that the development of any country, state, or district must be continuously driven by people from within that place, not by outsiders. Most scholars and practitioners failed to recognize that equity is a necessary condition of development. If the rich get richer and the poor become poorer and more in number, such a development will not be sustainable over time. If development excludes women and children, it is not sustainable. (Axinn, 1997, p. 38)

Thinking globally about the digital divide involves thinking non-linearly about development cycles, i.e., thinking systemically, in circles. One of the ways in which we can visually assess or locate the problem is by understanding its position within what Axinn and Axinn call the development cycle. The model of this cycle is a non-linear, orbital trajectory between underdevelopment, balanced development, overdevelopment, and then again balanced development. This model of the development cycle indicates the fluidity and momentum of development and the location of the phenomenon along the cycle. (Axinn & Axinn, 1997, p. 54) This model is a useful tool for diagramming the imbalance of IT development today, an asymmetry called the digital divide. Clearly, this model would display underdevelopment, according to geography and population demographics of marginalized

groups, and overdevelopment by the most privileged groups overwhelmed with information flows.

To summarize, the concepts of geography and reality, local and global, rural and urban are central to the theory and practice of development, yet are changing in light of globalization. With technology, we revisit the familiar with new inspiration, as in when we saw the whole planet for the first time. This vision was hosted by technology and inspired society further toward conceptualizing globalization. Research about the digital divide is affecting organizational agendas in the form of planning and action. Initiatives are increasingly being geared to the needs of women, according to a Gender and Development paradigm that fosters empowerment and values gender balanced participation at the outset of planning. While recognizing the needs of marginalized groups suffering the digital divide, development professionals need to be cautious of their assumptions and privileged perspectives so that they are not assuming too much. In this sense, collaboration and participation that empowers the marginalized groups may simultaneously disempower any outsiders in the development process and therefore it is necessary to provide alternative perspectives. (Axinn & Axinn 1997; Chambers, 1983) Efforts to address the digital divide will be sustainable if stakeholders of marginalized groups are active in defining their own development. Merely measuring Internet connectivity and subsequently responding with technical assistance approaches to development may be seen as only an extension of the modernization paradigm, abstracting the measurement of economic viability by associating it with connectivity. Furthermore, contextual considerations must be understood and not lost in the assumption of global convergence. Even when the classic geographic distinctions are shifting due to

globalization and technology, each location manifests these shifts uniquely. As definitions of reality are shifting, development studies need to revise conceptualization and vocabulary in response to these changes as well as revisit notions of space. Meanwhile, the overlap of actual space with cyberspace will provide new venues for development studies to provide insight.

Communication Theory

Communication scholar Harold Innes asserts that bias is built within communication technology. According to Innes, communication use under commercial systems of ownership and control creates monopolies and systems of dependency. "The new media centralize and monopolize civic knowledge and, as importantly, the techniques of knowing. People become consumers of information as they become consumers of everything else, and as consumers they stand dependent on centralized sources of supply...All this apparatus generates is continuous change and obsolesce time is destroyed, the right to tradition is lost." (Carey 1992, p. 169) According to Innes, people can disengage from dependency upon communication monopolies, "When they are capable, through the control of knowledge and resources, of producing goods for themselves..." (Carey 1992, p. 167)

At a basic dimension, concern among scholars interested in the role of an Information Age is the understanding of information as a resource in a constant state of development. According to Mowlana, "On the one hand, there is the promise of the globalization of personal communication with its potential to empower individuals. On the other hand, there is the reality of globalization: continuing centralization of mass communications, with few players (often international corporations) controlling the

choke points, leaving the overwhelming majority of the world's people increasingly marginalized on the periphery." (Mowlana, 1997, p. 16)

Critical and cultural communication theory, social globalization theory, and institutional economic theory can be used to approach an understanding of indigenous community access to and use of communication. Furthermore, the distributional consequences of mass media, particularly new media, display that information gaps can be problematic for indigenous groups existing outside of the mainstream culture. Thus, communication can be understood as a tool of development in the indigenous circumstance where communication needs are identified.

Inversely, understanding impacts of communication technology upon culture are important. Communication's system theory and networks and convergence theory provide the perspective that exclusion from the mainstream further preserves indigenous culture. These theories explain how acculturation occurs between groups having increasing contact. According to Kincaid, "...the more the communication, the greater the convergence; and the less the communication, the greater the divergence...cultures differ from one another because there is less contact between cultures than within a culture. If everyone communicated with others outside of their culture as much as they do with others in the group, cultures would soon disappear." (Littlejohn 1992, p. 57)

Viewing globalization and related technology in development as either a social savior or a tool of domination is another subject for the politicized communication scholarship dichotomy. Such a debate overlooks the inescapable cultural impacts of such communication technology more closely association with anthropological concerns. For

example, cyberculture is a newer domain for anthropologists as well as for communication scholars (Escobar, 1994).

According to Mander (1991),

> Computer technology has sprung us headlong into an entirely new existence, one that will permanently affect our lives and the lives of our children and grandchildren. It will speed up profound changes on the planet, yet there is no meaningful debate about it, no ferment, no critical analysis of the consequences. As usual, the major beneficiaries are permitted to define the parameters of our understanding. (p. 53)

In general, development and cultural preservation can make for strange bedfellows, displaying characteristics that can be mutually exclusive. Indeed, the best laid development plans can result in outcomes of serious maldevelopment. In light of this problem, questioning interventionist aims of development is paramount. Consequently, conscious nondevelopment strategies could be classified as development. Accordingly, it would be dangerous to assume that indigenous communities need to bridge information gaps. Nevertheless, to assume that they should not build better information bridges would be equally dangerous, if not remiss. Thus, assessment of the connective local-global context illuminates the direction of the appropriate development path. Exploring the relationship between these theories provides a transdisciplinary perspective framing how indigenous communities may be utilizing the Internet.

The concerns from both critical and mainstream communication theory are relevant to the study of indigenous telecommunication development. While critical theory sights what is problematic with media technology, mainstream theory seeks corrective and progressive paths. The sharp dichotomy between the two theoretical positions is too polarized to capture the more holistic dynamic of indigenous communication. In addition, cultural communication approaches, interested in the cultural phenomenon produced

from the social interplay with communication, are not necessarily concerned with development. Therefore, to rely on a hypothesis from a theoretic discipline to understand the indigenous telecommunication development context would be limiting. For this reason, a grounded theory approach to the problem may be necessary to assess this new dimension of social transaction. Thus, assessment of the social context illuminates the direction of the developmental path. Exploring the relationships between these theories will provide a transdisciplinary perspective framing the purpose of indigenous communication development.

The scholarship discussed here draws from the fields of Anthropology (cultural anthropology, cyberanthropology), Communications (the political economy of communications, cultural communications, and Telecommunications), Institutional Economics, and Sociology as they come to bear upon Development. Scholarship about the importance of communication development for marginalized communities is represented from the two extremes: the optimistic and the critical perspectives. This delineation of global ideology aligns with theoretical divides between mainstream and critical theoretical approaches in communication study, as in other fields. According to Tsui:

> The predominant 'mainstream perspective' is optimistic about the impacts of new communication technologies in Third World countries. Scholars focus on research on economic and social benefits accruing from these technologies, and are concerned with the removal of organizational and infrastructural constraints in Third World countries for the realization of these technologies' potential. 'Critical perspective' is skeptical of the positive impacts claimed for technologies promoted by the mainstream perspective. Instead of focusing on the potential of technologies, scholars analyze the social shaping of the technologies. They urge for a cautious approach toward the adoption of Western technologies in Third World contexts. (1991, p. 70)

Prakash (1994) elaborates on this exchange in emphasizing that local struggles succeed by awareness of their struggle in context of the global. Nevertheless, he warns that being globally aware is not necessarily the same as being a "globalist." (Prakash 1994) For example, being aware of crime in one's city to survive, and acting accordingly, is not the same as being a criminal. The difference between a globalist and one who is merely reactive to or surviving within a system led by globalists is clear to Prakash, and perhaps is best understood as a marked difference in practice and ideology.

Douglas Kellner points to the impetus of cultural communications scholarship as the connection between media and power and understanding culture as powerfully influenced by media technology and structure. Kellner elaborates on the concept of media culture and equates it with a cultural form or evidence of cultural artifact. (Kellner, 1995)

In light of globalization and culture communication studies, Geoffrey Reeves (1993, p. 53) discusses the media imperialism thesis of Oliver Boyd-Barret from a cultural communications perspective. Boyd-Barret was a critic of the dominant communications development paradigm developed along the lines of structural functionalism, i.e., modernization or growth perspectives. Boyd-Barret's media imperialism thesis analyzed how cultural relations influenced and determined the production and character of media in "Third World Countries." The theory sought to respond to previous imperialist and dependency theories and later evolved to focus on the uneven flow of international communications, but with little analysis of context or data. Reeves emphasizes that internal factors of a society need to be analyzed to better understand these uneven flows.

Telecommunication as Culture and Community Development

Similar to the political economy based theories in the critical tradition, it has been proposed that one of the most critical global impacts of the mass media is the perpetuation of an information ghetto. (Marvin, 1996) Theorists propose that the notion of community has expanded from geographically encased communities to those with "fuzzy" boundaries, making the concept of community increasingly complicated and hard to define. In fact, community is now an imaginative concept involving technologically boundless human connection, where definitions between community and mass media technology continue to dissolve. (Carey, 1992, 136) For example, the information superhighway is a massive common point of convergent consciousness, the only space we will perhaps be able to etymologically label as the post-modern community. Like the abstraction of currency being electronically transmitted from one location to another, highly abstracted realities are beginning to surpass obstacles of geography and concreteness. However, the marginalization of disenfranchised communities is exacerbated, while the reality of their geography is compounded by the New Media resources needed to survive. Thus, the digital divide is created. Tichenor was the first to propose that an increased knowledge gap existed and his hypothesis is known as the Knowledge Gap. The dynamic of the Knowledge Gap is that as a mass media technology increases in society, a gap is created between those who can afford to acquire the technology and those of a lower economic status that cannot. (Tichenor, 1970)

Graham and Marvin discuss what is now known as the digital divide as an information ghetto similar to what is recognized in communication theory as the Knowledge or Communication Gap Hypothesis. According to the authors:

> While affluent and elite groups are beginning to orient themselves to the Internet and home informatics and telematics systems, other groups are excluded by price, lack of skills or threaten to be exploited at home by such new technologies. Advanced telecommunications and transport networks open up the world to be experienced as a single global system for some. But others remain physically trapped in 'information ghettos' where even the basic telephone connection is far from a universal luxury. (Marvin, 1996, p.37)

As early as the late 1880s, technological impact on reality was related to communication and technological development. Herbert Spencer's vision of the organic conception of society elaborated an observation of the simultaneous technological relationship between the telegraph and the railroad. According to Spencer;

> The relationship between communication and transportation...the nerves and arteries of society—had been realized in the parallel growth of the telegraph and railroad; a thoroughly encephelated social nervous system with the control mechanism of communication divorced from the physical movement of people with things. (Carey, 1992, p. 143)

In addition, Sociology attributed communication transactions as defining community. The Chicago School not only defined communication as "...The entire process whereby a culture is brought into existence, maintained in time, and sedimented into institutions," but also attributed mass communication as the impetus for bringing forth public existence. (Carey, 1992, p. 145) Today, individual, community, and public reality continues to expand. Presence and existence are driven by telecommunication technology at an increasingly local-global level via telecommunication tools.

Furthermore, the expansion of reality through telecommunication is different today than former systems, understood as mass media. Mass media, as defined by James Turow, are: "The technological vehicles through which mass communication takes place...Mass communication is a process that involves the creation of messages...the use

of technology in the process as well as the involvement of large numbers of people." (Turow, 1992, p. 9)

In the vein of critical media theory, agenda setting asserts that media institutions are able to define broad categories of meaning, creating boundaries of the real and unreal—rendering people, places, things and events related to them—both visible and invisible within the reign of its agenda. Voice and visibility within the global information stream has been correlated with economic power in both critical and cultural communication theory. (Littlejohn, 1992, p. 348) Due to communication technology, access to global discourse, or, the global community, is no longer the domain of mass media institutions. Instead, access to the global commons is at the fingertips of information adept individuals that are economically poised for technological empowerment. The World-Wide-Web is an obvious example of this phenomenon. In the Information Age, global dialog is a breakthrough for those who can afford it, but not for those who are unable to participate. If a geographic community is excluded from contributions that construct a global information commons, they are therefore not present to participate in transactions at this level. In other words, they do not exist within a "common" (or, to retain the concept of agency this is best described as adverbial, "commonized") global dimension, or able to participate in a matrix of transactions reinforcing this technological reality. Communication development, then, is a serious concern. According to William Wresch;

> It would be naïve to assume information and its benefits would be equally available to everyone. On the other hand, it seems particularly callous to ignore those being left behind. The poor, cut off by geography or language, are powerless and they know it. They understand that living away from information does not free them from the stresses of the modern age—it leaves them to be victimized...Others will determine their fate. Others may or may not even bother

> to tell them what future has been selected for them. The poor won't even know the discussion is occurring, much less have a chance to join in. If information is the last train of the twentieth century, we are leaving many people and whole regions of the world behind. (Wresch, 1996, p. 136)

Both critical communication and cultural communication instructs an understanding of how mass media, as capitalistic institutions, have the opportunity to define meaning for society. Cultural communication theorist James Carey defines communication as, "A symbolic process whereby reality is produced, maintained, repaired, and transformed." (Carey, 1992, p.23) Critical communication theorists assert that the power of reality making is unevenly distributed under the structure of established institutional frameworks.

In addition, an institutional economics analysis would assist critical communication and cultural communication theories in conceptualizing mass media as reality producers with distributional impact related to profit maximizing functions of capitalistic economic institutions. Precepts of institutional economic theory, therefore, would extend critical approaches by clarifying economic relationships that create mass media power, isolating the level of mass media analysis at the institutional level. By particularly uniting communication and economic theory, the mass media can be understood as organizations working within an economic institutional framework having socio-cultural impact. Institutional economic theorist Douglass C. North asserts that;

> Institutions are the rules of the game in a society, or, more formally, are the humanly devised constraints that shape human interaction...Institutional constraints include both what individuals are prohibited from doing and, sometimes, under what conditions some individuals are permitted to undertake certain activities. They are the framework within which human interaction takes place. (North, 1990, pp. 4-5)

Furthermore, North delineates institutions from organizations.

> Like institutions, organizations provide a structure to human interaction...They are groups of individuals bound by some common purpose to achieve objectives...Both what organizations come into existence and how they evolve are fundamentally influenced by the institutional framework. In turn they influence how the institutional framework evolves. (North, 1990, p. 5)

Communication scholar Harold Innes explains that bias is built within communication technology. According to Innes, communication use under commercial systems of ownership and control creates monopolies and systems of dependency.

> The new media centralize and monopolize civic knowledge and, as importantly, the techniques of knowing. People become consumers of information as they become consumers of everything else, and as consumers they stand dependent on centralized sources of supply...All this apparatus generates is continuous change and obsolescence: time is destroyed, the right to tradition is lost. (Carey, 1992, p. 169)

According to Innes, people can disengage from dependency upon communication monopolies, "When they are capable, through the control of knowledge and resources, of producing goods for themselves." (Carey, 1992, p. 167)

Tehranian, who argues for a "cautiously optimistic view" of communication development has developed a typology of four attitude categories regarding information technology that include the Technostructuralist, the Technophile, the Technophobe and the Technonuetrals. Technostructuralists...believe that, "...technologies are by themselves neither good or bad, nor neutral. This is because their impact is always mediated through the institutional arrangements and social forces, of which they are an integral part." (Tehranian, 1988, 31)

Tsui summarizes these categories:

> Technophiles are the optimists who believe that the present 'technological revolution' will finally trickle down to the peripheries...The technophobes are, by contrast, rather pessimistic about such promises, and they point to the danger of cultural homogenization of national civilizations and further dependence of Third World Countries on First World Countries...Technonuetrals are the consultants

> who have little theoretical background but have considerable economic interests at stake. They often assume a neutral position with regard to the question of effects. (Tsui, 1991, p. 71)

The Concepts of the Technopeasant and the Technocrat

The dilemma of the technopeasant versus the technocrat was defined in Colette Dowling's The Techno/Peasant Survival Manuel as a reaction to the social divisions created by information control mediated through technological access. Colette defined technocrats as those who are technologically literate controlling a technologically illiterate technopeasantry. (Dowling, 1980). The obvious fusion of old and new language used to define a new social phenomenon was both inventive and insightful. Nevertheless, Dowling's language is also insidiously assumptive. Associating aristocrats with technological power and peasants with technological illiteracy is severely polar, and therefore, limiting. Dowling's definitions in context may not be problematic, but the class-based assumptions that such ideas perpetuate create another type of illiteracy, blinding real-world dynamics with outmoded hypotheses. In this sense, we understand that the use of technology is not relegated to the rich or the upper class. Contrariwise, shifting the term technopeasantry to refer to technologically empowered peasants is *transformative*—elucidating social dynamics associated with globalization, undoing old assumptions about technology, as well as representing a concept to identify a growing, even paradoxical phenomenon.

The concept of the technocrat was elaborated by French sociologist Jaques Ellul in 1990 in his continuation of a discussion of technique in his book, *The Technological Bluff.* Ellul was among scholars describing globalization before these complex concepts, interrelating various systems, were combined under the umbrella of nomenclature such as

globalization embodies today. In Ellul's career, he has talked much about the difference between technique (application) and technology (discourse, ideology). Ellul, who described globalization in his own terms with various metaphors about elaborate systems without using the term "globalization," that now describes similar phenomena. Ellul describes the technological bluff that is today relative to globalization critique:

> The bluff consists essentially of rearranging everything in terms of technical progress, which with prodigious diversification offers us in every direction such varied possibilities that we can imagine nothing else.... So many successes and exploits are ascribed to the techniques (without regard for the cost or utility or risk), because technique is regarded in advance as the only solution to collective problems (unemployment, Third World misery, pollution, war) or individual problems (health, family life, even the meaning of life), and because at the same time it is seen as the only chance for progress and development in every society. There is a bluff here because the effective possibilities are multiplied a hundredfold in such discussions and the negative aspects are radically concealed. But the bluff is not without great effect....It also causes us to live in a world of diversion and illusion which goes far beyond that of ten years ago. It finally sucks us into this world by banishing all our ancient reservations and fears. (Ellul 1990, xvi)

According to Ellul, the engine behind this bluff is operated by the technocrats. The technocrats are the aristocracy of today, a group comprised of an elite stratum of society equipped at various levels to understand, create, use, manipulate, and plan technological applications in our world. Ellul describes this group as a pervasive and increasingly omnipresent power with a collective agenda and mobility. These technocrats, like aristocrats, have access to practices and rights that only they have the right to engage. One of the ways in which the aristocracy maintains its privilege is by guarding its way of knowing through codified language that is not spoken or used by the common people. Ellul illustrates this point with examples from the actual aristocracy of medieval knights to the artificial aristocracy of the Freemasons.

Furthermore, Ellul emphasizes that technocrats have placed themselves at the center of almost every organism by creating a dependence upon them to "exercise a totality of powers." Technocrats have created their own environment, the extension of the metropolis is now the *technopolis* and the *technopole*. Whereas the *technopolis* is a "motive center for society and the economy" the *technopole* is a "rallying point" for researchers, industrialists, students, and financiers. Ellul cites Americans as having developed the first technopolis in Palo Alto, California in the 1930's when David Packard and William R. Hewlett's garage invention of test instruments and the subsequent formation of Texas Instruments that led to the creation of Silicon Valley between 1950 and 1960.

Ellul's (1996) description of the technopolis describes aspects of globalization in that "economic, financial, political, and administrative powers are controlled by technocrats." (p.29) Beyond the *technopole* and the *technopolis*, the technocrats tend to be futurists creating new spaces akin to their ideologies of space through futuring. The critique is that their exclusive privilege and language inversely impacts their ability to see beyond their own paradigm and worldview. Technocrats have a myopic worldview based on technology and tend to be ignorant of the realities of the world they plan leave behind in the activity of futuring. Ellul characterizes the technocrats as sheltered and naïve. They tend not to consider the outcomes of their technological advances, and they tend to be overly optimistic, if not blithely nonchalant, about access to technology. In consideration of by products of technology,

> They put all such things in parentheses. The technocrats have a strange blindness to the complex reality of the world and to the lessons of common sense...Their great knowledge and narrow specialization prevent them from understanding questions

> outside their field. Yet they write authoritatively about tomorrow's world. (Ellul, 1986, p. 30)

It is clear that to best address the problem of the digital divide, development scholars and practitioners need to be scholar-practitioners and able to integrate, respect, and choose among multidisciplinary perspectives to avoid the blinders of one position or field. Antonio Gramsci discusses this sort of blindness, as do others, as related to the dominant paradigm of objectivism. Gramsci's premise is Marxist, the intellectual hegemony of the elites is "purified" by grounding research continuously with life itself, and by the reality and life of the people. In his Prison Notebook, Gramsci writes:

> The question posed here was the one we have already referred to, namely this: is a philosophical movement properly so called when it is devoted to creating a specialized culture among restricted intellectual groups, or rather when, and only when, in the process of elaborating a form of thought superior to 'common sense' and coherent on a scientific plane, it never forgets to remain in contact with the 'simple' and indeed finds in this contact the source of the problems it sets out to study and to resolve? Only by this contact does a philosophy become 'historical,' purify itself of intellectualistic elements of an individual character and become 'life.' (Gramsci, 1992, p. 330)

In review, the view of technology as only from the critical view becomes myopic itself. For example, the definitions of technopeasant and technocrat of Dowling and Ellul, in context, may not be problematic, but the essentializing assumptions populations due to these concepts could perpetuate another type of myopia, being blind of the complexity of real-world dynamics due to yet another staid hypotheses. The important thing to actualize, as development professionals, is looking into and participating in the field itself, *the specific context of the actual world,* to see what is happening and make sense of it —while at the same time being cognizant of the many arguments that affect development theory and application. In this sense, we could in the future come to understand that the use of technology is not relegated to the rich or the upper class.

Contrariwise, shifting, co-opting or appropriating the term technopeasantry to refer to technologically empowered peasants could be transformative—elucidating the positive social dynamics associated within globalization, undoing old assumptions about technology, as well as constructing a concept to identify a growing, even paradoxical phenomenon. According to Trevor Haywood, we need to "free up" previous lines of thought by integrating them with states of mind equally willing to dump outmoded ideas. According to Haywood:

> It may be that the relentless ambiguity, uncertainty and 'new and shocking valuations' of modern challenges now require substantial unlearning before we can successfully address the proliferation of non-familiar patterns. ...The creative openness needed to address repeated uniqueness will require us to be hospitable to new kinds of wisdoms, wisdoms of holism rather than reductionism, of expansion rather than confinement, wisdoms that can break out of the old information-knowledge sequence and embrace unexpected futures with greater enthusiasm. Achieving this will require us to acknowledge and give a place to types of creativity that we may have difficulty in explaining by traditional information routes. (Haywood, 1995, p.8)

Haywood cites T.S. Elliot's post WW II call for an openness to a new world perspective. The poem was written in 1944 as society was moving in a new direction. Today, we can understand that we are always in evolution and revolution and these words can inspire our creativity into new realms, with the wisdoms of the past but yet without their hegemony.

> There is it seems to us
> At best, only a limited value
> In the knowledge derived from experience
> The knowledge imposes a pattern, and falsifies,
> For the pattern is new in every moment
> And every moment is a new and shocking
> Valuation of all we have been.

In conclusion, concern for indigenous communities in the matrix of globalization, technology and development spans beyond mere academic fields. Clearly, to better understand indigenous use of Internet, scholar-practitioners avoid myopia by reaching beyond the disciplines, transcending them, and grounding theoretical modes with knowledge from the field in constant praxis. If every moment is, in fact, new and unlike anything in our experience, scholar-practitioners involved in the theory and practice of development, are learning to create and understand new experience and experience anew within the specific contexts in which they occur. Scholar-practitioners are informed by praxis, the reflection between the continuum of theory and practice. This fluidity between rich context and streamline theorems provides appropriate, creative space for sustainable development initiatives.

Chapter Three: Methodology

The Portraiture Method of Inquiry

The research approach in Resource Development toward an integrative, multidisciplinary, and transdisciplinary study is to reach beyond disciplines to bridge, deconstruct, and reconstruct paradigms as a truly meaningful mode of engagement. Such an approach has the potential to strengthen the knowledge base and find a broader perspective to attain sustainable solutions to practical and theoretical problems. In order to have such a perspective, transdisciplinary researchers must be able to draw from various categories of knowledge and successfully work within different frames; comparing, contrasting, merging and integrating as necessary. According to Frijof Capra (1996), "In reality, scientific facts emerge out of an entire constellation of human perceptions, values, and actions—in one word, out of a paradigm—from which they cannot be separated." (p. 11) Creswell suggests that a paradigmatic approach "...of choice be based on worldview or assumptions of each paradigm, training and experience, psychological attributes, the nature of the problem, and the audience for the study." (Creswell, 1994, p. 15) For this reason, it is important to clarify the position as researcher. The ethos and guiding principles of Participatory Action Research (PAR) were combined with the method of inquiry known as Portraiture to capture a more holistic understanding of my role as researcher in exploring how e-commerce developed in the very specific case of the village of Teotitlán Del Valle.

Utilizing the qualitative methodology of Portraiture, as developed by Lawerence-Lightfoot and Davis (Lawrence-Lightfoot, 1997) the portraitist identifies emergent themes and central stories and rich specificity to inform the universal where, "The scientist and the artist are both claiming that in the particular resides the general."

(Lawrence-Lightfoot, 1997)14) The strength of Portraiture is in capturing the single case. "The portraitist is very interested in the single case because she believes that embedded in it the reader will discover resonant universal themes. The more specific, the more subtle the description, the more likely it is to evoke identification. Additionally, Portraiture does not omit the context, but rather seeks to convey to an audience the particular human experience in as rich detail as possible, including the position, viewpoint, and bias of the researcher. In this way, a holistic picture of the specific phenomenon embedded in context is created as portrait. In the end, the portrait is painted for a broad audience, not only the academy. (Lawrence-Lightfoot, 1997, p.14)

My Position as Portraitist: Personal Perspectives and PAR

At the outset of my doctorate career in Resource Development, my goal was to work with indigenous communities seeking greater voice and self-reliance by utilizing endogenous development in relation to cultural preservation and mass communication problems. Endogenous development is development that is,

> ...based, firstly, on the actual circumstances of societies and the needs and aspirations of their populations and, secondly, on the existing and potential resources whether human, material, technical, or financial, which any such society may possess, while taking into account the numerous constraints that are inherent in such circumstances. (Tri, 1986 p. 4)

My background in communications and journalism led to an interest in the marginal voice as concerned with various communication tools and the mass media. As a woman of both Native American and European heritage, I have been interested in how indigenous cultures are bridging their survival as outsiders in the currents of dominant society by utilizing Information Communication Technology (ICT).

My research approach has been shaped most by personal experience and the literature that speaks to the need for integration of scholarship and practice, or discusses the *modus operandi* of the scholar-practitioner. Alternative responses to the more dominant model of Technical Rationality are necessary for development professionals as well as other types of researchers seeking development as appropriate change. In the field of development, the research ideology that most closely resonates with my personal ethics and values along academic lines is Participatory Action Research (PAR). Ideologically, PAR is harmonious with my values and engages my whole person, versus merely the professional aspect of myself. PAR is admittedly personal, and in that sense, is an engaging form of problem solving that is satisfying on multiple levels. Participatory Action Research, therefore, is an ideological stance in the research process. Willms explains the process:

> Participatory action-research is based on this liberating understanding of the nature of inquiry. It is about individuals and groups researching their personal beings, social-cultural settings, and experiences...Knowledge is generated: a way of knowing with the mind and heart that incorporates personal and social understandings and authenticates experiences. The recovery of personal and social histories, reexamination of realities, and regaining of power through deliberate actions leads to the production of knowledge that can nurture, empower, and liberate persons and groups to achieve a more humane and equitable world. (Willms, 1997, p. 7-8)

Delineating Participatory Action Research from Action Research

As alternative paradigms of the social sciences, Participatory Action Research (PAR) and Action Research (AR) are distinctly different forms of inquiry that belong to a family of action-based research types. The two are distinctly different in emphasis, ideological history, and geographic origin, yet share enough similarities and central concepts to be often times confused for one another. AR is a non-critical, consensual,

reformist approach originating in the westernized perspective of OECD countries (Kurt Lewin of the United States and A. Curle of England), whereas PAR is a critical, radical, and political approach hailing from the Third Word. (Fear and Lichty, 1990) According to Fear and Lichty;

> The dual commitment to the knowledge base and problem solving is fundamental to action research. Community problem solving is not seen as more or less important vs. contributing to the knowledge base. In participatory research, community problem solving is the focal point. (p.13)

The main objective of AR is a mutually rewarding interchange between science and the public to address an immediate problem through a process of participation. "The action research process must produce scientifically acceptable and socially affirmable results...the goal is to enhance the public's understanding of science, as well as the scientist's understanding of the public." (Fear, et al. 1983, p.127) And, according to Rapoport, "Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework." (Rapoport, 1970, p. 499)

The main objective of PAR is the empowerment of less-powerful populations and the equalization of relationships through restructuring or social transformation, reflecting a more socialist and sometimes revolutionary or Marxist perspective very often unique and organic to indigenous communities of Latin America. PAR is a type of ideology that is a critical response to hegemony in scientific knowledge making. PAR calls for a type of participation that, at the outset, attempts to reduce inequality in and throughout the research process, as well as identifies the reduction of inequality as an end result of the process. Technical assistance models, associated with planning professions, seek to accomplish a task or a limited amount of tasks for clientele.

Unlike the more technical assistance approach of AR, the goal of this research is to address a problem that is understood as part of or connected to larger, more systemic problems of inequality. PAR proposes to be a new science for the people. It is more akin to a combination of self-help and conflict models of community development. Self-help models understand community development change based upon people working together to improve their situation, whereas conflict models understand the need for more just and equal distribution of resources with a focus on those with limited resources. According to Fals-Borda, PAR is an alternative science in response to the biased, cultural product of the dominant forms of science. According to Fals-Borda, this is a science that serves the interest of common people as well as those that are exploited, oppressed or otherwise unvoiced. (Fals-Borda, 1980)

In PAR, the academic/practitioner, Cartesian/experimental, internal/external, subject/object dichotomy becomes blurred within the tensions of *praxis*. According to Fals-Borda, understanding begins with *vivencia*, a concept constructed by Spanish philosopher José Ortea y Gasset. *Vivencia* in PAR is akin to the concept of *tacit knowing* asserted by Michael Polyani in Schön's *reflection-in-action* construct related to AR, in that both are a type of knowledge. Vivencia is a type of contextual knowing that is formed from the awakening or the experience of *conscientização,* [4] a concept coined by Paulo Freire (1970). According to Fals-Borda,

> We experience vivencia when we intuitively comprehend a thing or a process, when we feel, enjoy, and understand its reality, and when we place our being in a wider context. For the purposes of PAR, vivencia combines with commitment in

[4] "The term conscientização refers to learning to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality. See Chapter 3—Translators note." Freire, P. (1970). Preface (M. B. Ramos, Trans.). In *Pedagogy of the oppressed* (1997 ed.). New York: Continuum.

> the sense implied in Marx's Eleventh Thesis on Feuerbach. This combination of experience and commitment leads to a clarification of the notion of for whom is the knowledge that we acquire: it is not for ourselves as intellectuals or functionaries but for the people's base groups (the grass-roots). Moreover, such vivencia recognizes two types of agents of change: the external and the internal, which are unified in one sole purpose, that of achieving shared goals of social transformation. (Fals-Borda, 1986, p.42)

Freire captures both the internal and the external in an understanding of the essence of dialog being *the word.*

> Within the word we find two dimensions, reflection and action, in such radical interaction that if one is sacrificed—even in part—the other immediately suffers. There is no true word that is not at the same time a praxis. Thus, to speak a true word is to transform the world. An unauthentic word, one which is unable to transform reality, results when dichotomy is imposed upon its constructive elements. When a word is deprived of its dimension of action, reflection automatically suffers as well: and the word is changed into idle chatter, into verbalism, into an alienated and alienating 'blah'. It becomes an empty word, on which cannot denounce the world, for denunciation is impossible without a commitment to transform, and there is no transformation without action. (Friere, 1970, p.68)

Freire clarifies these ideas in his equation: *action and reflection is word=work=praxis, sacrifice of action=verbalism, sacrifice of reflection=activism.* This equation also reflects the Christian belief that about action as well. "Faith by itself, if it is not accompanied by action, is dead." and "As the body without the spirit is dead, so faith without deeds is dead." (James 2:17, 2:26 New International)

Freire's critique of verbalism and activism is answered by action and reflection in the word at work, becoming *praxis*. Chambers discusses the importance of action in the development professions by noting that development is, by its very nature, geared toward problem solving and a call to action, differentiating them from the normal professions where problem solving through action is not always presumed. (Chambers, 1993)

In AR, the academic/practitioner, Cartesian/experimental, internal/external, subject/object dichotomy becomes blurred within the tensions Schön talks about as the "art" of the practitioner coming from a type of tension that is similar to praxis which he calls "reflection-in-action." According to Schön,

> Often we cannot say what it is that we know...Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is in our action...both ordinary people and professional practitioners often think about what they are doing, sometimes even while doing it.... It is this entire process of reflection in action which is central to the "art" by which practitioners sometimes deal well with situations of uncertainty, instability, uniqueness, and value conflict. (Schön, 1991, p. 49-50)

Haraway explains grounding of research and practice from a feminist viewpoint by using the term "situated knowledges" as a means of avoiding "gross error and false knowledge of many kinds" in critique of the weakness of scientific objective approaches. (Haraway, 1988) Daly and Cobb (Daly, 1989) warn that *misplaced concreteness* can occur if we do not return to the concrete for inspiration and if we do not avoid excessive professional specialization. In this sense, the scholar-practitioner paradigm, coupled with a multidisciplinary perspective can be seen as fostered in AR and PAR as a means of avoiding *misplaced concreteness*. According to Daly and Cobb, the level of abstraction involved in academic disciplines is not fully realized and, "the result is that conclusions are drawn about the real world by deduction from abstractions with little awareness of the danger involved." (p. 35) Whitehead describes the danger of misplaced concreteness;

> The dangers arising from this aspect of professionalism are great, particularly in our democratic societies. The directive force of reason is weakened. The leading intellects lack balance. They see this set of circumstances or that set; but not both sets together. (Whitehead, 1925, p. 200)

Paulo Freire discusses *conscientização* as awareness of context that results from reflection.

> Reflection upon situationality is reflection about the very condition of existence: critical thinking by means of which people discover each other to be...in a situation....Humankind emerge from their submersion and acquire the ability to intervene in reality as it is unveiled. Intervention in reality—historical awareness itself—thus represents a step forward from emergence, and results from the conscientização of the situation. Conscientização is the deepening of the attitude of awareness characteristic of all emergence. (Freire, 1997) **[PAGE]**

While having different emphases, *vivencia*, *conscientização,* and *tacit knowing* are concepts that differently emphasize the importance of awareness in *personal* and *collective* dimensions of AR and PAR as ways of knowing or navigating. P*raxis* and *reflection-in-action* are similar concepts within the arena of scholar-practitioner. *Reflection-in-action, vivencia*, and *conscientização* are a scientific integration with common sense, the instinctive, and the mundane. In AR and PAR, the human activities of problem solving are understood as alternative ways of knowing in social science that are evoked somewhere between theory and practice in the interplay between concept and action. Kemmis and McTaggart (2000) highlight the Action Research Spiral to display the continuity of an overlapping and changing process that is "fluid, open, and responsive" versus a neat, rigid, linear progression. The Action Research Spiral shows the process of PAR as, "...planning a change, acting and observing the process and consequences of the change, reflecting on these processes and consequences, and then replanning, acting and observing, reflecting, and so on..." (Kemmis & McTaggart, 2000, p. 595)

Willms clarifies the meaning of research in PAR. "Our meaning of research, however, is broader. Research should be understood as a process of rediscovering and

recreating personal and social realities—a definition which recalls the verb "reserchier" in Old French ("rechercher" in modern French), meaning "to look again." (Willms, 1997, p.7)

Both the AR and PAR approaches understand participation as an integral part of the research process. In AR, distinctions between actors in the research are maintained, while in PAR the line between the semantics of "practitioner" and "client" are not utilized and intentionally blurred. Clearly, those who engage in PAR are engaging in a very particular type of action research with emancipation as its end goal. Whereas, the ends of AR are less ideologically specific, and for that reason more amorphous and applicable to many types of audiences, disenfranchised or not, political or not. While AR is built from the more scholarly perceptions of practitioners working collaboratively with clients — communities, organizations, stakeholders, etcetera as they *reflect-in-action*, (subject-object)— PAR is built from the co-perspectives of ordinary people at the grassroots of various backgrounds facing problems and experiencing *conscientização* and *vivencia* (subject-subject).

The goal in PAR is *critical* of existing power structures and emphasizes the necessity of a particular type of participation throughout the research/action process. (Fals-Borda, 1980) Kemmis and McTaggart explain PAR as a continuum of "reaching out" from the context of communities and "reaching in" from different perspectives theories, and discourses. In this way, PAR is a bridging mode of inquiry between the abstract and the concrete that can be very useful for reflective scholar-practitioners seeking to make change. According to Kemmis and McTaggart, PAR connects the global

and the local by transforming both practitioners theories and their practices. (Kemmis & McTaggart, 2000)

In light of my dissertation research, the research paradigms of action research and participatory action research have guided my decision making process about how to proceed and engage with the villagers of Teotitlán Del Valle. The implicit values of the alternative paradigms of AR and PAR speak to my research. PAR speaks the most clearly to my personal journey as it intersects with this research.

> Doing PAR means taking a journey because PAR is about movement—movement away from the way things are to the way things could be. It is about transformation on both personal and social levels. At the heart of this transformation is a research process which involves investigating the circumstances of place; reflecting on the needs, resources, and constraints of the present reality; examining the possible paths to be taken; and consciously moving in new directions. (Willms, 1997, p. 8)

As a doctorate student, the dilemma that I have struggled with is a tension between the ongoing transaction costs or in layman's terms the "do-ability" of continuing research (research funding and general support, limited time, limited resources, family pressures, etcetera) and the personal and professional commitment to community development within a participatory action or collaborative development paradigm. Axinn and Axinn (1997) speak to establishing trust and investing time as an integral part of *genuine collaboration* in international development, involving insiders and outsiders of various levels of backgrounds and fields.

> As an intellectual endeavor, collaboration is not achieved overnight. It takes hard work as people with diverse personalities, professional training, and allegiances, as well as a diverse cultural heritage and frequently diverse languages, attempt to establish a common framework and operational mode to solve problems...There are many types of collaboration, but those most likely to enhance international development will require the type of interpersonal trust and appreciation which also requires an investment of quality time. The formation of a genuine collaborative relationship which will involve individuals or their institutions over

> an extended period of time requires a great deal of time to be invested in the early years. (Axinn & Axinn, p. 94)

Since the ethos of my interaction with weavers from the village has been participatory in nature since the very outset, there is a different set of emergent expectations that I have come to know and to which I have been committed. Certainly, I could merely acknowledge action to date, and reflect upon that action, as next steps in a future project that could act more directly on the identified problem, which could lead to future research projects, participatory action research projects, or otherwise. However, my personal experiences of *conscientização* and *vivencia* have created realizations and ongoing commitments that have emerged from my interactions with weavers in Teotitlán. Another dilemma would be if anyone other than the collective that has been formed would care enough to take these next steps in the same way that the people of Teotitlán and I would hope for any endeavor to be undertaken. After all, this has come to be a shared vision, a shared responsibility, with a shared outcome.

To abandon this commitment when my research needs are met does not align with any of the literature guiding the ethos of the scholar-practitioner. However, for the sake of dissertation research—a research activity bounded by a certain means to an end—it is important for me to understand the scope of this research, its beginnings, its journey, and its end (or the shape of its decided continuum). This research journey has produced enough field data to be used toward the satisfaction of a doctoral dissertation. However, it would go against all of my personal commitments, relationships, the momentum of built social capital and value for AR and PAR as a scholar-practitioner to not be a part of the fuller process to include action and the reflection upon that action. In light of my constraints in conducting collaborative research as a student, I could consider the

dissertation as one part or one phase of a continuum. I could frame a dissertation research project with the data that I have collected, without the long-term expectations associated action in PAR built into that research product. Thus, the focus of my dissertation could be the analyzation of the found problem explaining alternatives for action that could be further pursued with PAR. This would be helpful to the village and could lead to future PAR projects that emerge from the dissertation.

While my research approach to date has been, out of necessity, action research methodology guided by a more radical PAR ideology, it has been my hope to engage in PAR to help resolve a broad problem and to be a part of the solution by contributing meaningful research in collaborative setting, with a liberating or emancipatory outcome. However, what has developed is along the continuum of emergent process not fully in my control ranging between the expert research model and the PAR model. According to Greenwood, Harkavay, and Whyte:

> No one may mandate in advance that a particular research process will become a fully developed participatory action research project. Participation is a process that must be generated. It begins with participatory intent and continues by building participatory processes into the activity within the limits set by the participants and the conditions....we treat participatory action research as an emergent process in all cases, placing it on a continuum ranging from 'expert researcher' to participatory action research. In the 'expert research' model, all authority and execution of research is controlled by the expert researcher. In participatory action research, authority over and execution of the research is a highly collaborative process between expert researchers and members of the organization under study. (Greenwood, 1993, p. 176)

I have come to understand the *reflection-in-action* and *problem setting* concepts asserted by Schön as descriptive of the type of action I have been engaged in with the weavers— sometimes more internal and sometimes more participatory, sometimes static and sometimes manifest.

> When someone reflects-in-action, he becomes a researcher in the practice context. He is not dependent on the categories of established theory and technique, but constructs a new theory of the unique case. His inquiry is not limited to a deliberation about means which depends on a prior agreement about ends. He does not keep means and ends separate, be defines them interactively as he frames a problematic situation....Because his experimenting is a kind of action, implementation is built into his inquiry. (Schön, 1991, pp. 68-69)

In an informal sense, a more participatory approach has become my obligation to the community of weavers. I will surely disappoint the weavers if I walk away with only my needs being fulfilled or by participating only in problem finding but not in participating in a collaborative sense to find solutions. In many ways I have become integrated into this endeavor as a trusted friend and associate, not just an outsider, but a collaborator with an important "outsider" perception held to certain interpersonal expectations of commitment. In this way, I have become a participant informant. I would surely disappoint myself if I did not realize the cycle of a research project from problem discovery to implementing solutions, the driving force or raison d'être of a development research career. Therefore, I am in a long-term relationship with this community

Furthermore, I am obligated to share not only the findings of what may be produced from my doctoral dissertation, but also to help them seek to solve the problems that they have identified in a sustainable way, utilizing a PAR process, until their goals are achieved. Of course, all of us are always bounded by realities that surround us, but in light of the concepts of PAR, we need to attempt to overcome them in order to achieve the goals of emancipation. Fals-Borda put it most succinctly when he said:

> There is an obligation to return this systematic knowledge to the communities in which it was gathered because the people involved continue to be its owners and guardians. They should also determine how to utilise such knowledge and to authorise its publication... PAR looks for a better distribution of real power, a better balance between the State and society, between the human and the cosmos. These sociopolitical tasks cannot be strictly planned because they involve open

> social systems in flexible, unpredictable conjunctures. They have no deadlines, they persist until their goals are achieved.
> (Fals-Borda, 1986, p. 47)

In conclusion, the literature interacts with my own personal preferences and field experience to guide my decision to continue to work with the community of Teotitlán Del Valle beyond the scope of my dissertation study. This is the result of my own *reflection-in-action*, my *vivencia*.

History of Engagement: Data Gathering

> ...the portraitist is interested not only in producing complex, subtle description in context but also in searching for the central story, developing a convincing and authentic narrative. This requires careful, systematic, and detailed description developed through watching, listening to, and interacting with the actors over a sustained period of time, the tracing and interpretation of emergent themes, and the piecing together of those themes into an aesthetic whole. The process of creating a whole often feels like weaving a tapestry or piecing together a quilt. Looking for points of thematic convergence is like searching for the patterns of texture and color in a weaving. (Lawrence-Lightfoot, 1997, p. 12)

In 1996, I began to explore the context of Oaxaca, Mexico for an appropriate research experience. Data gathering took place in the months of June, July and August from 1997 through 2000. My journey to Oaxaca began when I was invited to begin conversations with a group of weavers from the Zapotec village of Teotitlán Del Valle in Oaxaca who were interested in using the Internet. Since that time, I have been actively engaged in dialog with weavers from this village regarding obstacles to and opportunities for Internet use for commercial purposes. I have had the opportunity to engage in interviews, conversations, interactions, and observations in the village and, through these experiences, have been able to help set the research problem(s) with villagers regarding obstacles to and opportunities for Internet use. Even though I was invited to work in the community, it took a long time to

develop the necessary skills needed to access this community as well as create a level of social capital to be able to work with people effectively. Many transactions were possible because they were based upon a relationship of trust under the shared umbrella of participatory action research.

In 1996, this interaction with communities began and evolved directly from discussions with various communities involved in the Seminario de Gestion sobre Recursos para el Desarrollo Rural (The permanent Seminar of Resources for Rural Development) a multi-disciplinary program under the auspices of the Universidad Autonomia Nacional de Mexico (UNAM). Due to my interest in indigenous communities facing the challenges of globalization and technology I was introduced to seminar director Dr. Miguel Sekely by my colleague and mentor Diane Ruonavaara. Dr. Sekely warmly invited me into the circle of the seminar. During this time, I visited many different communities with the Seminar to better understand the various issues of indigenous communities in Oaxaca with the support of The MSU Department of Resource Development and the MSU Center for Latin American Studies.

This seminar, founded in the 1970s, brought indigenous, i.e., peasant communities, together to share obstacles and solutions in community development as a team. According to Ruonavaara (2000):

> The Seminar is both an innovation of traditional and legally recognized community assemblies and an elaboration of peasants' strategies to ally themselves with influential outsiders. Several assemblies established collaborative relationships with sympathetic university-trained development specialists to deal with legal, political, and social problems relating to land problems, coyotes, and the complex and bureaucratic Mexican agrarian reform system. (p. 11)

During this time, the Seminar was constituted of about 20 Oaxacan communities from all over the state with, comprised of Zapotec, Mixe, Chiriguiri, Chontal, Mixteco,

Masateco, Chinanteco, Trique, and mestizo as well as community development specialists from different academic traditions and nations.

During this time, I was introduced by Dr. Ruonavaara to the weaving cooperative in the village of Teotitlán Del Valle previously involved in the UNAM Seminario. The weaving cooperative members of Sarapes Arte y Tradición (Art and Tradition Sarapes) invited me to engage with them in several discussions regarding the many issues of importance to their cooperative and their families in a global market. These discussions were mediated by Dr. Ruonavaara who assisted in translation. At this time, the cooperative gained awareness of my interest in understanding the use of Internet in indigenous handicraft village. Based on these conversations and contextual immersion, I gained a better understanding of the regional context and the many important issues of facing Zapotec weavers. Due to these discussions, the focus of the research gained greater clarity as I learned about the level of interest in e-commerce among the weavers. It became clear that due to the global, tourist–driven economy of Oaxaca City, interest in the Internet and commercial websites were a rising phenomenon in surrounding craft villages. Through many interviews with the weavers of this cooperative, I was able to narrow the research focus to weavers in Teotitlán Del Valle with the online appearance of being successfully engaged in e-commerce. This cooperative graciously introduced me to an associated cooperative, Mujeres Que Tejen (Women that Weave), and these discussions further enriched my understanding of cooperatives, livelihood, and gender relations in the community. Overall, these discussions deepened my understanding of craft-production specific to the village and issues of livelihood in a globalized market.

During these discussions and regional immersion phase, I began to explore the village as it appeared online. I was interested in the various web page presentations about Oaxaca City and about the surrounding craft producing villages. After the extensive dialogs with the weavers of Teotitlán Del Valle and their willingness to host my research activity, I began to explore the specific online presence of the village. A web site search was conducted through web search engines. Google provided the most comprehensive search engine using the key words: Teotitlán Del Valle, Tapetes, Rugs and Sarapes. What propelled me to focus on a commercial website analysis was a beautiful website called Celerina's Rugs. The quality of this website was (and remains to this day) extremely high, utilizing the latest technology available at the time, such as sound and video clips, as well as the ability to accept online payment. Overall, it was very well presented and one could order a custom rug online with ease. In 1998, one did not see this level of quality often from any web page sourced from any part of the world. This irony immediately raised my curiosity about how the weavers who produce Celerina's Rugs gaining access to the Internet. It was the first commercial website I had seen from this village and it left an indelible impression. I was intrigued to learn more about how many other weavers had commercial websites and how they were gaining access.

Since that time, I have learned Spanish and some Zapotec and have gained knowledge about various levels of Zapotec life and, more particularly, life in the village of Teotitlán by commuting often from Oaxaca City for weekend stays and extended stays in the village. That is not to say that I am not an outsider. I am clearly a *gringa* (American woman) and have to understand the many aspects of my cultural standpoint and situation as it related to my research. I am an outsider on the inside of this PAR process that is

contextualized in their geography and culture, as well as my geography and culture and the more abstract elements of globalization and virtuality.

Notably, living in the village and learning their language seemed to be a very important aspect of trust building and initiating a co-researcher environment. From the beginning, these people have been my teachers and working from the standpoint of knowledgeable experts exchanging information with me for the mutual cause of their development, my development, and my and our research. My dissertation research has always been discussed in terms of PAR and action research, but perhaps is actually seen as a byproduct of the collaborative exploration and resolution of their problem.

Much data has been collected, and I have found that I have uncovered some very important insights concerning how many weavers are accessing global markets through e-commerce on the World Wide Web. However, in light of my values and the values of action and participatory research, I know that this inquiry is not complete and that I am most definitely committed beyond the requisites of the dissertation. In many ways, this work has only just begun. The concepts of Participatory Action Research (PAR) Portraiture guide my decision process and come to bear upon my understanding of appropriate future development strategy.

Existing Assumptions

According to Cresswell (1994) knowing one's research perspective or bias is helpful and important in facilitating such research choices. "Researchers bring to a study a worldview, an outlook, that favors the qualitative or quantitative ontological, epistemological, axiological, rhetorical, and methodological assumptions." (p. 8) My assumptions about the use of the Internet by indigenous craft producing communities

preceding the data collection phase of my research were based on much of the theoretical discussions regarding the promise or threats of the Internet in an increasingly globalized world. My predisposition was that indigenous communities as among the most poor and unvoiced in the world, would be facing the extreme elements of the digital divide, and any rural indigenous community overcoming this divide would be somewhat of a phenomena. Namely, the assumption was that indigenous populations were either harnessing the Internet in an alternative way for their gain or being left out of the opportunity to gain global voice and empowerment due to a lack of access.

Due to my interest in access and power asymmetries in relation to ICT, I assumed that in the context of Teotitlán Del Valle, it would be likely that the relationship with intermediaries was exploitative to a larger degree and that direct sales, removing any dependency on an intermediary, would be liberating. With a basic understanding of the various resources of the village, I also assumed that there was some sort of intervention by outsiders to assist in the development of web pages for e-commerce, but did not know what existed or how those relationships were negotiated between the weaver and the intermediary. With these underlying assumptions in mind, I knew nothing of the actual relationship between the weaver and their intermediary to the larger market. According to Cook (1984) and Stephen (1991), macroeconomic theories fail to explain the impact of capitalist development and capital accumulation at the local level for craft producing communities. According to Stephen (1991),

> In order to evaluate the impact of foreign markets on craft-producing communities, we must look at local economic relationships and community cultural investments in craft production as well as international economic ties. Specifically, community control over resources, capital, and labor relations, both within the community and with foreign clients, and the relationship between local

> ethnic identity and the production of particular craft items should be examined. (p. 381)

The literature did not exist exploring the specific structure of relationships between weaver and outside intermediaries, i.e., intermediaries to markets outside of their village, but various literature suggests that there is a process somewhere between craft producers and those who purchase the crafts that involves the negotiation of the actual development of the market as well as the elements of product production (Jules-Rosette 1984; Baizerman 1987; Good 1988; Morris 1991; Stephen 1991). Stephen has written extensively about social relationships within the community of Teotitlán Del Valle and her body of research is foundational in that it provided a wealth of understanding of the various internal dynamics and relationship structures of the village of Teotitlán Del Valle. Building upon that foundation, this research explores the specific and various structures of the relationship transactions between weavers and outside intermediaries in the context of the latest phase of capitalistic evolution in the village: e-commerce.

Data Collection

Interview discussions were videotaped to assist in capturing the portrait. This collection of data specific to existing commercial web sites from the village of Teotitlán Del Valle took place during July and August of 2001. Preparing for this aspect of field work, questionnaires were developed with the dissertation guidance committee in English and then translated on location with the help of native Oaxacan instructional staff at the The Instituto de Comunicación y Cultura (ICC) language school in Oaxaca, Mexico. Each question was discussed in context with these language specialists to fine tune the questions so that they would be understandable not only in general Spanish, but would be

phrased in the local vernacular. The questionnaire was, therefore, initially crafted in Spanish before entry to Oaxaca and then revised onsite to the vernacular local to the region with the help of local language experts.

Utilizing Internet search engines, I searched through approximately 3,500 websites about the village of Teotitlán Del Valle in order to find commercial sites that appeared to be owned by weavers from the village. From this search, 16 websites were found that had the purpose of selling or advertising rugs for sale directly from the village. The determining factor in selecting these sites were the use of appearance, voice or identity of a weaver (biography, personal introduction, photograph, the weaver at work) and the appearance of the sale of the transaction sourcing from within the community. Other websites exist that sell rugs from this village, but they do not assert direct involvement or ownership on behalf of a weaver or group of weavers. Relevant websites were then linked to actual people represented on those websites residing within the village.

During this time, I immersed in Zapotec language study and lived with a family of weavers who were not being studied in the village of Teotitlán Del Valle. Members of this weaving family were very accommodating in the orientation of this research. Januarío and Mácaria Gonzales, who also operate a bed and breakfast in their home, were kind enough to introduce me or guide me to the weavers of interest who appeared to have commercial websites. Of the 16 weavers appearing to be engaged in e-commerce, 13 were interviewed using open-ended and closed interview techniques as well as dialog. All interviewees were offered full or partial confidentiality. Among those appearing online only three did not participate in interviews. One family declined to be interviewed. One

very famous weaver accepted and consented to the interview but did not show up on several occasions for the interview for unknown reasons. And finally, a person of great interest to me, Celerina of Celerina's rugs was unable to be located. Finally, I learned that she no longer lived in the village and it was said that she moved to California quite some time ago. Others said that she moved to another part of Mexico. This was a disappointing scenario at the time, but has become a valuable part of the portraiture.

Most time in the village was spent preparing for the actual interview process that included the following phases: Location Phase—This phase included locating the family, group, or individual weavers through other weaving families and gaining an understanding of where they lived within the village. Introduction Phase—This involved an introduction to the weavers of interest. Consent Agreement Phase—This phase was initiated when an interview date was agreed upon by the weaver. During this phase the consent agreement was discussed in detail and consent forms were discussed and signed (see appendix for consent form). Interview Phase—This phase included discussion about the actual interview and what technologies were to be used and how they worked. The interview phase also included post-interview time that was spent talking with the families about their rugs and other conversational topics outside of the realm of the interview subject. In sum, there were 12 interviews total that were recorded on mini digital video format, and one interview recorded on cassette tape, as one interviewee wished to retain anonymity.

Weavers requested that a Zapotec translator not be used and that the interviews be conducted directly by me in Spanish. This request is understandable, since while many communities speak Zapotec, each dialect is village specific. In other words, Zapotec is

spoken by the neighboring village to Teotitlán, but the dialect is indiscernible to them. For this reason, the only Zapotec translator I could use would be from within the village. Therefore, it is understandable that in a village where everyone is weaving, interviewees might not want to discuss their business candidly among one another due to competitive market factors. A translator from the village would not allow us to talk candidly. In that case, it was decided that the interviews would be conducted without any mediation. I, as researcher, and the interviewed weavers both spoke Spanish as a second language. Therefore, the interviews were conducted in a basic conversational level of Spanish without a translator. The video and cassette interviews were translated and transcribed from Spanish to English. The categories of the questions were cross-examined to compare the 13 case studies collected as a multiple case study portraiture.

The mediums used to create the portraiture were handwritten field notes, typewritten field notes on a palm computer, digital photography, and digital video photography, as well as an audio dictation machine.

Data Analysis Procedure

The filmed interviews and previous data collection assist in creating a holistic view of the development of e-commerce in Teotitlán Del Valle, Mexico. The interviews, developed from previous data collection, were analyzed as stories embedded with emergent themes and convergence as well as differentiation. In the language of portraiture, these stories contain themes of resonance and deviance that create a unified web.

> ...empirical considerations of resonance govern the portraitist's decision of what to exclude from as well as what to include in the narrative. For example, when deciding whether to include a given story, portraitists need to ask, Is the story I

> am considering representative of others I have heard, or noteworthy in its deviance from the majority of voices on site? We can liken the resonance to the silken threads spun by the spider, and the resultant web to the aesthetic whole. (Lawrence-Lightfoot, 1997, 266)

In Portraiture, inclusion of themes is based upon resonance, coherence, symmetrical balance, descriptive detail, and necessity of the parts to the whole of particular stories and convergent themes. The portrait is created with these compositional schemata. To convey the unified aesthetic whole, the portraitist ties these themes together and conveys the overall pattern.

> In likening her work to that of the spider woman, Lawrence-Lightfoot describes this process of finding and applying resonance to the construction of the whole. Once the pattern of the web begins to be established, aesthetic concerns take hold and the test for empirical resonance is not the only measure of inclusion...Portraitists must prioritize the integrity of the whole that is being structured by selected emergent themes and attend to it in their decisions of what particular evidence and dissonance will be included or excluded. (Lawrence-Lightfoot, 1997, 267)

Emergent themes of convergence and divergence were analyzed from within the thirteen interviews with weavers appearing to be engaged in e-commerce and organized with the previous years of immersion and dialog as the portrait background.

Chapter Four: The Portrait

E-Commerce in Teotitlán Del Valle, Mexico

To what extent are artisans engaged in e-commerce? I type rhetorically as a group of women crowned with baskets of flowers, nuts, breads, embroidery, and handicrafts make their way down the famous street of Alcalá.

They pass the open balcony window where I am sipping latte in a cybercafé. I can tell the women are Zapotecas by the way they have customarily braided their long hair and coiled it atop their heads to balance their baskets. There are also the telltale hints of Teoteca traditional dress as they pass faded coral, teal, and earth colored storefronts. Today they may encounter German, Japanese, or French responses to their solicitations in a matter of seconds because, in addition to the many indigenous languages native to this hub, cited as the most indigenous location in the Americas, there seems to be an endless tide of new faces. Of course, encountering tourists is as ordinary as eating toasted *chapulines* (grasshoppers) for a snack or on a quesadilla in the same way that a visitor might eat potato chips or pepperoni pizza.

The women, resilient in their own traditions, seem to know, if not capitalize upon the fact that Oaxaca is a transient and diverse place. They seem to understand how Oaxaca is part of an increasingly stream of globalization (although they might not understand the term) flowing into a very marketable indigenous context that is teaming both with change and cultural conservation. Regardless, this morning, like every morning, tourists fill the streets and file in and out of the small stores with cooling patios and inviting courtyards, turned, in time, from family homes to boutiques and cybercafés.

Shopping and entertainment, along with the enchanting art, history, and ruins are among the many curiosities that draw tourists to the small colonial city of Oaxaca. People come here for a sense of place that is lost to them, and, like Oaxaca's famous mole, chocolate, and coffee, the culture here is potent and exotic. Here, students from everywhere in the world study intensive Spanish and immerse in a very different way of life. Tourists and ex-patriots are drawn here to escape from cultures overwhelmed with commercialization and globalization and yet, ironically, to also have the familiar comforts of cable television and the Internet to pad their escape. Oaxaca is a place where people tend to brag about or feel self-conscious of being able to charge a cheeseburger and ice-cold Coke on their American Express cards before jaunting off to a village tour to witness traditions that have been maintained for more than 6,000 years without interruption.

I watch the women continue down Alcalá and know that they are speaking Zapotec, Spanish, and bits of English to sell their wares. They are among many indigenous women vendors who will compete for tourist dollars. I turn back to my e-mail and latte and understand that there is much to be observed and understood about the interplay of globalization and tradition in present-day Oaxaca.

Authentic Illusions

Smiling warmly in traditional Zapotec dress, Celerina Martinez appears on computer screens around the world from her at-home workshop in Teotitlán Del Valle. She invites visitors to explore the rich story of her tapetes, (i.e., rugs) through each stage of their creation. The web page is a story that unfolds into a labyrinth of choices, educating potential rug customers about the culture and authenticity behind each rug. In all of Teotitlán Del Valle, a renown weaving village at the perimeter of the city of Oaxaca Mexico, it appears that Celerina's is the best, among many, web pages representing the region. Her page is not only beautiful and artistic, it utilizes state-of-the-art, professional web tools for e-commerce. (http://www.celerina.com)

Celerina's page is part of a growing trend of web sites representing weavers from this village, a main tourist attraction 27 miles outside of Oaxaca City, Oaxaca. Ironically, this village does not yet have an Internet infrastructure and has very strict restrictions upon the activities of women. Upon closer investigation, it seems that Celerina does not necessarily own her page. I learn from conversations that it designed and is maintained in California by a merchandiser of Celerina's rugs, reflecting a relationship or some level of transaction. The story of Celerina's web page and other Teotitecan artisans may provide important insights into a growing trend in Mexico and around the world. The story of Celerina's web page is a provocative lead that may be informative to follow in the village of Teotitlán. It may reflect an e-commerce situation prevalent in this region explaining how these artisans are getting commercially connected online and I wonder, What is the history of these web pages and is it development?

Only the Beginning

My assumptions about Mexico were turned inside out and backwards within about 30 seconds in October 1997 at the Mexico City Airport, where I began to learn that Mexico is a modern, moving scene set within an ancient frame. There seemed to be some very important people milling around, the kind of people you do not see in any American airport on a typical day. These fast walking, travel savvy, well-heeled people with cell phones stood out like extraordinarily groomed movie stars, weaving independently amidst congregated working class Indians and middle class mestizos families saying goodbye or welcoming a loved one. As a mixed-blood Native American, here I was merely the American with a big suitcase, part of tourist colonialism, yet not knowing where to go and unable to even form an understandable sentence in Spanish. The air was clean, cool, and air conditioned; the posh tariff-free shops so obviously unaffordable on my student budget, yet so enticing with Aztec style jewelry and authentic art and crafts from all over Mexico, including the best of Tequila and Mescal for last minute gifts. We pulled our luggage along the glassy, marble floor, glistening in the sun that poured in from the skylights. While waiting for our taxi, I browsed through magazines and book selections addressing "globalización," and headlines raging about the new Internet technologies. Globalization was a word buzzing as loudly here as it was back in the States. As we passed the American Express Lounge, it became clear that this node had the pulse of a globally-minded clientele.

After Diane haggled with a taxi driver, we were whisked to the bus station that would take us to Oaxaca. The bus stop was the epitome of outmoded kitsch, like a theme park that was out of step with time, abandoned, and then re-opened without much repair.

We had a few hours to wait there. We found a circular carnival-like restaurant at the hub of the bus stop and ate a leisurely dinner of various types of tacos. Eventually, the dreaded moment came where I had to use the bathroom, what Diane laughingly called the true rite of passage. I entered into this common initiation by waiting in line, paying 35 centavos, and getting 4 squares of toilet paper from the bathroom attendant. I realized then that all of Diane's travel experience from her work throughout South and Central America led to advice that would become of immediate assistance to me. "Rule number one: Always carry your own toilet paper."

After our long wait for the bus, the 8-hour journey to Oaxaca finally began. We found our soft, reclining seats and the in-bus bathroom. Predictably, the bathroom ran out of toilet paper within the first 45 minutes. I secretly smiled in relief of my preparedness. It was not more than an hour before the unusual scent of human excrement, mingled with the spiciness of exotic food and the sweat of road weary travelers became almost bearable as the hot, arid afternoon wound away into a cool, clear, and starry evening. The bus traveled along curved highway paths though Puebla, through the mountainous volcanic landscape whispering snow, and past miles of spacious pine forest. There was only one stop. We exited somewhere in the night after the hours into a barren landscape. We plunked out one-by-one and lined up according to gender at the public restroom where we were protected by the colorful, built-in Guadalupe altar. Diane and I bought a small bag of chips that came with a small packet of chile sauce and Coca Cola from a family with several small children selling *refrescos* through a fence to the bus passengers. I realized that this family made its living along this stretch of highway in this shabby poled tent shelter, where I observed women cooking dinner over a clay platter placed over an

open fire, a *comale*. We were the only non-indigenous foreigners left among all of the travelers, and it became apparent that we were a bit of a curiosity with our short, cropped hair and other-worldly clothes.

When we finally arrived to Oaxaca City, it was 4 a.m. and with luggage in tow we stepped off the bus through the brightly lit, bustling station and into ancient cobblestone streets of a sleeping city. Passing a church more than 500 years old that had been decorated with wreaths and garlands of flowers, we entered the mystical charm of Colonial Jalatláco across the church at Hotel Casa Arnel. Outside the entrance was a sign "Jale" directing us to pull on a string hanging from a very tall metal wall. We heard a few quiet footsteps and then the turn of a key before the wall parted like a giant doorway. There, a very old man greeted Diane in a knowing way. Passing his worn wooden chair near the gate, he showed us to our simple room with two twin beds covered in coarse, colorful striped bedding, across from a small table with two chairs and a dresser. We struggled for sleep as the cries of neighborhood dogs told faceless stories throughout the night. I awoke alone to the strange music of squawking parrots, cockatiels, and geese, and excitedly followed the trail of delicious breakfast conversation that guided me to Diane and other experienced travelers exchanging tips and travel tales. I joined them on a lush, tropical patio set with simple wooden tables draped in brightly patterned, Mexican oil cloth. After Diane and I replenished ourselves with fruit-ladened yogurt, rolls and tin flavored coffee, we purchased the hotel's own brand of bottled water, took the free hotel maps proudly displaying their logo of their famous white goose, and began to hike to the seminar to inform the office attendant that we had arrived. I had a camera hanging from

my neck, a compass in my pocket, a pen, and notebook. I was being pushed into a new world from this comfortable nest, regardless if I was ready to fly.

The Crafts of Oaxaca

Experiencing Oaxaca for the first time, I was amazed at every aspect of urban beauty unfolding that morning: the giant terra cotta planters bountifully offering vibrant flora and fauna, the scrolling wrought iron decorating the windows, patios and doorways of each façade, the lovely women in frilly aprons and long braids selling cool, juicy chunks of grapefruit sprinkled with salty chile powder, a variety of candy, and *chicles* at nearly each corner. Shopkeepers were sweeping their storefronts clean with the pungent, floral scent of *Fabuloso,* and artisans were gathering in the Zocolo courtyard, or setting up their wares in the *parques*, or scurrying to the *20 de Noviembre* market as foreigners still lingered over *Café de Olla* at the Zocolo cafe tables (what became known to me as an incurable pastime for any Oaxacanist). That day I explored lovely courtyards presenting bougainvillea-laced fountains, so inviting to the hummingbird and the dragonfly and, unquestionably, to the spirit of Art itself. The amount of boutiques and cafés laden with Oaxacan traditional art from the surrounding villages, as well as new art from local artists, was in itself attention grabbing, remarkable, fascinating. It was a day of wonder as well as haunting loneliness; the exquisite tension of being a stranger in a strange land emergent and ever present: That sense of being very far from home; a combination of feeling slightly off-center, awkwardly self-aware, dumbstruck with a lack of belongingness. Stubborn jet lag was coupled with delayed comprehension due to overwhelming wonder and rusty, unused Spanish. Language disabled, I was able to magnify my ability to listen to the landscape. Among all that I heard, the indigenous stories of *artesania*, or the surrounding handicraft villages, were the most predominant. Oaxaca City is surrounded by indigenous craft villages, specializing in some form of

traditional handicraft or another. There are eight distinct forms of handicraft which include various types of clay work, basketry, metalwork, wood carving, leather work, embroidery, wood carving, and textile production. One trip to the 20th of November market, the large market a couple blocks from the city center or Zocolo, is where one can explore all of the crafts in one location on any given day of the week. Every boutique lining the city streets, every restaurant and café, every hotel and museum is decorated from various types of these handicrafts. It is an overwhelming array of eye candy for any tourist shopper on the prowl for authentic art.

Clay

Oaxaca is known for two distinctive forms of pottery and produces large quantities of clay sculpture, functional pots, and vessels. The village of Santa María Atzompa is the main producer of the green glazed terra cotta, offering a range of beautifully mundane unglazed terra cotta pieces, such as lidded storage jars for water, to exquisite life size terra cotta sculpture. The green glazed pottery ranges from little turkey containers with tiny hand-carved wooden spoons that one might use to serve salsa or peanuts to large decorative *ollas de chocolate*, i.e., hot chocolate pitchers, where pressed chocolate cakes are dissolved in hot water and then worked into a froth with an ornately carved wooden device. Perhaps most striking is the black ceramic work of San Bartolo Coyotepec, where the properties and treatment of the clay produce the characteristic black color and smooth, metallic texture. This popular black pottery can be seen in beads and other forms of jewelry used in decorative pieces such as candle sticks, crosses, animal figurines, pre-Columbian gods, black clay skulls and skeletons, as well as

decorative serving vessels for sugar and sauces. But the most popular of the *barro negro* pieces are the cut out, *Calado* vases and lamps whose airy, geometric decoration is based on removing select parts of the clay wall. In Ocotlán, you will find the work of the four Aguilar sisters— Guillermína, Irene, Josefína and Concepción— known for their whimsical and dreamlike creations in clay. These figurines and scenarios in clay range from the fantastic to the religious, including mermaids, angels, devils, characters associated with the Day of the Dead as well as mythical Zapotec creatures, and figures of famous and respected artists such as Diego Rivera and Frida Kahlo. These are hand formed from local clay and painted. Notably, this work has become some of the most popular Oaxacan art on the gallery circuit in the United States.

Basketry

Elaborate baskets made from the local bamboo that is split and woven into a thick, rigid, extremely durable basket material called *Carrizo* and various types of plaited palm basketry are sold in renditions, from miniatures of real life objects used as souvenirs or party favors to tortilla holders, baskets, lamps, candy dishes, mats or *petates*, and even curtains. Other basketry includes the useful, square bottomed palm baskets called *tenate* or the round-handled basket made in Papalutla, the *canasta,* used widely throughout the Oaxacan Valley by local indigenous women to hold their goods while marketing. Without a doubt, baskets are a very practical item used extensively within the Oaxacan household. In every market one will see groups of women plaiting reads and palms into geometric designs by intertwining natural and colorful bamboo strands.

Metal

Metal work, such as weaponry and wrought iron was introduced to Oaxaca during the colonial period and began in Ejutla in 1750. The iron work of the villages of Juquila and Jamiltepec produce many sought after iron items such as knives, machetes, fences, and gates. Oaxaca produces "all manner of blades (sabers, swords, cutlasses, kendos, and machetes) cake servers, letter openers, and hunting and fishing knives, the latter chromed, highly polished, and acid-engraved with hunting scenes, animals and popular verse...with hand-tooled leather cases." (Sandoval, 1998, p. 139) In addition to housing weaponry, leather work is abundant in its own right. The markets are laden with hand-tooled and Manually-tanned leather from the Ejutla and Jalatlaco tanneries, which include machete covers, horse saddles, belts, purses, and shoes. Fine filigree jewelry of Oaxaca, in addition to indigenous silver jewelry is produced and sold in boutiques, jewelry stores, and market stands. The lacy filigree earrings, whether in gold, silver or the bright fake gold, *chapa de oro,* grace the ears of all traditional women from the villages. Very common are the silver *milagros*, tiny charms in the shapes of hearts, hands, legs, and any other imaginable prayer object for which a prayer could work a miracle. Once only used for altars and hammered into crosses to create a prayer collage, they are now sought out as collectable jewelry. Tinwork, introduced by the Spanish in the 16th century, is a very popular form of craft in Oaxaca City. Brightly enameled Christmas ornaments decorated as animals, fruits, and vegetables, and mythical figures such as angels, witches, and skeletons are popular as souvenirs. The most memorable are the large, ornate, punched tin mirrors shaped like colonial churches with bells and small doors that actually can be opened, closed and secured with a small latch.

Wood

Street vendors, boutiques and markets abound selling brightly painted mythical figures from San Martín Tilcajete that are made from the lightweight copal wood. These figures of jaguars, armadillos, and birds as well as make believe animals called *Alebrijes* have gained a lot of popularity in recent years. San Bartolomé Quilalana specializes in wood utensils, such as spatulas, scented orangewood combs, chocolate whisks, and oversized utensils used for holiday feasts that are commonly sold by mothers with children in tow and slung over their shoulder in the city Zocólo. (Sandoval, 1998), p. 109)

Cloth

Weavings are made from various types of fibers. Traditional wool sarapes are still woven upon ancient looms in Teotitlán Del Valle. Elaborate cotton weavings from Mitlá that include decorative household textiles such as bed covers, curtains, table cloths, and even clothing such as lightweight shirts and pants. On shaded patios throughout the city, one can see women teach tourists and children to back strap weave using cottons in various natural hues of native brown and white cotton. You will see rebozos in every fiber but the most common is the finely patterned black and white *rebozo*, a traditional shawl and daily necessity for most indigenous women in Oaxaca, made in real silk or the less expensive polyester imposter that is so difficult to detect without a trained eye. In the villages, every female has her own rebozo, which is about 30" wide and 2 yards long. The rebozo has become understood as a symbol of Mexican womanhood with its patron saint, El Señor del Rebozo. This is a powerful piece of cloth produced here.

> A child begins its life in its sling, always close to the mother; it keeps the girl's head dry and carries her school books. She uses it to flirt with a few years later, carries her own babies in its folds, and wears it for a shroud. Indian women in Oaxaca's Central Valleys wear their rebozos twisted over the forehead with one end hanging down the back, or wrap it around their head to balance a jar. In certain regional dances, the "rebozo" becomes a snare, enticement, or even a vulture (Sola De Vega). In Mexico, as well as in Spain, a woman will show off her prize article of clothing: an elegant, silk, embroidered and fringed shawl, or imitation silk rebozo, perhaps black with bright pink stripes and a proverb woven in: "I am my owner's pride. (Sandoval, 1998, p. 180)

About 20 miles South of Oaxaca, one might stop at the village of San Juan Chilateca on the way to the Friday market in Ocotlán to visit the home of Rudolfo Morales and the famous 16th Century blue church that, through his financial success, he restored. On the way, you will want to stop and see first hand the exquisite blouses and the traditional intricately embroidered *huipiles*, the once traditional Mexican wedding dress, made by groups of women in San Antonino Castillo Velasco and San Pedro Mártir near Ocotlán. Such dresses are now sold mostly to tourists and are the local expression of a type of tunic or, *huipile,* that identifies indigenous women from various parts of the state of Oaxaca. This type of dress is now reserved for folkloric dances such as the annual *Guelaguetza*, a festival that has taken place for hundreds of years, since the time of the Aztecs.

In summary, the above types of indigenous art are among the most visible handicrafts purchased for souvenirs, decoration or everyday use in Oaxaca City. Without a doubt, this is an area burgeoning with the force of creation on many levels, let alone handicrafts or *artesania*. While these are the most prominent goods, there are so many types of artesania that could be mentioned. Legend has it that all of this creativity was born from the weaving village of Teotitlán Del Valle.

The Invitation

By late afternoon it seemed that I had almost too much time before I was to reconnect with Diane. Hours of wandering browsing a map throughout the day led me to some great libraries, the Welte Institute, and the lovely air conditioned Instituto Nacional de Estadística Geografía y Informática office, offering a wealth of statistical information and maps at an instant. I found a language school that interested me as I stopped for respite at El Laurel, a sweet little restaurant run by a couple who talked with me in English and encouraged me to sit for awhile and enjoy their delicious organic food. Later, I checked my email at one of the many Internet cafés surrounding the Zocolo and the tourist attractions.

By sunset I found anonymous oneness among the tourists. I became like a minnow within a large school of fish. There was no leader, but we all seemed drawn to the same current. When they turned, I turned, when they stopped, I stopped. We started somewhere in the *Zócolo* and roamed happily for hours amid the burgeoning Día De Los Muertos festivities. We lined up to try *Elote*, grilled indigenous corn on a stick smeared with mayonnaise and peppered with red Chile powder. We stopped for a very large band of ranchero singers in beautiful black serenading suits who captivated us for almost an hour. We placed coins into the hands of street children, powerful negotiators selling small handmade toys and decorative toothpicks carved in the shape of small animals. We stopped again for the fire juggling Rastafarian youth. As we became enveloped in darkness and the glow of torchlight, we stopped for an older woman with a very round, lovely face proudly selling small bouquets of velvety Gardenias, so rich and irresistibly fragrant as they perfumed the night air. We flowed through Garcia Vigil, Alcalá, the

Zocólo, Porfirio Diaz. Every small side street turned up a new and exotic delight, bringing more fish into our happy school. Turn after turn within a group of strangers: well-dressed couples, budding families, beach clad surfers with dreadlocks, I was, like them, exploring Oaxaca before Día De Los Muertes in an energy that was convergent and cumulative, which eventually broke apart into new streams.

That night I was relieved to rejoin Diane for dinner, to reflect and relax my senses for awhile. After dinner we passed many shops staying open late into the night to accommodate the flood of tourists and approached a balcony facing the streetscape where the shop keeper was weaving in demonstration. The man lit up when he recognized Diane and waved us inside with a smile calling "Vienen adentro." Diane and the shopkeeper began to happily exchange greetings in Spanish. I tried to understand what I could from body language, intonation, and the surrounding environment of the beautiful store.

Mariano, jean clad with a polo style shirt, seemed young, in his 30's with just a hint of gray at his temples. That night was his turn to occupy the shop for his cooperative, then comprised of 6 other men from the village of Teotitlán Del Valle. It was a reunion for them; they had worked together in the ongoing permanent seminar hosted by the University of Mexico to assist rural villages facing development issues. He was very glad to see Diane again and began to talk at length with her about their business and their cooperative, *Sarapes Arte Y Tradición.* Kindly, she introduced me and explained my interest in studying indigenous artisans and the use of communication technology for my dissertation research topic. At that moment, he smiled at me, paused, and then through Diane's translation, he extended an invitation to me to work with the cooperative and to visit the village as their guest. I felt as if a large door had been opened at that moment. It

seemed that this threshold was crossed with a curious ease for all of us, especially for me after years of anxious searching for an appropriate community.

Mariano then turned to his work with affection, explaining the rug he was working on at the loom. He demonstrated how the rugs are made and have been made for centuries. Pointing to various terra cotta bowls filled with organic materials—a clump of blue rocky indigo, some rock moss, some white frosty ovules, i.e., *cochinilla,* residing in crimson powder—he explained each and their importance as traditional dyestuff for the wool while Diane interpreted the discussion so all of us could share in this conversation. Mariano spoke mostly about the importance of this work continuing and its meaning for them as a cooperative, as Zapotec people carrying on a way of life for their ancestors and for their children. This was only the beginning of my understanding of the weaving art that made Teotitlán Del Valle world famous, the beginning of my connection with this cooperative called *Arte y Tradición,* and the beginning of a journey into the depths of their love for weaving.

For the rest of our time, Diane and I participated in the *Seminario.* We spent several 12 hour days steeped in meetings or travel with the seminar. With Diane as my mentor, colleague, and translator, I began to learn first-hand from community members about the many pressing issues facing indigenous villages in Oaxaca. From that time we became known as "The Two *Dianas*: Diana number one and Diana number two" to differentiate us. (Diane and Deanna are pronounced the same in Spanish). I never did get to see the city on Día De Los Muertos as we left 2 days before the grand event. On way out of town, we stopped at a roadside vendor who lured us with the smoky fragrance of

grilled pork of Tacos El Pastor. That night I learned the meaning behind Diane's *Travel Rule #2: Whenever Possible, Avoid Eating Street Food.*

It seemed that a lifetime took place within a matter of weeks and there was much to journal about on the plane. When we reached Detroit Metropolitan Airport, I was immediately followed by two German shepherds and whisked to the side by two police officers. Excitedly initiating a drug bust, they ripped open my backpack and pulled out several thick, hard hockey pucks of Oaxacan chocolate given to me by an elder woman in the village of Chichicaxtapec. Disappointed with their discovery, they turned to my luggage and silently proceeded to move my bags off the conveyor belts and out of the way, directing me to an area where they could spray my boots, as they do for anyone who admits to being in a rural area.

A Few Blocks Left of Tourism

That spring, based on my previous travels, I received a fellowship to study Spanish and Zapotec in Oaxaca for 8 weeks. Diane was residing in the outskirts of the city during that time writing her dissertation, while I was living with a family north of the center of Oaxaca City, experiencing cultural and language immersion. I spent long hours at the Becari Language School during the day, and the afternoons were spent with my host family or with other students. I was beginning to understand another level of the Oaxaca experience, just a few blocks left of tourism. It seemed that people from all over the world and in every age category came to Oaxaca for a few weeks or more to study Spanish, to better explore the culture, and to seek adventure at all the restaurants and bars as if they were temporarily ex-patriots.

Through the language schools there are tours, dance classes, cooking classes, and other interesting outings. On the whole, language schools are a clearing house for more advanced travelers of all types, sharing a quest for a deeper travel experience and more authentic adventure. I spent two months immersing into the city life this way, extending my Spanish and working with a Zapotec tutor in preparation to work in the village. Here I learned about the strange amalgamation of tourism, of global amenities held captive to timeless ancient charm. On my way to school in the morning I would stop at a café owned by a woman from California situated next to the school. La Brew was a hip, granita-serving Oasis on a parched road, where one could rest at locally made wood tables, watch CNN and read the New York Times and People magazine, amid kitsch Oaxacan knik knaks and truly native art funkily decorating the cozy space. Students gathered there every morning for their morning dose of caffeine before their language

school classes, and in the afternoon I would return to meet with my Zapotec tutor before we'd head off to the village. I learned to say hello, good morning, and thank you in Zapotec while eating a French pastry filled with local pumpkin flowers strewn in a béchamel sauce. All this was made by a soul-seeking philosopher from Mexico City and served on a green plate from Atzompa.

Although language study, family interaction, and understanding life in the city took most of my time, I was there to work with the cooperative and begin my work exploring the culture of the village in the afternoons and on weekends. The cooperative knew of my intent to work with them since our first meeting. I would stop in and visit their store, *Sarapes Arte y Tradición*, right across the street from my language school. Eventually, Diane and I were invited to talk with the cooperative as a whole in the village home of then cooperative president Reynaldo Sosa Martinez. I prepared for this meeting by gathering my research perspective about the trends in Internet marketing and web pages that seemed to be sourced from the community. I also prepared my background explaining who I was and the importance of indigenous development from my perspective as a mixed-blood Native American. I shared the values that drive my research and the values of Participatory Action Research. It was in that meeting that I was extended a formal invitation by the group as a whole to work with them on this research.

The following weeks bustled with meetings. We arranged for our next meeting at Diane's apartment, as this was on the bus circuit heading back to the village and a convenient stop for those coming from closing their shop downtown and those coming from the village. We met to discuss how web pages were being used to sell rugs (tapetes) and weavings (sarapes) from the village. I showed them Celerina's website and discussed

the various elements and differences of each website. They were intrigued and launched into quite a bit of discussion in Zapotec. They grew quiet and pensive after viewing the web pages that they had heard so much about and so often. It was as if I could see their minds churning over what they had seen online.

The next time, we met late in the afternoon at the café Blue Angel, one of the boutiques that shared the once hacienda-courtyard-turned-shopping plaza which housed the cooperative. While Reynaldo ordered pitchers of *Tamarino,* or a drink made from the tamarind pod, we began to discuss the many different elements of how they work as a cooperative. They offered me an official letter of invitation to work with them, hand typed on blue watermarked paper featuring their logo in brown ink. This was a very touching gesture and another step of formal acknowledgement in our agreement to work together. We proceeded to advance our exploration of e-commerce. Using Diane's laptop software, Diane and I explained how basic web pages could be designed easily. Initially, I wanted to show each of them how to design a page and envisioned this as a hands-on workshop. With much trepidation, Gervacio came forward to learn as the others looked on. Hesitating, he reached out and touched one key of the keyboard and pulled back suddenly. He said he was afraid to break anything and did not want to do anymore. It was then that I realized that I erroneously assumed so much about these weavers. I began to see first hand the many obstacles they had to e-commerce. It became clear that to do e-business they would not only have to be able to write in Spanish and English, they had to learn basic computer skills, such as keyboarding. I understand how this would be overwhelming. It was then that Gervacio explained to me how they see this skill as something that they would like their children to learn, that they were too old to learn this

new skill, and would prefer to not learn this skill for themselves but rather continue to focus on their own work as weavers. This was an awakening, an "Ah Hah" moment, but and it reworked previous my previous concepts. I felt ridiculous for assuming so much, without having anticipated some very obvious obstacles. Clearly, they knew about the e-business phenomenon but yet had never really engaged with it *in any way*. This was where theory required practice. They watched as their children went to local "Internet cafes" to talk with friends they had met from around the world, yet they, themselves, had never even pushed a key on a computer keyboard.

From that time on I spent hours with each family of the cooperative learning about their way of life, their thoughts on the global market, the importance of each stage of rug production, and the types of festivals, customs, music, and food of the village. These men introduced me to their wives who they collaborated in their work. They talked with great admiration about their wives activity in a cooperative called *Women That Weave*. These women invited me to their cooperative to engage in long talks about their perspective of life and work in the village. Theirs was the first cooperative in the village that was ever formed. This cooperative gave me tremendous insight into some of the perspectives of women in context of family, work, and culture in Teotitlán. I am so grateful to both cooperatives for this hospitality and for their generous sharing.

The cooperative *Sarapes Arte Y Tradición* and *Women That Weave* have generously assisted me in gaining insight into the weaving world of Teotitlán Del Valle and their ancestral world of many generations of weavers. These cooperatives provided me with the opportunity to sit and talk with them on several occasions about their overall market as weavers in the context of their value, culture and belief system. They spent

hours in interviews and in demonstrating how they make their rugs. They took the time to introduce me to other villagers, hosted me in their homes, and shared many of their customs such as the childhood training for the Dança de la Pluma, or Feather Dance, and the elaborately prepared *Temascal* ritual, akin to the Native American sweat ritual. These core experiences framed my questions about e-commerce in the village of Teotitlán Del Valle.

So That Life Continues

During the time I began to interview *Art and Tradition* about their work, their lives, and the meaning of globalization, Reynaldo, the oldest member of the group, handed me a beautifully packaged video and told me that it was a gift from the cooperative. I was astonished by the production quality of the picture and the overall appearance of the packaging. I learned that a non-profit organization that assists indigenous artists helped them by producing this video. The video, entitled, *So That Life Continues*, was created in cooperation with this non-profit group to assist the cooperative in communicating their unique mission with their domestic and foreign clients. They asked Diane to translate the video for them so that they could make a version in English and offered me this finished copy.

The 7 voices members of the cooperative are given voice on this video and weave an indelible tale of mission and purpose. The cooperative members and the value they place on preserving the natural way of rug making that is their ancestral inheritance are captured in this video. (Fonaes, 1998) Due to the introduction of chemical dyes, much of this heritage has been lost, and it is the main purpose of the cooperative to recapture and revive that knowledge. For me, this short video gets to the heart and soul of the dilemma facing this village today summarized by the cooperative members in their own words:

Andres Gutierrez Sosa, Treasurer: "The way our grandparents lived in our communities many years ago was very beautiful. They lived in harmony and their work was beneficial. They taught their children everything, such as cultivating the land, and from much earlier times, to weave sarapes. I am weaving a rug with handspun yarns; carded and spun by hand and also colored with natural dyes. This color comes from

cochineal insects. Now there are many people who use factory-made yarns, but these are not as good as those made by hand. This is why we decided to continue working in this manner. Besides, working in this way is better and the weavings last longer. This is the reason I want to teach you how we prepare the wool."

Fausto Contreras Lazo, President: "Generally, it is the women who do this work. The women card and spin the wool and it is the men's job to do the weaving. This is how it's always been and this is what we teach our children. They start at six or seven years old helping prepare the gray-colored yarn, working little by little, they begin to learn. One day a group of us were talking about trying to find a way...that this work could be a little more profitable, that it would allow us to make a little more money. Now we are exploring ways to return to dyes made from indigo."

Mariano Sosa Martinez, Secretary: "Cochineal, moss from rocks and many other plants can be used as dyes. Our grandparents didn't pollute our environment, but when aniline dyes were introduced to dye wool, these things that came from factories caused changes. The people that worked with these chemical dyes taught us how to dye more quickly and the way we worked changed, it was no longer the way it was before. When you are dying wool you breathe in the vapor of the dye, and the vapor of chemical dyes is very strong. Natural dyes are not harmful. This red color is called cochineal; it is used to dye the wraps or skirts of the women. It has a very pleasant smell. Yes, it is very pleasant. It smells like a lime; it smells very nice. Now we are learning how to cultivate the cochineal insect that is what we are growing here on the leaves of the nopal cactus in this way. We are able to produce the color that we use ourselves. We are able to support ourselves with this, because the people of Teotitlán live by weaving rugs. This is how the

weaving begins, the trade that our grandparents taught us. It is a very ancient tradition. That is why we continue."

Reynaldo Sosa Martinez, Member: "Everything from how the wool is washed, how it is carded, from spinning the yarn to dyeing it. All of these things should be considered when buying a rug. Sometimes people come here who are not familiar with the complete process from beginning to end, from sorting the wool to cleaning it of plant debris. They do not appreciate how complex and time consuming the work is. Before each person worked for himself, and for the intermediaries to gain one more centavo. They decide which designs we should weave. We accepted these terms because we needed the money."

Gregorio Contreras Chavez, Member: "If the economic situation was better we would not accept these terms. We would weave our own designs, the traditional ones that are a part of our past. The traditional Zapoteco design is very good. We must listen to the opinions of people who want to buy the rugs done in the traditional designs and continue to work so that the traditional designs are not lost."

Gervasio Sosa Martinez, Member: "We organized to move ahead; we have been working like this for more than a year. Our intention is to sell directly to tourists. When we can sell direct in the location we have in the city of Oaxaca we are paid better than when we have to sell to other stores. The other stores always pay us very cheaply for our work. Now we have begun to create new designs. There are rugs that are based on the work of some painters. We replicate these paintings. [Speaking about his son] Before, when he was a young boy and just learning, I taught him how to weave from drawings. Now he is older; he has learned and acquired experience. My parents also taught me this

way. (He turns to inspect the work of his son, a woven replica of Diego Riveras' The Flower Seller, a famous painting of an Indian woman bundling Calla Lilies.) Turn it over so I can examine it."

Isaac Gutierrez Sosa, Elder: "We inherited this work from our old ones when they lived. They taught us so that our life could continue."

The Inheritance

It is one year later and I am living in the village with Januario Gonzáles and Macária Ruiz. The day breaks with the lead call of one rooster, his "Cock-a-doodle-doo" setting off a chain of excited greetings echoed from rooster to rooster and from hill to hill waking the 6,000 villagers of Teotitlán Del Valle to the fresh, golden mist of mountain air. A brand new that hails each morning. An SUV, weighted down with rugs, pulls past the older adobe homes, past the sandy bamboo crossroads and onto the paved main village entrance, slowly passing village storefronts. With a wave to the storekeepers, the driver passes between rows of trees pruned into beautifully plumed birds nesting along the paved sidewalk of Avenída Juarez—the artery that runs from the heart of the village to the Pan American Highway, pumping new life in and out of the quaint native landscape. The truck passes newer brick and crumbling adobe homes at the outskirts of the village, gearing past families already waiting at the bus stop at the t-square crossroads, and onward toward a day at the bigger city markets.

After the morning *chocolate*, *átole,* or *café*, men— young and old—commence the day with concentration, shoulders down, sandals to the treadle, fingers working quickly to stream the shuttle of yarn between the warp and woof with their strong arms engaged in a rhythmic slamming upon the old wooden looms, working hardest while the air is cool. "Shuttle-slam, shuttle-slam, shuttle-slam," can be heard as the women greet one another *"Zach Gee"* or "Good Morning!" as they pass one another to and from the central market with the handles of their round, tightly woven baskets tucked customarily under their forearms, either empty or laden with fresh eggs, stacks of large hand ground

tortillas, or *Tlayudas*, and fruits such as tomatoes, limes, mangos, avocados and herbs for sauces—such as garlic and *epazote*.

The women pool together to share the day's news at the market, snack on spicy toasted grasshoppers called *chapulines* and to sip fresh *limonada*. After an hour or so, women return home to prepare *El Desayuno* or breakfast with their weighted baskets perfectly balanced upon their heads. Typically, breakfast is break time for the families that begin to work at the first light of day. It is a late morning gathering to talk about the day and gain to regain much needed energy. This is a heavy meal, perhaps the heaviest of the day. The family talks liberally with one another while scooping up eggs soaked in a mild tomato chile sauce and black refried beans with crumbled fresh Oaxacan cheese into a Tllayúda sprinkled with salt and a squirt of lime. Or it might be a lighter meal today with baked rolls and butter served with steaming cups of Atole, a warm and comforting corn drink. Regardless, the men eat heartily with their families before returning to their looms that are not far off in a nearby room or in the central patio of the home or perhaps in the home of another family with a group of other men also bound by *compatrigazo,* or familial debt.

Throughout the most typical day, the men work at the loom, while the women work in the home preparing the meals while simultaneously caring for their children or grandchildren. The women spend their day receiving neighbors, rug merchants, or family as they pepper their daily rituals with other aspects of the rug making process. After lunch and between other chores such as laundry and housecleaning and childrearing, they may be hand-knotting the fringe on a newly woven rug or picking out any remaining bits of hay remaining in the woven wool. If they are diligent keepers of the old weaving

tradition, they will hand grind indigo and cochineal in preparation for yarn dye baths. The older women might begin to card the wool, combing it into soft, fuzzy clouds between two hand-held brushes—while granddaughters work with them to learn how to spin the natural wool into strands of yarn. Other family producers may skip this step entirely and buy their yarn from the Teotitlán yarn factory, *La Lanera de Oaxaca*, or hand spin with an ancient drop spindle by women in the sheep herding mountain village of *Chichicapa* in the Sierra Madre Del Sur. This nubby wool is stronger, more resistant, and contains more of the natural lanolin, which makes the rugs moisture and soil repellent. Nearby, someone is unloading bags spilling with freshly shorn churro wool from a dusty truck bed just in from this remote town, about two and a half hours somewhere above the valley, isolated beyond rocky, unpaved roads. This delivery service saves someone from losing a whole day's work weaving and from going to and from the Ocotlán market. At the river bank, a man washes the newly shorn wool in the clear, shallow mouth of the river that pours forth generously into the village from the higher altitudes of Benito Juarez.

Teotitecos are perceived as privileged among Zapotecs. It is not because of the surge of foreign tourist dollars that flow into the beautiful village center each day led by expensive tour guides or because of the educated tourists that wander daily from the late morning bus to visit the artisan market. It is not merely because this town is considered auspiciously located between the ruins of Yagul, Monte Albán, and nearby Mitlá where one will find the original temple grecas, the ancient symbols sacred to the Zapotecs that inspire patterns found in their weavings. If you are from this village, you might feel fortunate because you are well connected with a sales-minded tour guide who charms tourists into spending the day to see how the rugs are made, to have lunch with your

family, to better your customs and traditions, and then wander off to browse the village museum carrying away several of your weavings, satiated and tired before reaching any other storefronts or homes.

At the principal crossroad of the mescal trade, a Teotitecan may be part of a tour to learn about and taste Mescal, the strong-armed great grandfather of Tequila distilled from the fermented hearts of the *Agave* plant that is still made in small batches at artisan stills or *palenques*. If so, a tour guide may stop at their home, one of those nearest the highway on the main road and at the outskirts of town. All day a family may give 10-minute weaving demonstrations to captivate and entertain the tourists who may buy a rug or two, or in the very least find some miniature rugs—tourist souvenirs most likely used as beverage coasters—or a woven purse or pillowcase. With little time to actually complete a weaving, these families source these weavings from family suppliers, other villagers, or even from Santa Ana Del Valle, the nearby village that receives little recognition for their addition to the Teotitlán rug market as an anonymous rug supplier. If it is Sunday, a family might pick up tourists on their way to the famous Tlacolula market, the oldest in the state, drawing all nearby villagers and savvy tourists looking for a more authentic venture. All of this is fortunate for this village but is not the source of their blessing. You may learn a lot about Teotitlán in one day as a tourist, be it time honored fact or more theatrical, sale-enhancing fiction, but you may never learn why this village holds the key to understanding life as a Zapotec in the Oaxacan Valley.

The beloved village, nicknamed *Teoti* by villagers, has been propitious territory for quite some time and for various socio-political reasons rooted throughout Zapotec history, but mainly as the seminal origins of the Zapotecs. Once widely revered for

hosting a sun god, Teotitlán was previously called Xa-Guia, or "beneath the stone," because it rests under Mount Picachu where appearances of the sun deity are reported to have created a spectacle, making the village a gathering site for religious rites. Recorded but not thoroughly agreed upon among scholars, a popular belief is that this village was the first settlement in the valley and, therefore, is the Mother village of all the Zapotecs. In this place where Zapotec has been spoken for at least three thousand years, simple Spanish is used only as a second language with outsiders and, out of necessity, when Teotitecos are outside their own village. Here, the old ways are carefully guarded and instilled into the young, while the advantages of the newer ways are hesitantly filtered through the realism of survival. Much like the town's elegant *Ristorante Tlamanalli,* offering up traditional Zapotec food in a gourmet atmosphere, modernism serves *Teoti* best when it captures the ancient past for the sake of continuity.

But the most fortunate asset to Teotitecos is that they have inherited the weaving arts from their revered ancestors and are taught the values of this art, passing it on carefully from generation to generation. They say that they have been weaving since the beginning of time.

Web Surfing In Oaxaca:
The Stories of 13 Weavers from Teotitlán Del Valle

Josefina Jimenez

It is evening and the pink sunset is the backdrop for an open air workroom facing Avenida Juarez, the central road that connects to the Pan American Highway. As cars leaving the small town roar past the workroom, Josefina Jimenez sits at her simple, antique spinning wheel. The wood is pale, unstained and raw with time, an inherited tool from her great grandfather. It is at least 300 years old. She lives at the very edge of town, at the highway entrance. At 39, she is a single mother of one 16-year-old son and the head of her household.

Her voice is sweet and gentle and her steadfast calm reveals an unwavering, gentle power. While her voice is smooth and quiet, it is easy to believe that she is a strong, independent business woman. She is the president of the first cooperative ever formed in the village, *Women That Weave*, an organization viewed as a respected predecessor to all the cooperatives now in the village. She is, therefore, a leader among village men and women and widely respected, for both her work and for her courage. Like most people here, her kindness simply emanates from her demeanor. She is among few Teotitecan weavers who share a commercial web page maintained by "middleman" Steve Green, a long time friend and rug buyer.

While the native language of Zapotec is Josefina's primary language, she also speaks fluent Spanish and can also read in Spanish. She is a self-educated woman who regrets that she did not have more educational opportunity. While the proud sign that bears her name can be easily spotted by tourists and visitors, she must still go into the

City of Oaxaca to sell her rugs when the tourist tide is low, or when there are not enough orders from the middleman. The women from her cooperative, *Women That Weave,* travel together to exhibit their work throughout Mexico. She is both an independent businesswoman, and also sells her work with the cooperative. Not long ago, it was frowned upon for women to leave the village, and would never leave the village without the escort of their fathers, husbands or brothers. So much has changed for women in the last 20 years in gaining a little more independence as well as a place at the loom in Teotitlán. The cooperative was a part of that change. It is clear that Josefina runs her business like many other families, but that the cooperative is a reflection of her success as a community builder, entrepreneur, and weaver. The cooperative is the net in her network. "We are organized by family here, but I am also supported by the women's cooperative and they help me. I can go because they support me. When I go out and I take rugs from every woman they support me with transportation and spending money for food. If I were to just take my own personal weavings to sell, it would be lot of money to make to support myself while I am out."

As for Josefina, she has only one middleman, Steve Green, who she has worked with directly for 15 of her 18 years weaving. While her cooperative is well known for inspiring the conservation of natural dyes, the work that she sells to him and her tourists is made with both chemical and natural dyes, as she says, "When the rug is made with natural dyes, the rug is more expensive. Only the client that values that work will pay for the work of the natural dyes." In order to sell more work at a good price, Josefina produces more rugs made from yarn that is dyed with chemical dyes, like many weavers of this village. However, she is one of the few weavers that know how to use the natural

dyes extensively and are still involved in the entire process of rug creation, which is extremely labor intensive. Says Josefina, "I get the wool, card the wool, I spin the wool, I dye the wool, and I weave the wool."

Josefina's longtime middleman is the one who has designed a page for her and promotes her work. She does not know much about the page or when it was posted, nor has she ever seen her page before our interview. She only knows that her middleman takes pictures of her rugs and posts them on a web page to promote her work. "That person who I sell to, I've known a lot of years, and that's how he promotes my rugs. He comes over and tells me or writes to me that he needs a certain rug with certain colors, certain designs, and then I make it. He's the one in charge of looking for a market for me. That's how he gets me business. But about the page, I don't know exactly how he works it or how it is. I don't know how he started the web page." Regardless of her lack of involvement in her web page, Josefina is delighted that she is on the web and, even though she has little to do with it, considers her page as her property. Yet, when it comes to the administration of her website she confirms that, "The buyer is the one that is in charge." While she is unsure of the sales figures, Josefina estimates that 50 percent of her sales are from the Internet and believes that the page has increased her sales.

"All I want is for people to get to know my work and to have the opportunity to sell my rugs. Well, it's very important to me, being a woman, that they know that a *woman* made this rug, because here in this Zapotec culture, the men are the ones that do all the work. For me, as a woman, I am happy to have the opportunity to participate in a web page." Josefina says that if she could change her page, she would give more examples of her work and create a more in depth history of the work of her family. "I

would change the page so that it explains the rescue of dyeing the wool the old fashioned way, and how the *women* are working now. I would explain that women work the rugs on an equal level to men, that our work is as good as men's work. And explain that it is all high quality, just like theirs. We are trying to make our product better everyday, because we live off of this *artesania.* And that way our children can have a better life, and achieve better careers."

Josefina seems to know more than most about the Internet. She has been approached many times by companies wanting her to purchase a page or service, but says that she does not have the funds for a monthly service fee to post a page on her own or to get direct Internet service. She has heard that there is an organization that helps artisans get started with websites, but she does not know the name of it and is not yet connected to such an organization.

While Josefina does not have any computer skills, she emphasizes that she would like to learn them. Josefina seems to understand the global concepts of e-commerce and expresses the importance of the Internet to me. I ask her if she would like to have her own commercial web page, "Yes in the future. Maybe in the near future...In the future, I think for me it would be better if the page keeps on going. It would be very good for me, and for my family, and it would mean more work, for me and my family and my whole cooperative in the future....Through the Internet, the whole world can know what we do. And through the Internet you can give more explanation and see how everything is done and how the weaving is designed."

Zacarías and Antonio Ruiz

The sprawling ranch compound of Zacarías Ruiz Martinez, near Josefina's home, is located just off the Pan American Highway, but is a little further toward the village. Every day, a constant flow of tourists come and go from deluxe, luxury tour buses and wander languidly through the sequence of demonstrations given by the Martinez family about rug making. I watch an older woman show her work at the loom to a crowd of tourists until Zacarías welcomes me into the household and introduces me to his son, Antonio. The entire family works together to produce the plethora of rugs. Zacarías is priming his son to take the helm of the family business. Zacarías, 56, has sold his own rugs since 1973 and expanded his rug sales when he began traveling to San Francisco in 1981 to the Mexican Museum in San Francisco. Antonío, 27, has been weaving all of his life under his Dad's tutelage but has not been to the United States.

Like all of my interviews, I have brought paper copies of their web page and they are studying them with eager interest, as they have never seen any of the information before. The father and son speak to one another for several minutes about the paper copies in Zapotec. Once they have deliberated for about 5 minutes, they are ready to speak with me. While his father sits at his right side, Antonio has been empowered to do most of the speaking. Zacarías, a robust man that is characteristically warm and easy-going, obviously takes great pride in his son. This seems to be a new position of authority for 26-year-old Antonio. His father beams with pride and leans comfortably against a stack of rugs layered high against the wall. Like most showrooms in the village, there are many stacks of rugs lining all of the available walls. Antonio and I initiate the interview

conversation about the history of their Internet page, while Zacarías continues to study the copies.

This family also works with the same middleman as Josefina Jimenez. Antonio begins to tell me about the history of their web page. "This page was made by Steven Green. He's a middleman that buys everybody's work here. He's a middleman that buys here with us and various people here in town. He called me and asked if he could take some pictures, and I said yes, he could. And then he came with his video camera and we did the demonstration of the carding of the wool, the washing of the wool, and the spinning of the yarn. He came with this video camera and we demonstrated the carding of the wool, tinting of the yarn with natural colors with cochinilla and indigo, then the colors that we used, the dyes, how you make the colors, and the weaving. We did everything in Spanish and in English to demonstrate to his clients when he sells the rugs. He said that he has had a lot of success with it, showing the video at his store, and on the Internet too. And that's how he started doing the Internet page with us, and then later he took some more pictures of other places in the town. He took pictures of other people in the town to finish up his page. And that was the history of it." Zacarías and Antonio do not know how the page was made but that they were given the address for the page and that they checked the page to approve the contents. According to them, Mr. Green is a longtime friend and he is the only one that ever offered to help them get online. They have had their website about 3 years. "...it is good publicity and if somebody sees on the page my name and my rugs, and says "We know you, we saw you on the Internet," that's good, it's a good idea...there are people that have come and have seen us on the Internet." The family also has a store in Tijuana. "There's a lot of people that come there

that have seen us on the Internet because we have two brothers there and we have rugs and their clients say, "we've seen on the Internet a person who's name is like this." And he says 'Oh yeah, it's my brother.' Yes, but it's good publicity, the Internet." Zacarías explains that they sell 90 percent of their rugs to about three middleman from their home, and 10 percent of their rugs in Tijuana and from their home to tourists. He explains that tourists buy the smaller rugs and that the larger sizes and special orders go to the middlemen.

According to the father and son, their cousin Arnulfo Mendoza, one of the most famous weavers from the village, was the first one from the village with a web site but that he took down that page. They estimate that the Internet connection was probably too expensive since it is 10 or 20 times the cost of going into the city. They say that they do not know who has commercial web pages and who does not. "Yeah we know there are people on the Internet, but hardly anybody talks about it [They both laugh light heartedly.] Everybody's secretive for the whole town, they don't want to say. [They seem amused by this and leave that comment with big smiles] It's like for them, it's like more business and if they tell us, people in town, we would copy their designs, *segun*, according to them."

Antonío and Zacarías agree that they are not owners of the page and that the page is owned, operated and designed by Steven Green. I am curious about their level of involvement in the creation of the page and how they contributed to the design. "Well, probably the materials. That would be included," said Zacarías as he looks to his son for reassurance. Antonío seems to zone in my question and understand the intended context. He gently shakes his head "no" to his father, as if that is not really what I was

asking. For me this is a perfect example of the generation difference in perspective. In truth, Antonío answered my question in the most precise way. But I learn more from the perspective of Zacarías. That, indeed, they do participate in the creation of the website in by offering up the material for which the website is designed. This response spins my ideas around 360 degrees since, for me as researcher, this is a new way to think about the websites. My assumptions of exploitation are being challenged. The value and integrity in the production of a material culture comes across loud and clear, and in the most unknowing way from Zacarías. I realize how dichotomized my thinking of participation is, and the arrogance inherent in such an assumption. There are many layers here and the wealth of this inter-generational interview is revealed in this question: The older way of thinking, and the newer way or thinking. Is it that the younger generation better understands Internet? Probably. That is probably why the son is able to answer the question within the context it was asked. He gets it. But his father's way of thinking is a beautiful ray of light, giving me new insight. He explains with solidity that of course they are a part of it, they participate by making rugs. This simplicity of this perspective is elegant. Like other weavers he is satisfied with this answer and with this dynamic. It is a complete formula for him. For his son it is not. He sees the possibilities and the complexities of e-commerce on the horizon. He understands the dimensions of opportunity. Like many of the younger weavers, the Internet changes the simplicity of the dynamic and may offer a lot of questions, but also a lot of answers.

"Well, Steven was in charge of locating everything," explains Antonío, "How it was going to be in the page, according to his clients, how he mentions the weavers, this person has this type of rug and with what pictures. He organized it by weavers. That's

where we're at. He's in charge of doing all of that. We had no say in it." Things get a little more somber here, like a grim moment of realization has befallen them. The questions themselves seem to be statements and I become aware of this dynamic.

Zacarías explains to me his perspective of the advantages and disadvantages of the Internet. "For us, it's a help, because there are more sales when the people that are interested are looking at the Internet pages. And the disadvantage is how expensive it is, and that we don't know the pages very well yet. Everything's new for us, that's all."

While they do not have computer skills they estimate that it would be good to gain some basic skills in using a computer and in using the Internet. They both agree that the Internet will improve their way of live as weavers and will increase their ability to communicate with more people and to become more recognized for their work. "It's about the work," explains Zacarías, "That's the most fundamental thing. And the culture as well. Those two things. Because a lot of tourism comes here for the culture and also for the way the town is dressed, our ways, our lifestyle, the tradition in general, the customs, and the work. All that combined together has manifested the tourists so that they will want to come to this town." He nods in reflection, "Yes."

While the father and son do not know how many people visit the web site, they estimate that their Internet sales are about 3 or 4 percent of their total sales. While they understand the potential and are excited that they are gaining exposure, they do not see that it is increasing their sales yet. It becomes clear to me that the web site may be merely helping the buyer, i.e., middleman, advertise the weavings. What they would like to see are more descriptions of the way of life in the town and more details of how the rugs are made. Zacarías explains what he would like to see. "Well, pictures of the current designs

and the way of life. Pictures of the mayordomía, and pictures of the looms, and pictures of how you card the wool, and how you wash the wool, and how is it spun. That's the most important," he says.

They explain to me that the young people are being prepared to work with computers and the Internet so that they can be prepared to work in this new realm of business. Antonío explains to me that many of the young people from the village are taking, "....computer classes, computer classes, and more computer classes." Says Zacarías, "One of my sons who's in Tijuana, he just finished his career in computer graphics."

Manuel Montaño Sanchez

It is 8 a.m. *tiempo de puebla*, or village time, in Teotitlán, which is an hour later than city time. The village does not follow the daylight savings schedule and there is this distinction between the strict expectations of city time and the timelessness of village time. I am anticipating a meeting with Manuel Montaño Sanchez, someone I have been trying to find for more than a week and finally found two days prior. I happened to stop at a small store in the town center to talk to a woman carding her wool at the porch entry. I had seen her there many times, and she would greet me in Spanish, and I would greet her in Zapotec. This always made her smile at me in a curious way. I found that practicing Zapotec was different than practicing Spanish. It opened doors like a magic key, or, it seemed to create a discomfort to others who seemed suspicious of a foreigner they did not know living in their town. I passed this way so often that she became curious about why I knew Zapotec and what I was doing in the village. It was very fortunate when I learned of her name. I asked if she were related to Manuel, who by that time, I gave up on finding before my fellowship ran out. I had only a few days left in the village. Ironically, he turned out to be her son. I was connected to many people this way, through somebody who knew of someone. It would have been impossible to have find people in the village of about 5,000 residents without guidance and introduction of their friends, neighbors and relatives.

To reach Manuel on a Saturday morning, I walked at least 2 miles with all of my filming equipment up Avenída Juárez from where I lived, through the town center and to nearly the edge of town. No taxis run this early, and there are no cars or truck beds of friend villagers to hop into that might be leaving the center to the edge of town to the

market. The walk is long and I realize how much work it is for those who carry their goods to the bus stop, many of whom are women or elders with small children in tow.

Manuel, a 38-year-old father of two boys, lives across the street from Zacarías and Antonío Ruiz and is also one of the most popular tourist stops in town. He has been weaving for 18 years. His home is large and beautiful, displaying one of the most elaborate showrooms I have had the opportunity to see in the village. There are many rooms to display the rugs, which give off a unique, bold energy in deep color combinations that are intriguing to the senses. Truly, the rugs from his family are exceptional, richly hued, jewel toned and exquisite. They are not known for remarkable designs, but traditional Zapotec patterns in incredible color combinations. His rugs are in a class by themselves, extremely well-woven and breathtakingly large. Immediately, I am captivated with the selection so unlike other weavings that I have seen. Manuel welcomes me with extreme gratitude and a gentile manner. He is very open about his business and the history of his web page. He expresses that he has been looking forward to this interview. He, along with Josefína Jiminez, share a web page made by a long time friend and buyer, Steve Green. He speaks slowly and deliberately with great precision, smiling broadly in anticipation of each question.

Manuel explains that they are organized by family, which, on average, is comprised of about four people. "Many family members work together. And then, each person of the family has a certain measurement of rugs that they make. For example, our family makes the biggest rugs in the village. And then from there, there's the next size down; for example, the biggest one is 2 metros by 3 metros. The next ones down, they make them 160 by 140 [centimeters], and then after that it comes the 130 by 2 metros,

and then the next ones down are the 80 by 150 [centimeters]. And then we go by ages. Yes, we make them by ages. The 40 by 50s are the ones that the children make, and that's how we go, from the youngest to the oldest. That's why it's called family business." Manuel laughs softly, pauses with a huge smile, and continues to speak. "At a certain age we can't work with a loom. Once we hit 60 we don't work with the loom because for that work you need a certain kind of strength. And the older people, when they are that age, they do not have that kind of strength anymore. And then after that age they just work the yarn. The total process of the wool, the elders do it, from the carding to the washing of the wool, the spinning of the wool, and after the dying...the whole process. At a certain age we have a function in the house that is very distinct. Everybody has their occupation."

In the last 5 years, Manuel's business has gone from having 10 buyers to about 3 or 4 and he sees this happening all over the village. He says that sales seem to have gone down about 80 percent, and that about 80 percent of all their sales go to middleman. Most of his buyers, like other weavers in the village, are from the United States. "The majority are from the United States. In other countries they don't know us very well. That is because we haven't promoted ourselves enough. So that they can get to know us, we need to promote ourselves. The window that has opened for us has been the Internet. From here we have to promote ourselves and advance more in our rugs, in our art. For us it is very, very new, but it is the best option that we've had.

Manuel explains the extensive labor involved in the old way of rug making. "It is impossible to do the whole process. The natural dyes, we buy them in a little town that's named San Bartolo. There is a ranch there where we buy the cochinilla, it's called La

Nopalera. The rock lichen we get it right here in the mountains. It is a whole day out in the fields and so this is the day that we liberate ourselves from this tension. And the huizache we obtain from the surrounding fields all around the village. The wool we buy it principally in Ochitslán, and in Ocotlán. Those are the markets here in Oaxaca. One of the most popular markets is in Ocotlán where the people that have sheep concentrate themselves. They know that we go there to buy things and that's where we buy our wool. Presently, they just come and bring us our wool. There are people that go and get the wool, I don't know what parts, and come here to the town in their cars and we buy it there. And we don't have to go out to the town to the market to get it because it costs us one whole day of work to go get the wool. Those are the primary plants that we use. The indigo, they bring it from the coast of Oaxaca, from Initepec. It's a town from the district of Oaxaca and that's where we buy the indigo. There we buy the indigo. And the yarn, 30 percent we make it by hand, and 70 percent we buy it here from the factory. The wool that we buy, there's another town that produces it and takes care of the whole process of spinning the wool. That town dedicates themselves to spinning the wool and we buy it from them already spun. But they do the whole process of that wool, they sell it to us already finished, but everything is done by hand. The wool comes from *Chichicapa*. We have very few people spinning our wool totally by hand. If I can put this in this interview, my mother, she does the whole process of the wool, she cards the wool, she spins the wool. The majority of her time, which would be like 80 percent of the time, she dedicates it to carding and spinning the wool. It is very impressive and that is why we demonstrate this process. We do the whole process of the wool because there are people who haven't seen this."

Manuel describes his relationship with buyer Steve Green as an ongoing friendship. He says that the web page was his buyer's idea initially, but he thought it was a good idea as well and that he agreed to the design of the page to increase sales. No one other than Steve had ever approached him about a web page. "He suggested that I should have an Internet page and we both agreed on the page," explains Manuel. "I think it is starting to work now. We think it is going to work because we are getting the first payments. Steve was in charge of making it. He was the one with the idea and he did it with his own funds."

Manuel had not known anyone in the village that had any connection to the Internet before Steve told him about it. He said that the idea of having a web page was something that inspired him, "to have greater sales and greater profits with this page, to have direct sales to people that have Internet [because]...being what it may be, in this place we are a little bit *cerado,* or closed off from the rest of the world. We can't advance anymore because we do not have direct sales."

To prepare for the future, Manuel's son is studying computers. He would also like to take a computer course to learn about basic computer skills. "The abilities I'd like to have are just to know how to operate the computer. I don't even want to know 100 percent, I would be happy with 50 percent. And then I would not have to depend on my son to use the computer."

"Now I see our world advancing, and I think we are going to advance more. We are in the process of getting our own web page, but this page is going to be a personal page. My son is studying computers. I don't know how to use a computer, but we are going to get a computer and he's going to school for that. And then when he is capable of

working the computer, we are going to buy our own computer and we are going to have our own pages, and we want to promote ourselves really well." Manuel views the page as shared property because it is a joint venture with many weavers and with the buyer. While he does not want to change the page, he would like to have a page that is solely for his family as well but knows that he will need outside help to create such a page. "We haven't really had an influence. I would like to have my own direct sales. We want ourselves to be known," says Manuel.

Manuel is excited about the potential for global exposure that a web site can offer. While most of those who buy rugs are from the United States, he anticipates being known in Asia and Europe. "I think that Internet pages allow us to be known throughout the world. It is going to benefit us here at the entire level of the town, not just person to person. The people that work this way are going to benefit even more because we are going to have more sales, we are going to have more work. Instead of bringing us bad moments, it is going to bring us happy moments. That's what we want, to have more work, even more, and to have more production because today if we do not have sales our production stops."

Manuel is most excited about the way that people will order directly online and is about the prospect that the one percent of sales that they do from the Internet will grow in the future. "To communicate with the world directly, it will be a lot, a lot better because we are going to have direct sales, and we're going to let ourselves be known even more and let the specialties of the house be known. .... Well, the people that will see us on the Internet are going to say, "Well we are going to need a rug to decorate my house my room, my apartment. They are going to be able to ask for a rug, from the smallest to the

biggest. Right now we just started… It is just the beginning. And I think in the near future it will be like 50 percent, probably 50 percent of our sales will be on the Internet. And they are going to be independent. *We* are going to be the middlemen and direct, but right now it is just the beginning."

Margarita Alavez and Ernesto Vasquez

A young couple in their early 30s, Margarita and Ernesto sit side-by-side to mutually address my questions about their web page. I had met them the day before through Catalína Alavez, Margarita's mother. Catalína, a humorous, high-spirited woman in her 60s, connected with me through Scott Roth, one of the first rug buyers in the village. He was showing me how he was visiting houses to purchase rugs and some special yarn orders he was working on with some weaver where I made fast friends with Janet, Catalína's 5 year-old-granddaughter. Since that time, Catalína took it upon herself to show me where the dyes are purchased, where the yarn factory is located, as well as other hidden sites throughout town. She even insisted that I spend an afternoon filming her making tortillas "the old way," which I did. Most importantly, Catalína, set up my interview with her daughter and son-in-law, and took me to their house to introduce me to them. Today she takes their infant son into the back offices of their expansive rug showroom, allowing us time to speak at length about their web page.

Margarita and her husband are business partners and their showroom is just next door to the showroom of Manuel Montaño. Ernesto is the son of the most famous weaver from this village, Isaac Vasquez. They welcome the interview and seem very excited to talk share their ideas. He is quiet and calm, while she speaks rapidly and appears quick minded about business. I have surprised them with the news that they are on a web page on the Internet and that this news seems both exciting and awkward for them, as they know little about the Internet and had no idea that they were part of a commercial website before I requested the interview.

They too are on the compilation of web pages that have been put on the web by one of their buyers, Steve Green. When I ask them about the history of their page, Ernesto says, "We don't know. We wouldn't know how to explain that. We're really not in contact with the Internet. We don't know how it functions." Margarita smiles, "Well that was a surprise that they gave us, that our rugs were on the Internet. ...The people tell us that if you would like, we would put you on the Internet page but that's the end of that. And then we are no longer in communication and that's the end of that. And then unlike you, you come and bring us our Internet pages. But you brought us copies that we appeared on the Internet, and you were the first person that gave us a surprise, the copies, and showed us we were on the Internet." They are so appreciative that I brought them these copies and begin to refer to me as their friend.

Neither Margarita nor Ernesto have computer skills, but express that they would like to take a course to be able to work both with a computer and to gain Internet skills. I ask them about their relationship with Steve Green they say that would like to talk to him about the web pages and express how very grateful they are for his support, and Ernesto explains to me that he is "Like a friend." They both nod and say in unison "like a friend" again softly with a smile. Margarita and Ernesto do not consider the web page as their property, but do not seem to care about who owns it. However, they express that if they were to make any changes they would have an additional page that was exclusive to the business of their family.

"In reality, it is our wish to be on the Internet so that we can promote our pieces, so that we can make a better sale," says Margarita. "We want to have an Internet page only for the house, that's our purpose, to have that kind of page, first hand. We want to

show them the making of a rug from the beginning, show our clients our work, from the beginning and through the entire process. So the client can understand how the rug is born, how it's initiated. Demonstrating from the carding to the looming, the dying, and until the finished rug, the products are made exclusively from this house. Margarita glances to their small child talks to them from in the background. Catalína is playing with the child. Ernesto adds emphasis to her statement, "Like we told you before, here in this house. Yes, so we can let our work be known in this work, pre-Historic, pre-Hispanic, and traditional. We are a town of Zapotecos, and we are still indigenous and too closed to this thing called the 'Internet.' And we would like to have it, but we would know somebody that would know. We would like to have one [he speaks of an Internet page], but we would need somebody that would support us, that would know everything about this Internet page." Adds Margarita, "There are a lot of tourists that come to the city of Oaxaca, and in the city of Oaxaca there are a lot of rugs. But the tourists don't really know there's a town that dedicates itself to making the rugs. They don't know what it takes to make a rug."

"The truth is that it would benefit the town. So the *artesania* would get ahead, and it would be known worldwide, the *artesania* of the tapetes in the town," says Margarita. "More than anything, tomorrow the Internet will be more advanced like the town will be more advanced, of the next generation: Because we want to be a town that's more advanced, because the next generation *has to be* superior. The town has to be superior because of the new generation that's coming, and like the Internet is probably modernizing the young people for that episode. A lot of young people are learning the

computer. There's a lot of growth [now] because our parents, well, more than anything, we did not have the opportunity to continue studying like the young people do today."

Margarita pauses and looks over at her young son playing with his grandmother. "In the future we want the town...like we just mentioned, that the town gets ahead and will be more civilized. We want all the artisans to get ahead that could be known world wide from this town, Teotitlán del Valle, so that the tourists will visit this town, like the Europeans and foreigners and domestic and the like. I was telling you that they come and visit us here because they come and visit the city of Oaxaca and they could come and visit us...but they just go to the coast and to the city of Oaxaca. But they need to know that in the city of Oaxaca there is a little town named Teotitlán Del Valle with artisans that have a beautiful craft. For us, we're very proud to have these skills, to make the rugs by hand, because they are made one hundred percent by hand, and that's a very traditional craft, and we would like to know that this page will support us."

With a very serious look on his face, Ernesto adds, "It's the work of a family and it has came down through the many generations. Margarita adds, "That's why we have to keep it going and not lose it. That's what we inherited from our parents, our grandparents. How can I put it? That's why we have to make it better."

We can conserve it," says Ernesto.

"Yes, conserve our art of the rugs," adds Margarita.

Armando and Juan Gutierrez

Just across the street from Ernesto and Margarita is the home of Felipe Guttierez who also has a website. He is among those from the village who share pages on a site built by their longtime friend and rug buyer Steve Green as well as another page that sells their rugs that is called Colour Mexicano. A busy man running a large-scale family business catering to tourists, he leaves the interview to his two sons Juan, 28, and Armando, 27 who, themselves, are heads of households, each being married with several children.

It is night time and it is obvious that they have had a hard days' work. There are a few showrooms with rugs hanging from and stacked up against the walls. I am struck with the complex designs, tightly woven variety styles, so many that I cannot put my finger on one dominant characteristic. All of the rugs are excellent in quality and the quantity is astounding. I assume that there are many excellent weavers feeding this operation. I show them copies of their web pages, and they study them with great interest. They seem very surprised and are not sure of what they will have to say and, therefore, seem friendly, but hesitant. Like so many other weavers, they both sit on stacks of rugs against the wall and offer me a chair.

Juan and Armando are very interested in the photocopies I have given them regarding the websites on which they appear; one owned by Steve Green, the other entitled "Color Mexicano." " We don't know the website of these people," says Juan of the Color Mexicano site, "The only thing we know is the website of Mr. Green." They seem to comb through any memory that would inform them of their affiliation. "We don't know the "Color Mexicano," agrees Armando. "They come and buy but I don't know

because there are a lot of people that come to the house and buy and we don't know everybody, and that's the truth. The design that appears here, that's from this house, but we don't remember this man." I let them know that it appears that this site originates from Mexico City. "The truth is that they probably do come, but not very often," explains Armando.

They also know very little about how the website published by Steve Green was made or when it was posted. It becomes clear that they have never seen the page. While they recall some information about it, they did not know it was up and running. "He commented that he had a web page and there were some rugs of ours on the Internet. But then he took pictures of more rugs so he could show them. And then some of his pictures that appear here on this page, we gave them to Mr. green so he could put them on the page."

They talk of Steve as a long time friend of their fathers and a buyer for more than 15 of his 30 years selling rugs. The brothers, who have been selling rugs about seven years, express that they are not sure how viable this extension of business will be for them. According to Armando, their participation in the web pages is "... just to experiment with the territory to see if it really works, if it is a realistic option." They are both extremely skeptical that a buyer can see the quality of the rug, and are especially concerned that a client will not be able to see the true palette of colors. They are also concerned that their designs will be copied, even though there is nothing that they estimate is exclusive from their house. Says Armando, "There isn't any place where I could just say that these are my colors or my designs. This reminds me of similar

comments I have heard from other weavers. However, most weavers conclude that most of their designs are not exclusive but traditional and prevalent.

They both describe that the best use of the Internet would benefit the entire town, and this is the most altruistic description of needed Internet I have heard within an interview. They agree that the more tourists are drawn to the village, the better it will be for all weavers. While Juan has computer skills, Armando does not. Both feel that they would benefit from learning anything about the computer. Neither of them know how the Internet affects their sales, and estimate that there are no sales that can be attributed to the web page.

"Everybody is using email and we don't have email. And that would be a way to make business faster. That way they could say, 'I would like to order some rugs, this color, this size.' It is too expensive right now and they charge by the minute. It is 10 pesos per minute and it's like long distance, charged by the minute. Right here, right now, it would be too expensive. In Oaxaca, there is the system of the Internet, and to use it would be just a small fee." Juan and Armando estimate that in time there will be more competition between companies that will drive the cost of Internet service down.

"Right now, for us, what is so indispensable for us is e-mail," concludes Juan.

Raul Chavez Sosa and Beatriz Bautista Lazo

Raul 36, and Beatriz, 33, live near the weavers' market at the center of town nestled between hilly side streets. They are connected to tour guides who bring large groups of tourists directly to their home for in-depth demonstrations that include convenient tamale lunches served with chips, pop, and beer. Their business of 16 years has become a profitable arrangement with tour guides, catering to souvenir-seeking tourists milling around for affordable rugs. The profits of this niche market are paying off a much larger business endeavor, replete with a bed and breakfast situated on a large stretch of property closer to the Pan American Highway. Raul and Beatriz appear to be less traditional and more worldly than most villagers— Raul with his long ponytail and hipster hat and Beatriz with her long loose unbraided black hair—because they have spent so much time selling in markets outside of the village, even outside of the state of Oaxaca in numerous trips to Guadalajara and Monterrey. They work their business with their two teenage children: Their daughter, Viridiana, and their son, José, are studying computers and are being prepared to run the business. We begin our meeting later in the evening, but before *cena*, the late dinner, where they seek to entertain me with American style hamburgers, fries and Cokes. We begin our discussion in their dark showroom, dimly lit by a single, exposed light bulb. They beam with excitement as they see themselves within the small television like screen of the video camera and our interview begins.

Both Raul and Beatriz speak Spanish, but Beatriz like most women in the village, speaks Zapotec most of the time. They have three buyers, all of whom are from the United States. One of them is from Santa Fe, New Mexico, and the others are both from

Texas. Raul sells about 20 or 30 rugs per month, depending on the season and the clientele, but sells most of his rugs to middlemen. "Every client has a different taste. There are some that prefer fine rugs and there are some that prefer the normal ones. There are some that prefer rugs made from yarn spun by hand. For us the process is very expensive. It is a very, very long process. It's too long. And I live off the main street and don't have the time. And the people who come here just want *regular* rugs with a *regular* price on them. I can make rugs that are very fine rugs, but I don't have any one to buy them." To save time, Raul purchases most of his yarn from the factory, which allows him to keep his prices down and keep up with tourist sales.

Raul and Beatriz are not sure who put them on the web, but speculate about an English woman who bought some rugs and promised to help them gain publicity with a web page. Like all of the artists that I interviewed, both Raul and Beatriz think it would be ideal if they were to have the opportunity to receive computer and Internet training.

They do not have a computer and would not know how to even begin to use one. "I agreed with it because my interest is to promote my product and, hopefully, people will see it and come and see us," explains Raul. "This is our job, this is what our ancestors left us and we continue that tradition...we want to conserve it, we want to sell them, and we make rugs to order. More than anything, I want to make money that is my motivation because I want to help my children. I want them to be prepared to have a life, more than I do. That's why I weave a lot." Raul looks at Beatriz. "We both work together. She makes the colors. That's our motivation, to make money. Because here in Oaxaca, the school is very expensive so we have to work hard." Raul talks about his son and how proud he is that José is taking classes to learn how to work a computer. "He

found a page where my rugs were on the Internet. I was so happy. It was one step forward for my life and for my rugs. Because all I want to do is sell rugs. I want to sell rugs."

Raul does not consider the web page to be his in any way, but a free gift from a client that has not yet manifested any additional sales. "I don't think it affects us at all. Maybe for some people there are advantages, but for me there are no advantages. That's my perspective," says Raul. If he were to have a site of his own, he says that it would feature more links explaining the rug making process with more pictures as well as an in-depth history of Teotitlán. "Right now there is a picture of my son, but not of me," he says, "And I would like to be on there, too. I want to be on the Internet, but I don't know how. People from other countries need to learn about our town and the work of the Zapotecs. I want them to know the rugs of the Zapotecs. I am interested in the work of my town. I want them to come here, to my home. There are good artists that make the antique designs, and if other people, the people that pay for the work, get to know us, that we are totally productive people, it will be better... I want them to know directly that we are the people that produce the rugs so that we are no longer anonymous. I am interested in having them know the weaver."

After the interview, Raul and Beatriz invite me to join them for a dinner of cheeseburgers, fries and Coca-Cola to celebrate our interview. After months of traditional Zapotec food, I am glad to accept this invitation to spend time with them and to sample their version of an American meal, which, at the time, seemed much better than the real thing. We spend an evening together talking as if we had been friends for a very long time. They encourage me to come back and stay with them in their bed and breakfast that will be ready the next time I am there. Their daughter Viridiana and I speak in English

about music and computers as she kindly drives me back along the dark street and back into the town center and to the front door of the home in which I am staying.

José Chavez Sosa

It was Januario, the father of my host family, who finally showed me where José Chavez Sosa lived, just a few blocks toward the main road and around the corner. I passed this cement house almost every day and, like many houses, the tall walls hide any indication of what happens inside. However, the formidable steel gate doors that form a wall to the dusty side street seem to hide any trace of life at all. Several days in a row I have knocked accidentally at the house next door, not being able to tell which door went with what number. I had given up until Januario arranged for me to stop by the house at a certain time. I stood at the door and knocked for several minutes. I was surprised when a young woman answered the door and beckoned me inside to a house teaming with life. The family warmly invited me to their kitchen to share the customary morning chocolate with them and to discuss my interest in their Internet page. That morning, they happily scheduled a time for me to meet with them the following day. José, a bright, cheerful man in his early 30s spoke on behalf of his family.

When José explained to middleman Steve Green that his sales were very low, Steve told him about the Internet to sell more rugs. This is the only time that anyone has ever approached José about a web page. He estimates that he has been on this page about 2 years. "He was in charge of making a page," says José, "Because I have very little knowledge but he was in charge of making the page and its promotion." He explains how Steve asked for permission to put José on the web site. "Yes, he's a very good person. He used to come here before [the Internet page]. He has been coming here for many years. It's been like 28 years that he has been coming to the town as a buyer. And he liked my rugs, so we became friends. And like a middlemen, he buys rugs from me too. And that's

how he came to be in charge of the Internet page. "No, it is not my property. How can I tell you," José pauses," I am just part of that page, but I am not the owner. I'm just part of it.... Right now here in the town it is not very known, the Internet, and that's why a lot of people do not know about it. There are a few things that he would like to change on the page if he could, especially his name. "The first last name should be Chavez. Because my last name should be changed, but I don't think that's a big deal. It's not necessary. Well, now I would like to put in the new design that we have if we can. Like, if it's possible to put up a new [rug] design...I know the other ones are selling, but this," José points to another rug, "this would be more saleable. Like this design on the page, but this is a new design ...if it could change, I would change it."

José has seen his orders increase since he has had the web page and feel that his work is becoming better known as well. "And now they ask more for the rug because they know it," says José, speaking of an equal armed cross design that he says he originated. "The disadvantage is that somebody is going to copy my design and then they can make it. [Good follow up question. How much of this will actually happen worldwide. Interesting since many designs all over the world already have so many common elements and before the Internet this has been a concern. It brings into question, What is authentic?, especially in a place like Teotitlán where designs are rooted in historic ruins and yet so much is influenced by special client orders. José says that, "There isn't much difference. Every person has a type of work, their designs, their own style of working. And I don't think there is a comparison; everybody makes their own kind of work."

José speculates that Internet sales will increase in the future and for that reason, he expresses that he would enjoy learning how to use a computer "to be able to enter the business market." Explains José ,"If a client asked me to make a certain type of rug, I would like to be able to communicate with him." To José, the Internet will help Teotitlán become even more well known, and give the entire town more work. "The work is getting to be known, and there's more work; and the town is going to have more work, and I think that it is better that way. Our goal is to sell our product directly to our clients. All the people that visit our page could get to know us and come here to visit. This is what we want, that's all."

Juan Vicente Vasquez and Ana Gutierrez

Juan and Ana live in the hilly sector of the village, nestled deeply in a neighborhood of adobe homes. When I arrive at their home the morning air is still crisp, and I am led past grandchildren playing in the household courtyard. For the sake of our interview they lead me to a lovely balcony on the second floor that is in perfect view of beautiful Mount Picachu, a natural icon of religious history and religious mysticism. Ana, 62, is traditionally dressed with her light blue plaid apron trimmed in white cotton lace pulled customarily over a vibrant floral dress. Her beautiful long braids are tied together at the back of her shoulders, revealing her gold, half-moon hoop filigree earrings, the kind of earrings that Zapotec women from the Oaxacan valley wear. Juan, 72, is clothed in a western style dress shirt and dress pants, with a straw sombrero hat that all country men, referred to as *campesinos*, wear. His rugged hands and deeply tanned skin reveal that he is a hard working man, obviously strong and diligent, and I recall seeing him carrying his rugs on his back in Oaxaca City. Juan and Ana sit side by side, and like many married couples here, appear to be partners working in collaboration in all areas of life. They speak comfortably together, taking turns talking back and forth.

Juan learned to weave like most young men, from his father. He started selling rugs on his own in 1940. Traditionally, explains Ana, "The women dedicate themselves to work the wool and the men weave."

According to Juan, marketing a rug has changed quite a bit over time, but drastically since 1960 due to increased transportation and road services. "Well, before in 1948 it was so different. I used to sell my sarapes at the festivals in the mountains, at every festival. I would carry my rugs by donkey and would travel walking for 2 or 3 days

to get to the place where I would sell. I did this before, between 1950 and 1955. And somewhere around 1958, 1960 things started to change. Buses began to come three times a day to and from the city [Oaxaca]. Now I sell my rugs very differently than I did before. Before, there weren't a lot of weavers. Now the whole town weaves. Not like before, when they would just work the fields. They would just work their fields and only for about 15 days on the rugs, but mainly they would work their fields. And now even the children work with the rugs. And before, when I was young, I would work for my Dad on the entire process of the wool. Now it is very different. All of the young that are growing up now...everything has changed....In 1960 it started changing little by little, and then the Americans started coming and buying."

A rug from Teotitlán Del Valle, now an expensive, luxury purchase for the foreign tourist or an artistic artifact of Mexican material culture was once a mere practical item— useful, mundane and of great importance. Oaxacans themselves purchased the rugs and weavings, using them for blankets, or *tapetes*, and long ponchos called *sarapes* to keep warm and dry. "Before, there weren't any tourists," explains Juan. "We used to go to sell to other towns where there were no buses or anything. We used to go sell, but on a donkey, and there [in the mountains] the people would buy sarapes to cover themselves, not for home decorations, just to use. They would buy the tapetes and sarapes because the wool weavings are water repellent. And that's why they used to buy them before in the mountains. Up in the mountains it is cold, so they also use them as blankets. In 1940, we used to call them *jarongos.* Little ones, big ones... and that's what we would sell for use by the people that would live there in the mountains. The ones that we sell today are the kind that the tourist buys over there in the United States."

Juan also notes other changes from the 60s. According to him, the tourists used to buy more rugs than they do now. Today, the middlemen are the only buyers that purchase weavings in large quantities. In his view, tourism changed life in the village for the better, and it improved the art of Zapotec weaving. "Now for every worker there's a design." Ana says that while every weaver has a design, their work is very special. "We work a special kind of design, even pictures we can weave. If an American says, 'Please, will you weave this picture?' we will do that." Juan and Ana specialize in taking any picture and recreating that image into a rug and their work is breathtaking.

The family has five buyers, from different parts of the United States and from Canada that typically order 10 or 15 rugs at a time. Juan and Ana also supply Celerína Martinez, who no longer lives in the village, but sells Zapotec rugs on her web page that appears to be sourced from the village. When there is a special order, the whole family will work together to fill it. "I have three daughters and their husbands. I work with them and my sons and my daughters-in-law. There are 10 of us. But the whole family works together," says Juan proudly. Tourist season is high during the Guelaguetza celebration in July, in November during Día De Los Muertes, Christmas, and in January. Ana says that there are a lot of tourists that buy their rugs, but that they usually buy only one or two. "Buyers from the United States, those are the people that order the most," says Juan. "The Europeans just come and buy one. They leave and we never see them back. But the other people, my middlemen, always return for more," says Juan. Juan and Ana also sell to a gallery in Oaxaca City, about 25 pieces at a time. Juan nods confidently, "The rugs always sell there."

It is the client's desire that drives the design of each and every rug and usually the essence of their decision, according to Ana and Juan, is color. Ana begins to describe how a rug order is requested. "Sometimes they say, 'I want a rug that is very natural.' They don't want chemical dyes. And then we go to get the plants, the husks, the peels to color the yarn. There are some people that just want natural colors that are from the vegetables, and there are other people that say they want everything in chemical color because they love the colors. There are plants that color blue, there are plants that color yellow, there are leaves that color brown, there are fruits, very big fruits, that color really, really dark brown. The beet, the alfalfa, there's a bark from the tree, the Grenada, all of this gives us color. We get color from all of that. The beets give us the yellow color; it doesn't come out the red color, it comes out yellow, like a really gold color of yellow."

Juan agrees that color is the most important factor influencing a purchase, but that this changes as buyers become more educated and get to know the process of how rugs are made in the village. "There are people in Oaxaca that just buy. It doesn't matter what kind of rug it is. The people are just interested in color. But if one person wants to buy rugs, they come here, here to the house, and we'll explain to them how it is made, what kind of wool it is, and what kind of color it is. And then they can come back with more or with a group of friends or a group of students. Sometimes they want to watch how everything is dyed, and that's the kind of stuff we do."

Unlike the majority of weaving households, Ana and Juan do not buy their yarn. Ana still spins all of the wool that they use. It is at her discretion what wool will be purchased and how it will be prepared, getting help from her children in the wool preparation process, dying the yarn with traditional, natural dyestuff. And it is not only

the men that weave in this family, the whole family weaves, including Ana and her daughters. She is very proud that not only does the family have seven looms, each of her daughters have their own looms in their homes and their own unique designs. She also owns a loom of her own.

While Juan and Ana do not have a computer or have any computer skills, they appear to have their own web site, sourced from within their household. However, it was a longtime American rug buyer that created the web page at a time when he lived with them. He is considered a dear friend, "like family." When he invited them to venture into the realm of Internet business, they accepted his invitation and agreed to the way that he organized the page. They have had the web page published for about 2 years and the buyer handles all of the online communication and is a liaison for all of the web based orders. "We are comfortable with him promoting us on the Internet because it is a support to us," says Juan, "It is the support of our rugs." When asked about the ownership of the page, Juan is clear that he does not own the page. "No, it's not mine, it is his. It has my name, but he works it. No, I don't own it. That's what we want in the future, because our page is called Oaxaca Maca and our rugs are in there. Now we would like it to be ours. That's the name of the American. Now he lives in the United States but he used to live here. He lived here for many years. The address is from here." Juan says that if he had his own page, that there would be more pictures and would feature the family name. "We just want our name on the page, because that is very important."

Juan recounts how the buyer would take orders for them through the web page. "The man said, 'Your rugs are going to sell all over.' It was working because he would

look at the computer every day and orders would come in from different parts of the country."

"When he was here," adds Ana, "He used to tell us that, 'They are asking for this type of rug. Now work this rug.' He used to look at the computer at what kind of things they wanted to buy, when he was here. But now he has left, and we don't have anyone to tell us how the computer is doing, or to see if they want rugs."

Neither Juan nor Ana believe that while they would be interested in learning computer skills, that this will be most important for their children and grandchildren to learn, since they estimate that more work will come from Internet orders in the future.

"In the future," foresees Ana, "If children learn the computer, and they want to get on the Internet, that is good. It is very interesting for them, too. But the town [as a whole] doesn't know how; the kids, yes, they learn that when they go to school now. They get on the computer and they are going to know what the Internet is. That is going to help them." "It doesn't affect us," says Ana about the Internet, speaking of their role as elderly weavers and of the job of weaving, "because *this* is our work."

At the end of this interview, I cannot help but to sense that they feel somewhat abandoned by their once present middleman. He is at least absent for the time being, for whatever reason. I leave the interview noticing a trend in the appreciation for the questions alone, how much they seem to value the opportunity to speak their mind. I am left wondering what kind of impact the sequence of these questions might have on them.

Israel Ruiz Bazan

Israel Ruiz Bazan lives on a grassy knoll on the eastern hills of the village overlooking the town. He speaks very quickly, as a very busy front man for a large family operation that does not deal with tourists, only middlemen, and has many large orders to fill. He is an outstanding example among all of my interviews. He is the only one who seems to be participating in e-commerce in any real or direct way, selling excellent rugs of exceptional quality in bulk to Novica.com. While he, too, does not own his web page, he is the only artisan from this community on the Novica website, a beautiful commercial online catalog featuring native crafts from Mexico. Novica is an example of the new electronic extension of the middleman relationship. However, unlike other relationships with middlemen, there is a high level of cooperative interaction with the Novica staff that involves a large degree of education and participation for the weaver. While Israel is featured on Novica.com, I was shocked when I met him that he did not look anything like his picture. "Oh," said Israel, "I don't know how that happened. That is a picture of my cousin."

Israel Ruiz Bazan is 32 years old that began selling rugs for 10 years, after being groomed for success by his father, who had learned the business from his father, and so on. "This is passed from generation to generation... We have a very big family... We start with washing the yarn and dying the yarn, and then we distribute the yarn throughout the family. There are about 15 of us weaving. We have one middleman that's been there for a long time, since my Dad. Recently, we have visitors, not middleman, but tourists that buy one or two rugs.

"We export approximately 20 thousand pesos per month," explains Israel, which is approximately two thousand U.S. dollars per month. "The history of my page is that we have initiated it with a general representative here in Mexico. His name is Jose Cervantes. I've known him before he worked with me. We have known his Dad. We've known him since he started school. He is an engineer. They started visiting here in Teotitlán. They liked our rugs, and that's how he started being a representative here... and he remembered us and our rugs and he invited us to sell rugs with him."

Novica added a page bearing Israel's name and the work of his family, adding Zapotec rugs to their repertoire of native Mexican crafts for sale. Referring to Jose Cervantes, Israel explains the history of their relationship., "He was a friend. Not a middleman. He never dedicated himself to the sale of the rugs. But he finished his degree as an engineer. Then he took a job at Novica.com. He was a student, and then when he finished his degree, I imagine that the company Novica offered him a job. It's a company in Mexico, and they probably offered him to reunite all the artisans in Mexico, of the country, and that's how they sell their products over the Internet. That's when he invited us to sell our products on the Internet. When we first started selling our rugs with Novica; that's when we found out there was an Internet. But before it was just middleman that used to visit Oaxaca, and he would make the orders with us and we only knew how to make the rug. Then they had the contact with Novica and then they have a branch in Guadalajara... and little by little we got to know what the computer was and took one or two courses and it became a little bit easier to get to know the computer and how to deal with Novica directly.

Says Israel, "It's very interesting for us. We are anxious to move our product through the Internet. It's not just good to move our product, but to let them know about what we make and what Teotitlán stands for, and the products of the whole town."

Israel and his family did not know about the Internet at all until they began working with Novica.com nor do they know anyone else that has an Internet page, but assumes there are many. "We are artisans and we want to sell our product," reasons Israel, "There are probably a lot of people that have been put online." Yet, now they are the most positive example of e-commerce I from all the weavers residing in the village. It is apparent that Israel is becoming seasoned in Internet business. "It has increased our sales to clients," says Israel, "We have worked a long time with people and we have found that some colors sell more than others, and that there are some colors people would rather not have. We have to change the colors by season because what people like changes seasonally.

Israel does not consider any aspect of the page his property and acknowledges that the page belongs to Novica. "We are simply the artisans that promote our product there. We sell our product here, but they are in charge of selling it to the whole world." He expressed that he does not know how the web page was designed or any details of how a web page is operated or owned. He says that there were no agreements made about ownership of any elements of the web page.

"Novica... had a photographer and they took pictures," says Israel, "We put rugs out. We explained how the work was done, and how it was weaved, and how everything was done, and then they took it with the company and the company was in charge of doing everything else." Nevertheless, he visits the web page frequently to see which rugs

are selling and which ones are not, and which rug orders he needs to fill. Israel says that sometimes the pictures are updated to feature new rugs. The most successful rugs that they provide to Novica are the more traditional Zapotec designs. "Before we tried the paintings, but they didn't work as much or sell very well. What sells the most are the original Zapoteco designs," says Israel with a smile.

Israel communicates with representatives of Novica.com through e-mail. Each rug is given a number and they know which rugs to make when they receive email from Novica. Novica provides the Internet connection and the computer, but they cannot use the computer. "Here in the town we do work by the Internet, we have a computer here that Novica has given us to work with. We don't have an Internet connection yet via telephone here in town so we have to go to Oaxaca and it's a lot cheaper. To stay there for an hour in Oaxaca it's a lot cheaper."

"At first it took awhile, but the most interesting thing was that we became more confident in working with Novica. First we sold something like 10 pieces that we gave them to try, to see if it was going to be successful. Then we had to repeat the ten [rugs] and see what the possibilities were. It's like having an exhibit on the page. Then we did that, little by little. Now we have 50 or 60 pictures of our rugs [on the Novica website]. That's a lot." He summarizes the dynamic elegantly, "We are only in charge of sending the rug. They are in charge of taking the picture and putting it on the page."

Israel understands that the advantage in accessing the online market equates to reaching buyers from all over the world, an additional market beyond the middleman. He expresses that the challenge in this is that most of their income is dependent on Novica. Nevertheless, he is grateful for the connection that his family has established with Novica

and enjoys the computer training and skills that they have provided to the family. "After we signed up with Novica, we had to prepare ourselves and go to a couple of classes to be able to work with computers so we can be in contact with them." Israel becomes excited as he talks of learning the computer. "It was very interesting. In the moment that we decided how to use the computer, it was a miracle. To know what the Internet is, is to get to know the whole world. It is very, very interesting." In the future, Israel would like to take more courses and learn all that he can about the computer and online business. For now, most of his training has taught him how to use the Internet. While he is fascinated by the computer, he hasn't seen it as changing their lives. "It hasn't changed our lives a lot. It has just opened us up to one more market. We can work now easier and our rugs aren't just piling up. They are selling more and now we know which ones to make, and which ones not to make."

The family seems to be spinning gold due to their connection with Novica. Their sales have increased more than 100 percent and on top of that, they still produce 30 percent of their work for other middlemen. So while their way of life remains the same, it is remaining the same in a much more profitable way. Israel recommends that other people in the village pursue online marketing of their rugs. "If other people have pages they can make their own sales and maybe people are doing this in the village. It would be more exciting for them and better for them. They would be receiving a better pay, a better margin of profit for their product if they sell their product to the Internet. But we are just taking it easy, working with one company. We are just looking for a way to sell more than anything else. All I want is that we would get more publicity in the world."

Looking out from his idyllic property, the entire village looks like a toy model nestled in a beautiful valley. His home is remote from the daily hustle and bustle and the tourist grind but he seems to understand the big picture. Like his land, Israel offers an overview of the village. "To me, we need more interesting things like the things we are seeing now like computers. The kids need to be prepared in how to operate the computer. This is very interesting for the whole world. We hope that they have better abilities in order to make better business and have better business sense."

Alberto Vasquez Jimenez

Soledad Sosa, wife of Alberto Vasquez Jiminez, greets me at the door of their home on the main road of Avenída Juárez at the center of town. She is in traditional dress, a white embroidered blouse with a long, wool skirt, tied at the waist with a hand woven sash died crimson in cochinilla. Her braided hair is softly coiled underneath a tied rebozo. Her husband, Alberto, one of the most original and famous weavers from this village, is glowing with kindness and warmth as he sits in front of his large, wooden desk. Behind him hangs an exquisite rug made with a dazzling combination of colors made from naturally-dyed yarns. An American Express sticker has been stuck to his desk, quietly announcing itself to any tourists that may wander into his showroom. Alberto is known for his work with authentic, naturally produced dyes as he creates rare, original patterns with gorgeous hues. He is also famous for his ability to translate any picture or photograph into wool, being the best at replicating what the weavers call "paintings" into a rug. His weaving is fine, perfect, stunning. At 59, he has been weaving for 30 years and is proud to say that he takes his time and is highly sought after for special orders from those who desire a collectible weaving that is more of a piece of art than merely a souvenir. His weaving stretches the imagination beyond any other authentic weaving from the village and is, in a sense, an example of perfection. It is no surprise that he has been invited time and time again throughout Mexico and the United States to exhibit his work.

Alberto displays a series of rugs patterned after Salvador Dali paintings called *Girafa* that he is currently working on. How he scales these weavings utilizing ancient tools is proof of his creative genius. He is very proud of this work. The rugs are nearly

replicas, but are somehow even more beautiful than the sheets of paper copies that inspired them. Alberto's 16-year-old son, Irman, proudly displays a rug made of blue mohair dyed with natural indigo, a vibrant depiction of the Zapotec God of Death. This rug is not only very captivating but also very, very expensive. Alberto explains that he is teaching Irman how to weave so that he can carry on his tradition.

Alberto, like the other weavers, has only a few middlemen. "Like three, but really they are friends. I sell them one or two rugs, not in a great volume, but they're great friends. Yes, yes, yes," he smiles. Alberto explains what he observes as the different types of rug buyers. "The ones that buy my work, they're European. They like the Pre-Hispanic art and the natural colors and images a lot. And the North Americans just like the combination of colors and that's it. They have interest, but in other combinations. The Europeans like the natural colors ...we sell more natural colors to them, like the Cochinilla. They accept it with kindness. Yes they know me and about my work. They know that I do paintings and all kinds of weavings."

Alberto says that he does not know anything about the web site that features him, published by rug buyer Steve Green but that he has know that it has been online for about two years. A longtime friend of more than 20 years Steve is considered more of a friend than a buyer. "Steve says to me, 'I have your Internet page,' but that's all I know. I don't know how he adopted all of this into the Internet." Nevertheless, the communication between the two is very open and active. Says Alberto, "He is a middleman but I've never worked more than 10 or 20 pieces for him. We're always just talking and we are always in contact."

Alberto does not know of anyone else in Teotitlán that also has a web page, but he speculates about some weavers here and there that appear to be enormously successful. He supposes those that are online in the village are probably those that appear to do the most sales. He also thinks that the people that buy rugs online are a very specific type of buyer, and seems to understand that may be an altogether different type of market. While he speculates, he admits that he knows next to nothing about the Internet and has never used a computer and does not lay claim to his page online. "No, its Steve's. The page belongs to Steve. The people kind of go to Steve and then Steve comes and tells me." He nods his head, "He made all the decisions. All the decisions were his."

Alberto does not visit his page frequently, and like the other weaver's featured on Steve's page, he really doesn't need to. The page does not change frequently and if there is an order, Steve calls them or drops in to let them know. However, if Alberto were to have a page of his own, he thinks he would make an entirely new and different type of web page, "Something very new, very original," he assures me.

While he says he wouldn't mind taking a course, he would only want to learn the basic skills that would enhance his job. "The truth is that I haven't had enough experience in this. If it's more work or if it could make more work, or if it is just more money to pay on the Internet, I don't know." He does think that his skills would need to include understanding the basics of email. "It is especially important at this time. It's fast. Because, like I said before, there will be a person who likes my work and they would write to me instantly," he says.

Alberto estimates that due to the Internet and commercial web pages that sales will increase for the entire village, especially those producing unique weavings unlike

any others in the village. "I like to do more complicated things, more artistic, and I live outside the box. And I think the Internet is beneficial for people like me." Nevertheless, he has no idea who has visited his web site and does not notice any increase in his sales. "Until right now, I haven't received any work from the Internet. I have just been told by a few friends 'I have seen your work. Your work is on the Internet!' No, I haven't had somebody come and tell me, 'I want this from the Internet.' I haven't had that experience yet. I don't have major sales from the Internet, but I still think Steve has orders. But I don't know. I don't know how many orders are from the Internet."

"I want people to get to know my work and to receive orders on the Internet because my son is now refining his weaving. That's mainly my wish. The wish is for him [to learn how to use the Internet] because, essentially, at age 60, there's very little work that I am going to do. But I want to look for a future for him and the Internet is it. That's my wish for the Internet. Hopefully, it will be possible."

Alberto passed away from an illness shortly after this interview. His death is a huge loss to his family, his community, and to the art of weaving. Since his death, his daughters travel to the United States to demonstrate their art in galleries and schools.

Edmundo Montaño Lopez

Edmundo is the owner of a brightly, clean restaurant adjacent from the bus stop and thoughtfully placed at the heart of the village. Edmundo's restaurant caters to the foreign tourists, serving various types of Mexican fast food in addition to hamburgers, fries, and soft drinks. Edmundo's is the easiest choice for tourists as they exit off of the buses and into the central plaza that features the elementary school, the museum, and many small *puestos*, or pop up tent stands, for selling rugs, sarapes, ponchos, rebozos and any other kind of saleable souvenir. It is clear that his family has a successful, expanding business. His busy restaurant connects to a spacious boutique displaying handmade regional clothing, jewelry, handbags and rugs. We conduct our interview on the second floor of the boutique, where most of the rugs are displayed.

Edmundo has about 10 middlemen, all of which are from different parts of the United States. "They buy the traditional rugs, the Zapotec rugs," says Edmundo. He explains that while he has many middlemen, his sales are best in October and November as the tourist season begins to climb. It is clear that his restaurant and his location allow him to do more sales to tourists.

Edmundo does not know much about his Internet page and is not sure, initially, who put him online. "Well, the truth is," says Edmundo, "I am not very sure about my page because I think one of my middlemen put this page on the Internet. I am not sure." Edmundo says that he has very little contact with the middleman that has created this page. I ask him if it is Steven Green and he thinks for a moment and then he nods as if to say yes. But he still does not seem to be sure. He estimates that he has been online three or four years and has no interest in changing the page. "Maybe I'll have an interest, but at

the moment, I don't." Additionally, he doesn't know how the Internet may be affecting his sales. "I don't have an idea of what the percentages are because, like I've said before, the person that put this page together is the one that has all the accounting of the percentages, and I haven't seen him in years."

Edmundo says that he believes that the Internet is influencing the artist. It seems that he sees the Internet having an individual affect, but not a community-wide affect. "The Internet is something marvelous for the artisan because it is centered around what the artist does so that they get to be known by the whole world. So it is marvelous... that the production and what we make, and what an artist does will be known to the whole world. And that is something marvelous, something the world can admire! And so, I think Teotitlán is happy for the new methods of the market, of the real market. It is very interesting for the Zapotecos."

Edmundo does not have any computer skills but is interested in learning to use a computer. While he has heard a lot about the Internet from tourists and clients, he has never been online. "Yes, yes, I know. I knew about the Internet," he says, "I knew it was like a medium for publicity, for art." But until now, he has never seen his own web page but did know that other people in the village were beginning to appear online. "The advantages is the growth in sales. The disadvantage is that if there isn't a page on the Internet, one is not known."

"The person that has interest in promoting the art of Teotitlán and the important people who take the promotion of our village to their state, makes us more interesting, more appreciated, appreciated as Zapotec artists in production of the weaving. Maybe in the future the town of Teotitlán can be more successful, more creative for the world.

Because right now I think the town of Teotitlán is recognized worldwide, and that's the most beautiful thing. This is the pride of Teotitlán."

Anonymous Weaver

This weaver lived near the center of town and wished to remain anonymous. Out of all of the weavers that were interviewed, his is the worst example of e-commerce that appears to be sourced from this town. While he appeared to own an amazing website featuring his original version of Zapotec designs, he had no idea, until I approached him about his website, that he was online. Of all the weavers interviewed, he was the most surprised when I showed him the printed copies of his website, or rather the website that uses his name, his story, and his identity to sell the rugs that he produces. While he had no idea that he appeared online, he was a little angry when he saw his name and the description of his history as a weaver told in first person, as if it were him speaking directly to the online reader. In spite of his palpable anger, he is very grateful to have a copy of this web page and seems to enjoy the opportunity for our discussion, even though it seems clear to him that he represents the least favorable end of the e-commerce spectrum.

Looking closely at the pictures of the rugs, he identifies that these are indeed his rugs that are being sold on the website, rugs that were most definitely purchased from him from a buyer. He takes a deep breath and sighs and continues to study the pages and he explains to me that it must be a page owned by a buyer, or middleman, and that they created the page without his knowledge. "Possibly my name is just is there because they have a person that sells the rugs." He says, "Possibly they do it because they want the business, to get a page just for the work." For this reason he chooses to be anonymous in speaking with me. He wants to be able to speak candidly without harming any business relationship or rug sales. Like all of the weavers that are interviewed, he is grateful and

thanks me with the kindest Zapotec words for talking with them. I feel that like the other weavers, he is relieved to be heard, to convey his own voice, but I sense this more powerfully from this weaver.

He is anonymous in many ways, not just in this interview. His large household and weaving compound appear hidden off the main road. His business entrance lacks a big sign at the household entrance, a typical feature for many weavers. Yet it is very apparent that they are very successfully engaged in business. Nevertheless, this weaver is a typical weaver in this village and like most he is part of a weaving business that is organized by family. At age 50, he has been selling rugs for 27 years. He is the head of his household and leader of the family business. Unlike many of the weavers I have talked to, he purchases all of his yarn from the factory in the village, or from other weavers. He has a wide variety of buyers from the United States, but mainly in California, Colorado, Dallas, Houston, and New Mexico. He explains the nature of his interaction with rug buyers. "Well, they come to buy anything that they might sell in their own business. There isn't a certain amount that they want. They just say, 'This is what I need today. This is what I will need next time.' There isn't a certain, set amount. They just come and pick whatever they need." He estimates that he sells, on average, about 30 to 40 "pieces," i.e., rugs per order.

"In truth, I am very ignorant about the page, like I said before. They are the ones that are handling the business. And really I am not involved. I don't pay. They are the ones in the sales, right there in the United States. There will be that later, when there's going to be a line here," He says, "We don't have a line now. But I do have a computer. But I need to have that line here in town to connect it to."

In spite of not knowing about his page, he seems to be waxing optimistic about the news. He explains to me why he would like to be on the Internet and like many others, seems to know much about the possibilities of the Internet, even though he does not have any hands on experience. He has a computer, and like others in the village he is eagerly anticipating affordable Internet service. He, like other weavers, talks of web pages as "announcement," or advertisements, and acknowledges that they are advertisements at a more global scale. Even though this may be true, I initially register this as an oversimplification. Since my perspective is from a country that touts the multitude of functions of the web as a new and completely unique form of multimedia, I have never deduced web pages. Yet, from the commercial perspective, they are right. It is an announcement to the world, and in many ways just another form of advertising.

"Like any artisan," he says, "I want to announce myself directly, like the ones that sell their rugs directly. That's what I am interested in. I would like to announce myself and demonstrate more of my work because there is a lot to demonstrate. I would like that. But it would be direct from here, from this house." He nods and his mouth turns down in an expression of certainty. "No, I wouldn't do it from the middleman. I would probably create my page with all of the pictures of my rugs and a detailed demonstration of my work. This is very important."

He explains to me that he has heard that many other weavers in town have web sites, but is not sure who has them. He explains that if he were to have his own page the joy would come from being able to work directly with his clients, to display more pictures, and to be able to describe how the rugs are made. He does not like the fact that he did not know about his page or participate in the design but rationalizes that it is good,

nevertheless. "Well, it supports me," He concludes, "Now there is only my name [on the web page]. And I feel, mainly, only that it exists. They are announcing my work, they are promoting my work. Well, I think that's bad," he pauses, raises his brow and lifts his hands as if to show that he is weighing out the dilemma, "But I feel like it is helping me, too. I think it's good. It's a good expression and it's a good history and it is helping me. It's helping me in a way." He summarizes this for me by emphasizing that he has had no level of participation in the creation of his page. "[It was] only when you got here that's when I knew it. I was ignorant of everything and I did not know anything." He sighs deeply, and explains that there is no way of knowing if sales can be attributed to having a web page, but also that he has not noticed an increase in orders.

It is ironic that a man that is so interested in expanding his business over the Internet should be the one who does not even know he is doing business on the Internet. At least, that is what appears on the global stage. It is sad to hear about how interested he is in the Internet and yet to learn that he has had no hand in the creation of the page that represents him. He seems to enjoy talking about the Internet. It strikes me that even on the Internet, he would like to remain private, or control who might be able to see his page. I consider how odd it must feel for such a private person to find himself on a web site without his permission. "For me the Internet has a lot of influence. I have more interest in having it at home and having me being the one that displays my own work. It is very interesting, Internet sales. I've always wanted it since the computer was invented. I've always wanted it to create a catalog. However, there could be more work to do, even if we don't want to do it. I don't know if the Internet could be more private, but I do see

that it's necessary to be out there. It has its advantages and disadvantages, it does help, but at the same time, they [can] steal your designs."

Like many other weavers, the idea that someone may steal your designs is one of the most common points brought up. They are not referring to other Zapotec weavers, and not necessarily referring to other Mexican weavers that might copy the designs. Most of the time, they are talking about their competitors in other countries. However, I have heard time and time again from weavers that they consider the Navajo weavers their 'brothers' and that they wish to work with them or feel a sense of kinship that they would like to develop further. The concept of other weavers stealing their designs seems to come from the production of replicas that began years ago. Buyers tell me that they have borrowed designs liberally themselves and there are many pictures of such rugs even though most of the time, Zapotecs make Zapotec rugs. Like most interviews, the issue of design stealing seems a minor point that has been made as if they are fully aware that the benefits of being online far outweigh such issues.

While "anonymous" does not know how to work a computer, he emphasizes that his children are comfortable with them. Yet, he too would like to learn more about it computer technology and would like to gain skills that will enhance his business. "I would like to learn about the Internet simply because of the business, because I would like everyone to know about my work." He pauses for a moment. "That would be very beautiful."

Sarapes Art and Tradition

The sweet, musky scent of naturally-dyed rugs fills the air of the long, narrow showroom, one wall comprised of large, jalousie glass louver windows, giving anyone who visits this showroom—a room off from the home of Reynaldo Sosa Martinez— the ability to see the outdoor aspect of rug making while shopping: dye baths being heated over wood fires in huge clay cauldrons, freshly dyed wool yarn hanging on lines to dry, a woman winding yarn onto spools, children spinning the yarn into wool, and grandmothers sitting on rugs in the shade with wise hands carding wool between two heavy brushes. This room is directly underneath several looms arranged in a row above, where men and women of all ages weave the tapetes. The showroom walls are covered with their weavings, tied up on nails by their fringe and we are surrounded by traditional clothing and stacks of rugs for sale. In the corner rests a desk and a computer used by their children, hidden under a thick, plastic dust cover. The musky scent of the rugs is like a subtle perfume that comes partly from the rich, smoky scent of wood burning beneath the huge terra cotta dye bath jars and partly from the amalgamation of other natural ingredients that comprise the dyes; such as fruits nuts, rock moss and the clean, light scent of cochinilla. This comforting aroma stays within a tapete forever and permeates any space that hosts it presence. It is the soul of the work, a hallmark of an authentic, naturally-dyed weaving from Teotitlán Del Valle.

Three members of the cooperative *Sarapes Art and Tradition* are meeting with me to talk specifically about their experiences in having a web page. A few years prior, we had crafted a temporary, experimental page together to explore how e-commerce might work from the bottom up. Shortly after that experience, they were approached to create a

page with a government group promoting the area. We are meeting at 9 in the evening, which is late for them as they have worked a full day. I feel fortunate to have them meet with me since it is a busy season for them and it is often difficult to find time to meet as a group. And even though I can tell that they are tired, we all agree that it is a good opportunity for us to talk in depth and reflect upon our experience before I conclude the gathering of my research. We begin our conversation with a formality that is foreign and rigid for us— but a necessary aspect of the more formal interview process—as we have worked so long together.

Reynaldo is 63 years old and the father of two teenage daughters. He is the elder of the cooperative, and while they take turns speaking on behalf of the group, he often takes the lead. All of the men are related to one another. Reynaldo, speaking on behalf of the community explains that it has been about 65 years now that the community began selling rugs to tourists and outside buyers and that he has been selling rugs for as long as he can remember. His younger brother Gervacio Sosa Martinez, 46, a father of three children, whom he is now teaching to weave, recalls that he began to help with the process when he was seven and began to weave at age 11. "At the age of 18, having more experience, and with the help of parents and the elders, we can go through the whole rug and finish it all by ourselves," he explains. Their cousin, Andres Guttierez Sosa, 44, who is also present for our discussion, started weaving when he was 14. He begins the interview by explaining the significance of the cooperative's formation. "Like my partner Reynaldo said, we've always worked with the middlemen, we've always sold for the middlemen, but we got together to form the cooperative so that we could sell in direct form to the people who use our product. But this has only been since we've gotten

together and formed a cooperative." he emphasizes. When Andres stops, Reynaldo looks me in the eye to make sure that I fully understand what they are trying to say. "There are no longer 3 or more people involved," he says to me, with a deep, intent voice. "There is just the artisan and the buyer." I nod my head to let him know that I understand him, that it is clear to me that because they as a cooperative have deliberately cut out the middleman.

The cooperative sells their rugs directly to tourists from their busy rug boutique on the bustling, tourist stretch of Garcia Vigil in Oaxaca City. They also sell at festivals and exhibit their work whenever possible. In a sense, the cooperative members are purists; they only want to produce authentic, traditional Zapotec rugs. Andres explains this achievement. "We produce about 80 percent natural rugs. It is a little bit difficult. It has been difficult from the beginning. It is a lot of work. Not just anybody can make them. A lot of times one can say, 'This is cochinilla.'" He says of the most distinctive natural dye element used in Zapotec weaving. "But in this cooperative, we want to be honest because one day a tourist might return their rug and be told, 'No, this is not cochinilla.'" Andres explains the integrity of the cooperative's work and how it is rare that a weaver can guarantee that their work is actually made with natural dyes. As a cooperative, they are proud of their independence from the middleman but also for their work the in recovery and conservation of the nearly lost art of producing rugs the old way. In addition, they have worked extremely hard to learn to successfully harvest their own cochinilla, a crimson parasite that lives on the leaves of the nopal cactus.

While the group has other web sites, they do not want to discuss them. I am disappointed, however, that they do not seem to want to elaborate more about the other

pages that feature them, but I also do not want to push, as they are entitled to their own level of disclosure, after all. But much can derived about what is and what is not said, as they refer mostly to our mutual experience and seem to avoid any description of the other sites. It becomes apparent that our efforts to meet and share in ongoing dialog about the potential of the Internet for weavers has truly been worthwhile.

Reynaldo explains how the group became interested in the Internet. "I received a page from the government when they talked to us the first time about the Internet," says Reynaldo. "To us, it didn't seem interesting. But afterwards, we learned the Internet was good. And then we started talking when you came to Oaxaca. That's when we started to work with the Internet. We knew this man that worked at the University of Mexico with a Ph.D. and later Diane [Ruonavaara] came and we talked with her and we had meetings in Oaxaca and we talked with them. They would come and talk with us. When you came with them, we started talking with you and how we wanted to create an [Internet page]. First we were contracted with a person from the government to open up a page. But then we had a page with you; that we opened up with you. And then the following year this person came to open up another page, but that was on behalf of the government. But we started first, and this came last year."

Andres explains the importance of our working relationship. "Through you we learned about how the Internet worked, how it functioned, what it was used for, and why people use it a lot. That is what motivated us to participate in the page. Thank you for opening us up to that. I feel like we're not the first ones, but we're not the last ones. But we feel like we are *among* the first on the Internet in Teotitlán. Other people in other countries are more developed, and they know a lot. Now we're in *their* world."

Through our shared experiment, it became very clear to all of us how much training would be needed for them to become comfortable in using a computer. The cooperative members feel strongly that they would need some type of training to begin to engage in e-commerce, but have difficulty expressing what they would like to learn. "I don't even know how to respond," says Gervacio, "I don't know what you need to work a computer. I have very little knowledge about the computer to even respond to what kind of abilities I would like to learn. I think we would need to learn the ability to type. We need some classes on typing." Working with them it became clear to me that they would need several types of skills to even begin to engage in e-commerce, such as; keyboarding, basic computer operation, and basic Internet training. Additionally, they would need the hardware and software, as well as a way to constantly maintain and upgrade their systems. Without a doubt, they would need a digital camera or a scanner to be able to update their catalog of products. Essentially, they would have to be able to write in Spanish and English and ultimately other foreign languages. In sum, we became aware of how interdependent we became to create the web page, and how it could also produce greater dependency for them upon intermediaries if they did not receive further training and obtain the necessary equipment. Clearly, this project informed us of how difficult it would be to maintain a website with an intermediary without constant, present communication. At times, I became suspicious of the sustainability of such a project, and began to wonder if they really needed to go digital at all. Together we learned a lot about the challenges that may be faced in attempting to do business online. The beauty of the ongoing exchange is that we have shared our ideas openly and have built a certain level of trust. In a sense, we have been co-researchers and have learned a lot from one another.

I have learned about their organization, families, culture and village in addition to their interests and needs. They have learned about my interests and about the growing level of e-commerce that is associated with their village, and about where they might need to prepare themselves.

While the group has been interested in the Internet, they did not know that other weavers were online until, after several conversations, Diane and I had brought a lap top to a meeting to show them how the Internet functioned and web sites that I had found from the village. They explain that they still do not know anyone who has a web site because they do not have the time and the skills to check for websites. They are all hard workers and their physical labor takes up most of their time away from the store. "We don't have the capacity to sit down and check a computer, but we know for a fact that there are people here in Teotitlán that have a web page," says Andres.

While they are not sure if they are technically correct, they consider all of their web sites their property. "When they said 'Here, here is your web page, this is yours' we considered it our property," explains Gervacio. "With the page that we did with you, the *main point* was that it was our page. And the other one was the people of Mexico that did us the favor, only one person, Irma Juerta, she was in charge of doing the other web page. She was in charge of it because we didn't know how to use the Internet or about computers." Gervacio face grows more serious. "There *has* to be other people to intervene."

I am taken back by this statement. It is interesting how he has acknowledged the need for outside intervention, a reality that most weavers have come to embrace. It seems that within the village, help from foreign intermediaries is not only welcome, but a norm

that dates back to the Spanish monks who taught them how to weave on the loom in the first place. This norm is somewhat of a conundrum for this cooperative, because within their own organization, the cooperative feels strongly about sharing ownership and the principles of co-operation that form the foundation of their cooperative. "The decision is not just made with one person, there are two parts," explains Reynaldo. "There has to be a decision from both sides." He continues to talk about how, as a cooperative, they were involved in the design of our experimental page." The acknowledgement of the importance of shared power, participation, and shared voice is a prevalent aspect of their description of our experiment. Reynaldo explains what it was like working with our team in creating their experimental page. "In the beginning we would check if one rug would be up, we would tell them to move it if we didn't like it, or that we wanted it across or another way. And little bit by little bit, as time passed by, we did not check as much as we did in the beginning. And it announces all the people that have been to the page." The cooperative members recount that in our project, all of our decisions were made mutually through constant communication and this feedback is a very rich reward for my sparse, open ended question, "What is the history of your web page."

It becomes evident to me that they understand the process of updating a page and also the importance of keeping it current and they recount for me how they would communicate with me through an English teacher who translated all of our email correspondence after I left the village. "It is necessary to continue to check and to keep on looking at what other things are missing. To change pictures, look at other things that need to be added... When the English teacher left I went on behalf of the cooperative to check the Internet, but the teacher left and I was still checking after she left. Maybe other

partners in the cooperative also checked it." Gervacio looks to his cooperative members who shake their head as if to say, "no."

Gervacio seems to grasp their dilemma and qualifies that his opinion is his own, and not necessarily that of the group. "This is very personal to me. I need to have capacity and not go to another person that opens the page for us," says Gervacio. "We need a little more knowledge of how to look at how the page is doing because we don't recognize these things completely. We have a computer, but we don't know how to work it. So we need some kind of knowledge to be able to open up a page. Right now we know that the children in grade school all have computers and us, we are all behind, because we need to be in direct contact with our page as a cooperative."

Gervacio explains that their daughters are preparing to do business through the Internet. "I may not have the capacity for that, but my family is preparing for that, to maintain and check the computer," he says. However, Gervacio also explains that, "It is a very difficult task, in addition to the weaving of the wool. That is a lot of work for us, it is more homework. To be able to do that, it is difficult and that is another task for us. And we cannot do everything at once, but we can make a little space where my partners can prepare themselves and create a capacity."

The cooperative feels that having a commercial web site is a great advantage but is also aware of obstacles such as these. "We think that in using this technology the advantages are good because it brings people to Teotitlán. The disadvantage is that we need to have a computer at the store and we need to know how to work it, and that is our disadvantage. We already have the advantage [of having a web page] but we do not have the capacity. But having the computer right there in Oaxaca it would be possible to take a

course so that disadvantage would not continue. To have Internet here in Teotitlán is, right now, a little impossible. It is too expensive having it all the way down here."

The cooperative does not yet sell through the Internet, so their web pages are functioning much like an online yellow pages or merely as a web advertisement. According to Gervacio, "There's something more important that is missing. More communication with the people from other places. We need, by email, more communication." He continues, very serious in his tone, "For all of that you would need a computer, a telephone, and a way to answer the phone. It is not very easy to obtain all of that. If you have the equipment you will have more capacity to do all that. And you need to know different languages to answer the email."

Reynaldo expresses that one of the most motivating elements of having a web page would by to convey the great history of Teotitlán Del Valle. "It is a Zapotec town," says Reynaldo, "the first town that was founded and very old. People who hear that will come more to Oaxaca to see our products that are made here." He pauses with a sly grin as he formulates his next thought, "Right now," he refers to their web sites, "there's only an idea of where the store is. But they don't call or we don't have any order forms. No, we are not that commercial, we haven't taken orders yet [online]. Now *I* am going to ask a question. "How do we make a page so we can make orders?"

Chapter Five: Do Not Judge A Book by its Cover

This research, comprised of 13 in-depth interviews responds to the question, *How has e-commerce activity emerged in the context of the indigenous weaving community of Teotitlán Del Valle*, Mexico?" Each interview, although displaying areas of divergence, share a convergent story. While it may appear that indigenous weavers are actively engaging in e-commerce, this is not the case. As we peak behind the curtain of this global stage we explore what is actually taking place behind the select images offered on the computer screen. In truth, in Teotitlán Del Valle nothing is as it seems: These images are authentic illusions. They are authentic in that these are authentic stories of real people in a community dedicated to weaving and the preservation of their traditional way of life as weavers at the helm of Zapotec culture. They are illusions in that the nature of this technological addition to their market is barely perceivable to them, while web pages are publicly presented and maintained by foreign intermediaries to increase their profits, for themselves and for the weavers.

To elaborate, the weavers interviewed from the village who appear to be selling rugs directly online are not launching their own websites nor are they engaging directly with the world through a commercial web interface. What is happening is merely another dimension of a pre-existing weaver-buyer transaction, or relationship, not unlike what has existed for more than 40 years with foreign intermediaries. While this on the whole is a very friendly relationship, the weavers express that they are dependent on their foreign intermediaries to reach the outside world. Of course, this relationship in many ways is symbiotic and the intermediaries, likewise, depend upon the weavers to produce the rugs that they sell. These stories reveal that while these Zapotec people do direct business with

other weavers and suppliers, tourists, and middle people, they are not being empowered in any way toward gaining capacity in e-commerce.

What becomes evident in their stories are the many obstacles that exist for a rural Indian people that dedicate all of their time to weaving, rearing families, and part-time agriculture. Surely they are experts in their craft but adding the necessity skills to learn a third language, such as English, in addition to keyboarding, computer skills, software skills, import/export know how and Internet marketing competence all seem to overwhelm them. However, most of them realize that they need to gain some of this training even if it is only through their children, who are being poised to take their business into the digital frontier. In their view, it is their children who will truly be able to maneuver these skills as adeptly as they do patterns in wool, and they express that their children are preparing for this opportunity.

While the children of this village may becoming geared for the electronically-mediated market of the future, it is the *mayoristas* or "middlemen" buyers that present the Zapotec identities on the Internet to sell more rugs. It is as if the Internet is another dimension or a mere extension of a previously existing market. Nevertheless, the weavers tend to view these online presentations on behalf of the middleman as a favor, a show of support, and an exciting new area of sales or a new level of transaction. While they may hope to have their own websites one day, it is in addition to the current pages that the middle people have created. In the end, increased sales are the ultimate bottom line for a rug weaving village hoping to succeed in a global economy.

There are several core themes that the weavers reveal in their interviews. First, it is clear that they are not the owners of their own websites. They make evident that the

Internet is new or mostly unknown to them. Second, most of them do not own computers or, if they do, they do not know how to operate a computer. Third, all of the weavers interviewed expressed that they would like to learn basic computer and Internet skills that would aid them in business. Fourth, all of those interviewed mentioned the preparation and education of their children so that they would be able to use computers. The village has computers in their schools. Fifth, all weavers requested support from some type of intermediary outside of their village to learn more and engage successfully in e-commerce.

For all but one weaver interviewed, none of them had ever seen the web sites that featured their identity before being shown paper copies of these sites. Only two weavers could identify any increase in sales from the Internet pages. Additionally, only one weaver, Israel Ruiz Bazan, knew how to operate a computer, had Internet access, and used email. None of the weavers interview had ever hired or worked in collaboration with anyone to create a web site. For all but the cooperative Art and Tradition and Josefina Jimenez, the existing web sites, in their view, were the work of supportive long-time friends and buyers of their rugs, and not their own property.

Mainly, all of the weavers anticipated that the Internet would be a great tool for the whole village so that all weavers and the designs of their households would become known. Altruistically, all of the weavers expressed the importance of their village, of their culture, and of the general process of making rugs as being the most important thing to be presented online. However, when asked what they would change about their web sites if they could, interviewees consistently reported that they would design their own pages and that these pages would elaborate on how their rugs were made and provide

more pictures that would be changed frequently. In addition, it was widely expressed that if customers understood the elaborate weaving process, they would understand the value of the rugs and be more willing to pay a fair price for them. Looking ahead, all but one weaver, Edmundo Montaño, projected that in the future they would have web pages featuring their own unique designs and skills, and that they would share information about Teotitlán, such as their history, as well as what is unique about the work that came from their households.

Based upon these interviews it is clear that, on the whole, the assistance of long term friends and buyers with good intentions have, to date, published the websites of Teotitlán Del Valle. While the weavers know little about how the web sites were created and had little participation in the process, most of the web sites were done as favors to help friends to become better known and to assist them in selling rugs for them. However, only further interviews with the initiators of these pages will reveal this side of the story.

In development terms, the critique is cast toward development professionals from a more participatory action research perspective. What is needed to approach e-commerce as appropriate, sustainable development would clearly involve greater levels of participation from the villagers of Teotitlán Del Valle. Participation in the entire process of web page creation would be needed so that it is primarily the creation of those that the pages represent. This level of participation would provide the weavers with hands on training and so that they can learn firsthand about that process, hence making the effort more sustainable.

While their children may be more Internet ready, people of various ages could also participate in the process to learn as well. In this sense, many different levels of learning would be engaged to better accommodate the entire community. Overall, all age groups could learn more about the concepts so that they are better able to reach their outside market without being completely dependent on intermediaries of the outside world. Additionally, they would all be able to communicate with one another about this new realm of business. On one hand, this approach would activate more autonomy among villagers. On the other hand, removing intermediaries completely may be short sighted as they have proven to be valuable friends who have generously brought support, ideas and overall encouragement to the villagers. There is a kind reciprocity between weavers and the outsiders who share their skills, resources, and perspective from the outside world. It is a social capital conundrum from my perspective, but this conundrum is removed through the lens of the ethos of Participatory Action Research where outsiders and insiders may work together with these guiding fundamentals to assist them in achieving more sustainable, thoughtful development. According to Fjørtoft (1999),

> With new communication opportunities, the political and social challenges in bringing the world together are within reach. Even the poorest countries do not need to be left out.... However, in order to bridge the growing gap between rich and poor, a new vision with a modern development approach has to be implemented as soon as possible. It is a question of political priority and utilization of professional skills and knowledge. The tool to achieve a more balanced world society is available; it is the very technology that is today threatening to tear the world apart. The choice is ours. (p 410)

Furthermore, for a community that cherishes their Zapotec foundations and the preservation of their culture, they also are very excited about technological elements of the outside world that might assist them in carrying forth their mission in the global

business environment. However, this same technology might later reveal serious side effects that they might not foresee which could actually harm their culture. It appears that deepening their perspective of the consequences and potential pitfalls of using this technology would be imperative. From this perspective, it is clear that this situation is not an ideal development situation, but one that could greatly benefit from a more appropriate program of development that would include not only high levels of broad participation from within the community but also high levels of interaction and discussion about the various consequences. Clearly, it would be beneficial to apply principles of Participatory Action Research to a thoughtful, inclusive development project, since, "...PAR strategy has a double objective. One aim is to produce knowledge and action directly useful to a group of people—through research, adult education, and sociopolitical action. The second aim is to empower people at a second and deeper level through the process of constructing and using their own knowledge..." (Lincoln, 1994, p. 328) In conjunction with this aim would be a project that is inspired by the media specific tools found in development communication principles. According to Meoemeka, development communication plays two broad roles. "The first is a transformational role through which it seeks justice. The second is a socialization role through which it strives to maintain some of the established values of society that are consonant with development." (Okigbo, 1996 p. 5). Says Moemeka,

> Besides creating opportunities for the people to know about the technical nature of new ideas, how they work and with what effect, development communication plays the more important role of creating an atmosphere for understanding how these new ideas fit into the real social situation in which the people operate. Its ultimate goal is to catalyze local development activities, local development planning and implementation and local communication to smoothen the path to development. (p. 24)

In addition to co-research utilizing PAR and development communication strategies, future research might also explore parallel interviews with the rug buyers that sell the rugs from this village and who have erected commercial web sites on behalf of weavers. Other areas of research may expand these interviews to include the newer websites that are emerging online, including those that feature booming bed and breakfast and restaurant industries being tied into the village as an extension of tourism and as an addition to weaving.

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APPENDICES

APPENDIX A: Research Questions (English)

I. Guiding Questions

- How do Oaxacan artisans engage in the process of e-commerce? What proportion of Oaxacan artisan with web pages are from the village of Teotitlán Del Valle?
- How can Oaxacan artisan web pages be categorized or understood?
- What types of relationships are involved in the process?
- How does gender play a role in the commercial Web page presence of Oaxacan artisans? Is there a dominance of gender presented on Oaxacan artisan web pages?
- What methods will best answer these questions?

II. Background Questions (Library and Archives)

- How many people are connected to the Internet in Mexico? In Oaxaca?
- How many people have computers? Web pages? Engage in E-commerce (total population in Mexico)?
- If data is available, What is the rate of participation of indigenous artisan's with web pages? (Find out the total number of indigenous artisans and estimate the proportion that have web pages.
- What is the artisan participation rate by gender?
- What is the population of the village of Teotitlán from census documents?
- What is the history of Teotitlán?
- What are the existing cooperatives in Teotitlán?
- What agencies (government and non-government) in Mexico and in Oaxaca are involved with Oaxacan artisans or artisan cooperatives?
- What agencies work with indigenous people of Oaxaca, of Mexico to help them gain Internet access? Are there any that work with artisans in particular?
- What government or community support exists for cooperatives in Oaxaca?
- What is the proportion of cooperatives in indigenous communities in Oaxaca?
- How many young adults are studying computers from Oaxaca and where are they from?
- What literature discusses the *stages* of infrastructure development in geographic locales?
- What literature is relevant regarding efficacy issues related to computer use?
- How many Internet cafes or places selling access to Internet available in Oaxaca (count and take pictures).

III. Interview Questions for Indigenous Artisans

Characteristics of Business

- How long have you been selling rugs?
- How do you sell your rugs? Please describe.
- How are you organized in rug production? (Family, cooperative, individual or other type of business?)
- How many buyers do you have?
- Where are the buyers from?
- Who are they?
- Are their types of customers? Please describe.
- Who are the largest buyers?
- Where are they from?
- What do they do?
- What products do they buy? Wholesale or retail?
- Total volume of sales by 1) By product? By buyer?
- Who do you buy supplies (dyestuff, yarn, wool, tools, etcetera) from?
- What other operations do you have?
- What is your association with other artisans who sell their rugs?

Web Page History

- How long have you had a web page?
- What motivates you to sell rugs on/or advertise through the web page?
- How did you learn about web pages?
- Did you know anyone from Teotitlán that had web pages before you? If so, whom?
- Did you know other artisans from villages outside of Teotitlán that had web pages? If so, whom?
- Who do you know that has web pages now?
- How did you come to have a web page? What is the story of your web page?
- How was it made?
- Who approached you about having a web page?
- Did you first deal with this person/organization about something different than the web page? (For example, were they rug merchants, tourists, friends from traveling or exhibitions, friends of family or other friends?)

Participation

- Who was involved in creating the web page?
- Who from Teotitlán is involved in the web page? (relatives, friends, external parties)
- Do they also sell rugs through a storefront, stand, or other type of means of sale?
- What was the decision-making process of creating a web page?
- Was there any negotiation/agreements made regarding ownership of the web page, content of the web page, photography, color, or art on the web page?
- Do you view your page often? How often do you view your web page?
- Can you change the web page easily?
- Is there anything you would like to change? If so, what would it be?
- What is the process that you would need to go through to make a change in your web page?
- Who owns the web page?

Voice

- How much "voice" or influence have you had in the decisions regarding this web page?

Skills

- Do you have computer skills? If yes, did you have them before the web page relationship?
- Was there computer training for you in the web page making process? Please describe.
- If no, would you like computer training? If so, what type? What would you like to learn and why?
- If you did not design the web page, would you describe your relationship with the web page intermediary as a pre-existing relationship or is it a relationship that exists mainly focused on the web page?

Relationship with Internet Intermediary

- Who from outside of your community is involved in the web page?
- Where are they from?
- Who from outside of your immediate family is involved in the web page?
- Who from the community that is not a relative is involved with the web page?
- If you were helped in creating the web page, How would you describe the relationship you had with the person/agency/organization that helped you get a web page?
- Does a business contract exist with any intermediary regarding the web page regarding ownership, sales, or any other element of the web page?
- If yes, were these/ are these agreements written or oral?

- How were you involved in formalizing the agreement, if the agreement was formal?
- How would you refer to the people that helped you get on the web page? (Friends? Associates? ...)

Economic Development

- What is your overall volume of sales as a rug merchant?
- What percent of sales are from your web page? What do you estimate are the percent of sales through other means of selling rugs?
- How many hits/visitors have you had to-date on your web page?
- Have your sales increased due to your web page? If so, is your overall income and way of life better due to the income or increased sales that you receive from your web page? If not, please explain.
- What are the benefits of having a web page? Please describe.
- What are the costs of having a web page? What are the disadvantages? Please describe.

Culture

- How do you think this web page effects your way of life as compared to before you had the web page?
- In your opinion, what is the importance of this web page?
- Do you think web pages are affecting life in Teotitlán?

Demographic Questions

- **Age.** How old are you?
- **Geography.** Where do you live in the village?
- **Languages**. What languages do you speak, write, and read?
- **Ownership.** What is your level of ownership in the rug making process? (do you own your own dyestuffs, dyes, yarn, loom, tools, materials, storefront, stand, car to go into the markets/city, etc) What is your level of ownership of the web page? Who owns the web page?

IV. Interview Questions for Internet Intermediaries

Characteristic of Business

- How long have you been selling rugs? How long have you been selling them online?
- How do you sell your rugs? Please describe.
- Where do you sell your rugs?
- Who is your consumer?

- How are you organized in rug purchasing? (With a family, cooperative, individual, or other type of business? Please describe.)

Relationship with the Artisan

- What is the history of your relationship with the artisan? How would you describe your relationship with the artisans you work with to sell rugs online?
- How do you refer to the artisans? What is the nature of your relationship?
- How would you refer to the people that helped you create the web page? (Friends? Associates? ...)

Web Page History

- How long have you had a web page?
- How did you have the idea to have this web page?
- How did you come to have a web page with artisans?
- Did you first deal with this person/organization about something different than the web page? (For example, buying rugs, meeting as tourists, exhibitions, through friends of family or other friends?)
- Who approached you or whom did you approach about having a web page?
- What is the history of the web page? What is the story of your web page?
- What motivates you to sell rugs on/or advertise through the web page?
- How was the web page made?
- How did you negotiate how the page would be designed?
- How was the content of the page decided upon?
- Did you or do you receive a percentage of Internet sales?
- How did you negotiate percentages of sales that you would receive? Has this changed or evolved?
- Was the agreement written or oral?
- Is there a business contract?
- What do you feel is the importance of this page?
- What is the process that you engage in to discuss the maintenance of this page with the artisans involved?
- Regarding the above question, how would you describe the difficulty of the process?
- What is the future of the web page? Do you think it will change significantly?

Participation

- Who was involved in creating the web page?
- What was the decision making process of creating a web page?
- Was there any negotiation/agreements made regarding ownership of the web page, content of the web page, photography, color, or art on the web page?
- Do you view your page often?
- Can you change the web page easily?

- Is there anything you would like to change? If so, what would it be?
- What is the process that you would need to go through to make a change in your web page?

Voice

- How much "voice" or influence have you had in the decisions regarding this web page?

Skills

- How do you estimate your computer skills?
- Have your skills changed due to the web page relationship with the artisan?
- Did you provide computer training for the artisan regarding the web page design and creation process? Please describe.
- If so, what type of training was provided?
- If no, why not? What do you think needs to be provided and what are the obstacles?
- If you did not design the web page, would you describe your relationship with the artisan as a pre-existing relationship or is it a relationship that exists that is mainly focused on the web page?

Economic Development

- Does a business contract exist with any intermediary regarding the web page regarding ownership, sales, or any other element of the web page?
- If yes, were these/ are these agreements written or oral?
- How were you involved in formalizing the agreement, if the agreement was formal?
- What percent of sales is done through this web page?
- What are the percent of sales through other means of selling rugs?
- What is your overall volume of sales?
- How many hits/visitors have you had to-date on your web page?
- Have your sales increased due to your web page? If so, is your overall income and way of life better due to the income or increased sales that you receive from your web page? If not, please explain.
- What are the benefits of having a web page? Please describe.
- What are the costs of having a web page? What are the disadvantages? Please describe.
- What are the import and export concerns that you have had to face?

Culture

- How do you think the web page effects your way of life as compared to before you had the web page?
- Do you think web pages are affecting the way of life in Teotitlán?

Demographic Questions

- **Age.** How old are you?
- **Geography.** Where do you live?
- **Origin.** Where are you from?
- **Education.** What is your level of education? Did you attend college? If so, which college and what were your degrees?
- **Career.** What is your occupation(s)? What is your income?
- **Languages**. What languages do you speak, write, and read?
- **Ownership.** What is your level of ownership in selling rugs offline and online? Through web pages?

V. Characteristics of the Web Page (Content Analysis)

- Commercial web page with online sales.
- Advertisement web page.
- Tourism.
- Educational web page.
- Collective artisans organization.
- All of the above.
- Other, with description.
- Who is featured on the web page?
- What type of material is on the web page? (content description)
- Who are the contacts listed on the web page?
- Is there a designation of ownership on the web page?
- What language is used? (English, Spanish, other)
- What page is there?
- What types of pages are there?

VI. Interview Questions for Teotitlán Students Studying Computers

- Why are you studying computers?
- What influenced you to do this?
- What are your career goals?
- What is the importance of computers in Oaxaca? In Teotitlán?

VII. Interview Questions for Internet Access Businesses

- How long have you been open?
- Who owns this business? (age, gender, race)
- How many people use this service?
- What type of customers do you have?
- What is your business philosophy?
- Does your business design web pages for business? If so, what type of businesses and who is responsible for web page design?

VIII. Interview Questions for Web Page Designers in Oaxaca

- How did you become interested in web page design? In computers?
- What types of pages do you design?
- How many have you designed?
- Do you ever work with indigenous artisans?
- If so, what pages have you designed?
- If not, why is this?
- In your view, how do tourists use web pages in Oaxaca? By Oaxacans?
- What is the importance of web pages in Oaxaca?
- How has the web page business in Oaxaca changed?
- Do you see the web page business changing in Oaxaca?

APPENDIX B: Preguntas Para Entrevista Con Artesanos (Español)

Historia de las Paginas de Internet

1. ¿Cuál es la historia de su pagina?
2. ¿Cómo fue hecha?
3. ¿Alguien se aproximó a usted para crear su pagina?
4. ¿Cuál era su relación con esta persona antes del diseño de la pagina en Internet? (Por ejemplo, mayorista, turistas, amigos, conocidos, familia, u otros)
5. ¿ Cuanto tiempo ha tenido pagina en Internet?
6. ¿Es su decisión vender o anunciar sus tapetes en Internet?
7. ¿Qué le motiva a vender ó anunciar sus tapetes en Internet?
8. ¿Cómo supo de las paginas de Internet?
9. ¿Conocía a alguien de Teotitlán Del Valle que tenia una pagina antes que la suya? Si es así, ¿quién?
10. ¿A que personas conoce que tienen un pagina de Internet?
11. ¿Cómo consiguió una pagina?
12. ¿Quiere decirme si la pagina es de su propiedad? Si no, ¿de quien es?

Participación

¿Que personas de Teotitlán Del Valle o fuera están involucradas en el proceso y diseño de la página?
¿Cómo fueron hechas las decisiones para el diseño de la pagina?
¿Tuvieron acuerdos de negociación para la propiedad de la pagina, contenido, fotografía, diseños y colores, texto, etcétera?
¿Visita su pagina frecuentemente? ¿Ó que tan seguido la visita?
¿Cambia el contenido de su pagina fácilmente? Si es así, ¿a como? ¿Qué proceso necesitaría para cambiar algo contenido su pagina?
¿Hay algo que le gustaría cambiar? Si es así, ¿que?
¿Qué proceso necesitaría para cambiar algún contenido de su pagina?
¿La pagina esta hecha para con su? ¿De quien?
¿Qué influencia ha tenido en las decisiones sobre este pagina?
¿Cuales son los ventajas y desventajas de tener una pagina Internet? Por favor, descríbalas?

Habilidades

1. ¿Tiene habilidades para la computación? Si es así, ¿las tenía antes de crear la pagina o antes de una relación con intermediario de la pagina.
2. ¿Estaba relacionado con la creación de pagina en Internet el curso de computación que estudió? Si es así descríbalo por favor.
3. Si no, ¿le gustaría tomar un curso? Si es así, ¿que tipo de habilidades quiere aprender y por que?

Relación Entre El Intermediario y El Artesano

¿Cómo describiría su relación con el intermediario de pagina en Internet? ¿En particular, describa su relación con el intermediario de la pagina en Internet como una relación pre-existente o como una enfocada solamente a la creación de la pagina?
¿Qué persona fuera de su comunidad esta involucrado en la pagina (mantenimiento, diseño, etcétera)?
¿De donde es?
¿Que persona dentro de su comunidad esta involucrado en la pagina (mantenimiento, diseño, etcétera)
¿Tiene familiares que este envueltos con la pagina?
¿Hay un contracto con un intermediario sobre la propiedad, ventas, ó algún otro elemento de la pagina?
¿Si es así, es escrito o es de palabra?
¿Que postura tiene usted en el acuerdo?
¿Cómo se refiere a las personas que le ayudaron obtener acceso a una pagina Internet? ¿(Amigos, compañeros de trabajo, conocidos, mayoristas, etcétera)?

Cultura

¿Cómo cree que esta pagina afecte su forma de vida?
¿Cómo creeque las paginas de Internet afecten la forma de vida en Teotitlán?
En su opinión, ¿Cual es la importancia de su pagina y otras para Teotitlán Del Valle?

VI. Desarollo Economico

1. ¿Cuál es su volumen total de sus ventas?
2. ¿Que porcentaje de sus ventas pertenecen a la pagina Internet en comparación a otros tipos de venta?
3. ¿Cuantas personas visitan su pagina?
4. ¿Ha incrementado sus ventas como resultado de la pagina? Si no, explique por favor.

5. ¿Cuál es su participación en el proceso de fabricación? Es usted dueño/dueña de sus tintas, hilo, telares, para tejar, tienda, puesto, ó coche para trasladarse al mercado ó a la ciudad, etc.?

VII. Características del Negocio

1. ¿Cuánto tiempo ha estado vendiendo tapetes?
2. ¿Como vende sus tapetes?
3. ¿Hay otro tipo de formas en las que vendes tus productos?
4. ¿Vende tapetes de otros artesanos? ¿De donde son ellos? ¿Son familias suyas?
5. ¿Dónde vende sus tapetes? ¿(Tienda, puesto, de casa en casa, ambulante, u otro?)
6. ¿Como está organizado? (¿Por familia, cooperativa, individuadamente, u otro tipo de negocio?)
7. ¿Cuantos mayoristas o intermediarios tiene? ¿De donde son? ¿Quienes son?
8. ¿Existen diversos tipos de clientes? ¿Por favor descríbalos?
9. ¿Quiénes compran mas? (Clientes, Mayoristas).
10. ¿Que tipos de tapetes compran?
11. ¿Cuál es el volumen total de ventas mayoristas?
12. ¿A quien le compra suministros como tinta químicos, naturales, (musgo, cochinilla, índigo, etcétera)? ¿Hay alguna persona que los vende en Teotitlán?

VIII. Preguntas Demográficas

1. ¿Cuántos años tiene?
2. ¿Dónde vive en Teotitlán?
3. ¿Que idiomas habla, escribe, o lee?

APPENDIX C: Artisan Research Consent Form

The following consent form is designed for indigenous artisan interviews in the village of Teotitlán Del Valle, Oaxaca, Mexico. It will be translated to Zapotec and Spanish.

- I am a graduate student in a Ph.D. program at Michigan State University in the United States.
- I am interested in researching how you have participated in the development of a web site that is currently on the Internet to sell or advertise your weavings.
- I am requesting an interview regarding your use of the Internet in regard to the Web site that features your weaving, information about you (story about your work) or image (photo, video, voice).
- Participation in this interview is on a voluntary basis.
- No payment will be made for participation.
- The interview will take approximately 1 hour.
- I am requesting your written consent to ask you questions about your use of the Internet or work with people who use the Internet to sell your weavings.
- (If husbands consent is needed to interview a woman) I am requesting your written consent to ask your wife questions about your use of the Internet or work with people who use the Internet and sell your weavings.
- (If parent of a minor) I am requesting your written consent to ask your child questions about your use of the Internet or work with people who use the Internet and sell your weavings.
- Do you own your own web page? (screening question for italic script below)
- Did you hire the person directly who designed your web page? (screening question for italic script below)
- If the answers to one of the above questions is "no" then the "owner" of the page is not the interviewee or the web designer is not a hired consultant by the interviewee In this case, READ:

  "If you identify yourself while speaking honestly about relationships with Internet intermediaries, merchants or web designers that have created a Web page that is related to you as an artisan, do you think that your relationship with these people would be harmed? For example, if an online merchandiser from the States learns that you as an artisan said things in the interview that they did not like, would you be likely to lose the account or would this harm your business relationships? If so, you may want to make sure that you have ***Full*** *or* ***Partial Confidentiality****."*

- The options for this interview include: 1) Full Confidentiality, 2) Partial Confidentiality, or 3) No Confidentiality. **1) Full Confidentiality**: This is where identification, image, and voice are not presented to the public or in publication, **or 2) Partial Confidentiality:** This is where the researcher would solely change your name to a fictitious name (for example, Maria or Juan) but may still use your image, voice, and story in the research study as it relates to a particular web site. The researcher will ask you to sign a release form to clarify if full or partial confidentiality is desired.

3) **No Confidentiality**: This is where you do not feel the need to have anonymity and you approve the use of your identity (name, image, voice) in this research and research related materials. Therefore, with "No Confidentiality" you would be potentially named and identified in future publication, public lectures, and other public forums related to this research. If no confidentiality is desired, this means that you do not think any harm will come to you by revealing your identity in association with this interview. In this case, you will sign for "No Confidentiality".

- If you consent to **Full Confidentiality,** sign and date this line:

  _____

- If you consent to **Partial Confidentiality**, sign and date this line:

  _____

- If you consent to **No Confidentiality,** sign and date this line:

  _____

- ***Your privacy will be protected to the maximum extent allowable by law.***
- **You may contact the following researchers if you would like to discuss any questions about this research or research related injuries:**

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- **If you should have any questions regarding your role and rights in this research, please contact:**

David E. Wright, UCRIHS Chair 246 Administration Building
East Lansing, MI 48824-1046 (517) 355-2180
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APPENDIX D: Forma Para Acuerdo Permiso (Español)

1. La siguiente forma está diseñada para entrevistas con artesanos indígenas en el pueblo de Teotitlán Del Valle. Estará traducida al Español y Zapoteco.

2. Soy una estudiante de doctorado de la Universidad del Estado de Michigan en Estados Unidos.

3. Estoy interesada en investigar como ha participado en el desarrollo de una pagina que esta actualmente en Internet para vender o anunciar sus tapetes o productos.

4. Estoy solicitando una entrevista con usted sobre una pagina en Internet que promociona sus tapetes información sobre usted o la historia sobre tu trabajo incluyendo imágenes (por ejemplo fotos, video, y voz).

5. La participación en esta entrevista es voluntaria. Usted puede retractarse de la investigación o rehusarse a contestar alguna pregunta sin ninguna explicación ó penalización alguna. Tambien, si alguna pregunta es demasiado personal para responder, no está obligado de ninguna manera a responderla.

6. No se pagara dinero por su participación.

7. La entrevista demora aproximadamente una hora.

8. Estoy solicitando su consentimiento por escrito para hacerle preguntas sobre su uso en Internet o trabajo con personas que utilizan Internet para vender sus tapetes.

9. (Si es una mujer y necesita el permiso de su esposo para participar en la entrevista) Estoy solicitando su permiso por escrito para hacer preguntas a su esposa sobre uso de Internet o trabajo con personas que utilizan Internet para vender sus tapetes.

10. (Si es menor edad) Estoy solicitando su permiso por escrito para hacer pregunta a su hijo sobre uso de Internet o trabajo con personas que utilizan Internet para vender sus tapetes.

11. ¿Usted es el propietario de su pagina en Internet?

12. ¿Empleó al diseñador solo o vía otra persona?

13. Si la respuesta a una de las preguntas es ¨no¨ entonces el properiatario talvez no es el entrevistado o el diseñador y talvez no es empleado de consultas para entrevistador. En este caso, leer;

¨Un intermediario en Internet es alguien que te ha ayudado obtener un sitio web o tiene sitio web que vende o promociona sus productos.¿Si se identifica y habla honestamente sobre sus relaciones intermediarias de Internet, mayoristas, o diseñadores que ha creado una pagina Internet relacionada a usted como artesano, piensa que sus relaciones con estas personas serán arruinadas?Por ejemplo, si una mayorista de Estados Unidos sabe que usted dijo cosas en entrevista que ellos no les gusto, ¿es posible que perder la cuenta o dañaría sus relaciones de negocios? Si es así, talvez querrá asegurarse que usted tiene completa o parcial confidencialidad.¨

14. El investigador le solicitará por su firma para clarificar el tipo de confidencialidad que desea. Las opciones para esta entrevista incluye:

    A. **Confidencialidad Total:** Esto es cuando su identidad, imagen, y voz no son presentadas al publico en la publicación.

    _____

    NOMBRE APELLIDO FECHA

    B. **Confidencialidad Parcial:** Esto es cuando el investigador solo cambia su nombre por uno ficticio (por ejemplo Malquíades o Macrina) pero puede utilizar su imagen, voz, y la investigación relacionada en la pagina.

    _____

    NOMBRE APELLIDO FECHA

    C. **Sin confidencialidad:** Esto es cuando usted no siente la necesidad del anonimato y aprueba el usa de su identidad (nombre, imagen, voz) en esta investigación y materiales relacionados. Por esto, se escoge sin confidencialidad, usted sería potencialmente nombrado e identificado en futuras publicaciones, lecturas publicas, y otros formas públicas relacionados a esta investigación. Si escoge sin confidencialidad, significa que no piensa que sufrirá alguien daño por revelar su identidad en asociación con esta entrevista. En esto caso, firmará ¨Sin Confidencialidad.¨

    _____

    NOMBRE APELLIDO FECHA

15. Su privacidad será protegida dentro de los cánones establecidos por la ley.

16. Puede contactar a los siguientes investigadores si desen discutiré cualquier pregunta sobre esta investigación o daño relaciones con la misma.

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17. Si tiene alguna pregunta relacionada a su participación y derechos de este investigación, contacte por favor:

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