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Dr. Monica De Hart
AHSS Summer Research Report

Weaving Sustainability, Carving Identity:
An Exploration of Oaxacan Artisan Livelihood

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Glossary of Non-English terms

Alebrije = handmade wooden figure

Alfarero = Potter

Artesanía = folk art

Artesano = Artisan

Calpuli = Indigenous form of organizing

Campesino = Peasant

Comunidad = Community

Usos y Costumbres = Indigenous form of community organizing

Textil = Textile

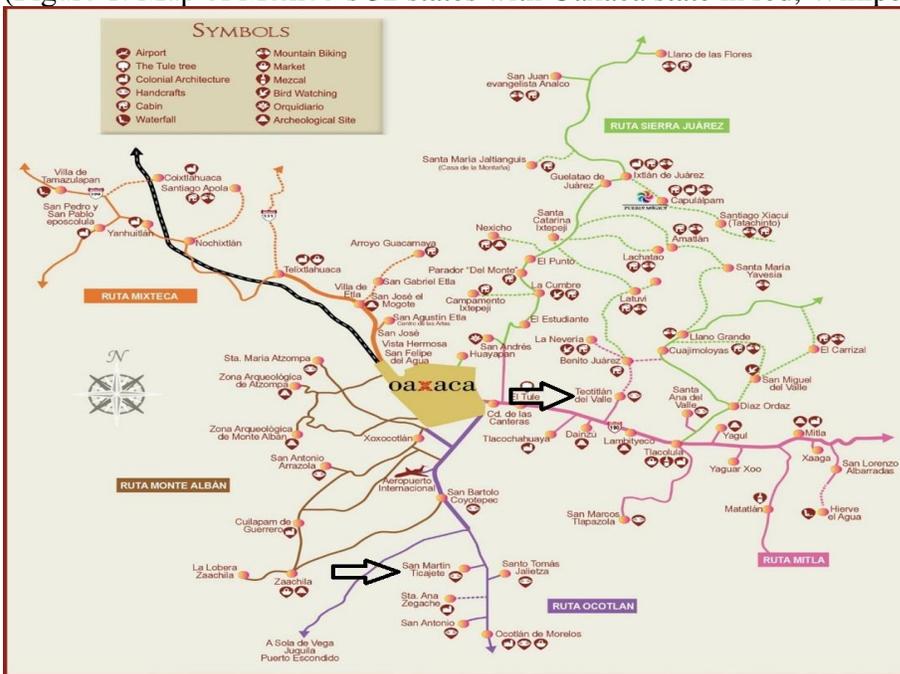
Tejedor = Weaver

Secretismo = act of being secretive

Introduction



(Figure 1: Map of Mexico's 32 states with Oaxaca state in red, Wikipedia.org)



(Figure 2: Map of Oaxaca Central Valley. Arrows point to San Martín Tilcajete and Teotitlán del Valle, Oaxacaevents.com)

The southwestern region of Mexico is world known for its beautiful folk art called *artesanía*, which is high in quality and variety. The tradition of folk art and craft has been passed down by generations while the economy revolves around agriculture, animal husbandry, and other forms of employment that include folk art and nonagricultural

livelihoods (Cook 2014). Oaxaca state is comprised of ethnic indigenous groups including the Zapotec majority, Mixtec and mestizo groups. The majority of the artisan communities are Zapotec or mestizo (Cook 2014). Many of the arts and crafts are bought and sold in the “plaza-mercado system” (Cook 2014; 18), which are local markets that rotate on a daily basis in which the agricultural and artisanal commodity exchange occurs. These *artesanías* are also sold in each community that creates them; artisans sell them in their own houses to tourists who visit their villages. The most famous *artesanías* include wood carved figures called *alebrijes*, textiles including wool and cotton products, and diverse clay pottery.

Teotitlán del Valle and San Martín Tilcajete

Teotitlán del Valle is a village in the central valley of Oaxaca with a population of around 5,600 located thirty minutes from the state’s capital, Oaxaca City (Municipios.mx, 2018). The main language spoken is Zapotec, an indigenous language. This community has been favored in its craft of woolen products due to its historically long participation in the production of the craft and high quality (Cook 2014, 17). Weaving as a form of folk art has gone through several transformations due to technological advancements brought by colonialism and industrialization. One of the key changes is the introduction of wool and the *telar de pedales* brought by the Spaniards during the conquest, which were added in thread production and weaving techniques used by Mixtecos and Zapotecos (King 2011). Moreover, traditionally the rugs were dyed naturally with local plants such as vegetables and fruits, flower petals, shrubs, the cochineal insect and tree bark (Donkin 1977, Baskes 2005). Historically, the cochineal insects for making red and indigo rock for intense blues achieved international demand and were symbols of high-class status (Donkin 1977, 6). During *la conquista*, the production of cochineal dye for export was a very important economic activity that only indigenous people were engaged in (Baskes, 2005, 192). The

second key transformation of this form of folk art production came with European scientific discoveries of aniline dyes in the 18th century, which came to replace almost all of natural dye production for export (Donkin 1977, 6). Today, the majority of *tejedores* in Teotitlán prefer these synthetic dyes to natural dyes for their woolen products. These are more economically accessible and available than natural dyes; the popular indigo rock is over 1,000 pesos per kilogram (approximately over 50 USD). *Tejedores* have been able to increase and accelerate production due to this technological advancement. The colors seem brighter and take less resources and time to dye the wool. Only a few families of weavers have continued the tradition of natural dyes.



(Figure 1: Photograph of Alberto's workshop with natural dyes in Teotitlán Del Valle)

San Martín Tilcajete is one of the villages in the central valley known for its woodcarving fantastical animal figures. This Zapotec woodcarving tradition acquired international attention when woodcarvers Manuel Jimenez of the village of Arrazola and

Isidoro Cruz from San Martín Tilcajete began to sell these to American markets in the 1960s (Chibnik 2008). Traditionally called *tonas y nahuales* and carrying indigenous spiritual meaning, the market renamed these woodcarved figures as “*alebrijes*” by associating them with the contemporary sculptures of Mexico City artist Pedro Linares (Chibnik 2008, 365). Thus, the *alebrije* is a fascinating *artesanía* as an alliance between the modern and the traditional. Artesanos use copal, a tree scientifically known as *bursera glabrifolia* to carve out their imaginative figures (Peters et al 2003). Due to the exploitation of copal, woodcarvers now depend on the copal market to carve their figures (Peters et al 2003, 438). Most *alebrijes* are produced in big quantities and sold to storeowners in Oaxaca City. Since 2006, woodcarvers have seen a decrease in the number of tourists and *alebrije* economic profit is lower than ever before.



(Figure 2: Photograph of Luis Antonio’s *Alebrije* workshop in San Martín Tilcajete)

Why this project: Folk Art and Sustainability

Weaving and woodcarving are pre-Hispanic traditions that have taught *artesanos* to care for the gifts that nature can provide. However amidst a global environmental crisis and a rise in socioeconomic barriers to indigenous community development, *artesanos* have had to find ways to uplift their families from poverty resulting in many cases in the exploitation of primary resources. The woodcarving community of San Martín Tilcajete is a prime example of the overproduction of *artesanías* leading to the deforestation of the copal tree. Arriving into Oaxaca, I was aware of this environmental impact, yet my interest was in the perspectives of the *artesanos* themselves concerning this issue. In Teotitlán del Valle I became interested in the reintroduction of natural dyes, which had been at the brink of extinction due to synthetic dyes. I was perplexed by its significance on indigenous identity and environmental knowledge.

This ethnographic exploration of these two aspects of folk art production in Oaxaca aims at uncovering the ways in which *artesanos* understand the cultural and environmental sustainability surrounding artisan livelihood in a growing globalized neoliberal market. I focused on analyzing how these artisans view themselves and their role in preserving this threatened way of life; this includes maintaining indigenous spiritual values of coexistence with their surrounding environment, balancing tradition and innovation, finding a market for their craft, and utilizing traditional community systems of organizing. I will present these emerging themes of tradition, market, and community and their relationship to sustainable folk art production.

Methodology

I spent six weeks in Oaxaca City to conduct my qualitative study. I took *colectivo* taxis as my form of transportation between Oaxaca City, Teotitlán del Valle and San Martín Tilcajete. Arriving in Oaxaca City, I talked to the few people I already knew to get in

contact with a few artisans. I also visited artisan *cooperativas* in the city to introduce my project and myself. I used snowball sampling after that to continue my interviews. In total I conducted 14 in-depth interviews of which I interviewed 10 *artesanos* in their respective homes and family workshops in both villages. The other 4 interviews were with staff at a range of civil society organizations such as Casa de las Artesanias, an artisan-owned cooperative in Oaxaca City, Colectivo 1050, a non-profit organization focused on the revitalization of communities of *alfareros*, Palo Que Habla, an artisan-owned organization dedicated to the bioconservation and reforestation of the sacred copal trees used for rituals and the making of *alebrijes*, and finally Oaxaca's only textile museum El Museo Textil. I also participated in a community event on the international day of the tree, a yearly event that has been happening for 23 years in the village of San Martín Tilcajete. One of my interviewees invited me to participate and observe the community's perspectives on environmentalism and community climate action.

The grand majority of my interviewees were middle-aged male-identifying *artesanos*. Although I did try to interview a more diverse representation of artisan life the reality is that gender roles are very distinct in rural Oaxaca. Therefore it did not seem appropriate to interfere in this order since my project is not focused on gender issues. I also could not get more than a couple of young *artesanos* to be interviewed for this project. As a part of snowball sampling, I found myself only acquiring the contact information of the male *artesano* as the father or husband, and very rarely the son, daughter or wife. This recognition is important but does not have such impact on my findings. There is a variety of scholarship written on gender roles and issues in the community of Teotitlán del Valle (see Lynn Stephen's work). However, there is not a lot of literature on gender issues in the village of San Martín Tilcajete thus future research has the opportunity to expand the

research on sustainability and identity including the topic of gender in this particular artisan community.

Utilizing these ethnographic methods I present my findings on a variety of themes that all revolve around the sustainability of artisan art and livelihood.

Findings

Sustainability through Traditional Values

In Teotitlán del Valle, the environment plays an important role in how *artesanos* choose to source their primary resources. Although the majority of weavers do not use natural dyes, my findings reflect that there is a strong correlation between the sustainability of this traditional knowledge and a sense of pride in their indigenous identity. Those weavers who have reappropriated natural dyes in their craft have an important connection to the inherited traditional values of caring for the earth's resources embedded in the Zapotec identity. Nicolas, a young weaver, mentioned the importance of sustainable harvesting as a form of oral tradition that has been passed down to him:

“It has been a part of the culture also, as a part of the family education, they always always taught you, well at least to us, they taught us to have respect for nature. If you are going to the fields to harvest firewood well you have to do it with respect and ask for permission, no? And to mentally prepare yourself. [...]. This consciousness was already present, we have to take care of plants, they are alive. We cannot mistreat them. We cannot misuse them and all of that. This is present in the community.”

His family's workshop is one of the few that still use natural dyes. In San Martín Tilcajete, the Zapotec tradition of carving animal figures called *tonas y nahuales* has taught woodcarvers to carefully choose their wood. Copal has proven to be the perfect wood for carving such imaginative figures. I found that all of the woodcarvers I interviewed had a clear connection to nature. At first I associated this connection to an indigenous identity, as was the case in Teotitlán. Yet, I realized through some interviews that traditional values of

conservation had only re-emerged as the copal tree declined in numbers. Artisan livelihood was threatened by the misuse of this resource and for a number of years, woodcarvers decided to turn a blind eye on the issue, until they couldn't anymore. Alejandro commented on this grave mistake: "We knew we had to take care of it but we neglected that part! We neglect that part that always has to be protected, that has to be taken care of, give it maintenance! Yes! That was the neglect!" He realizes the community as a whole chose economic profit over the environmental and cultural sustainability of their craft, and as a consequence losing a significant part of indigenous identity.

Traditional values have been key to recuperating the natural dye tradition that was almost lost due to the introduction of synthetic dyes. I observed an array of cultural knowledge concerning natural dyes since oral tradition was disrupted due to these incoming technologies. The sustainability of natural dyes has historically depended on oral tradition as these practices and techniques have rarely been recorded on paper. Thus, it is important to note that many of the weaving families who use natural dyes have had to acquire all the knowledge surrounding the technicalities of natural dying, resorting to academic knowledge and experimentation. Nicolas told me that although the older generations remembered some dying techniques, they had to experiment to develop a diverse palette of beautiful colors that would be worthy enough to compete with the bright synthetic dyes. Nicolas explained how it has taken his family about 10 years to fully develop their techniques due to several complications in addition to a lack of a formal sharing system:

"It was of talking to the people who knew about [natural dying processes] a little bit, but also here what has happened is that people have not been wanting to share this information, no? It's like the grandma's recipe! It's not like they give you the references of if it dyes this way, and there is even something more there with the quantities, the temperature, and the ph. and all of that! That is part of the experimentation. Books, no."

He mentioned *secretismo* within the community as being one of the reasons why this knowledge is not widely accessible to everyone. Miguel, a young *artesano* focused solely on the processes of natural dyes, has had a similar struggle since he moved to Oaxaca a few years back to learn about this tradition. The elderly weavers who do know about these practices have not been so open to speaking with him:

“Well in the end I see this as a responsibility, to take it if it’s within the people’s possibilities, uh to take that responsibility and well to transmit it! This type of things I do think is through transmitting it, a lot about transmitting it to the new generations so that can allow the survival of this type of things.”

I can conclude that *artesanos* showed a strong connection and added values to the natural environment that surrounds them. These passed down traditional values are a main aspect in sustaining artisan livelihood and root their work in Zapotec culture. However, as it appeared in San Martin Tilcajete, an environmental mentality in woodcarvers can also be present without being attached to an indigenous identity. Furthermore, oral tradition can have its limitations in supporting the sustainability of ancient knowledge such as natural dye processes. Without a proper sharing system this tradition could be lost, and losing such a tradition that so importantly values and utilizes nature can have irreversible impacts on the environment.

Sustainability in a Globalized Market: Tourism and Competition

Historically, weavers and woodcarvers have adapted their craft according to market demands. An example of this is the introduction of new technologies such as synthetic dyes in weaving communities. Many weavers changed a sustainable tradition to compete with international goods. My qualitative study shows sustainability can be supported or discouraged by the market. Increasing tourism and competition strongly impact folk art production. Not only does this mean that tradition is evolving but also it means this has

clear repercussions on the exploitation of nature and the long-term participation of the craft in the global market.

In San Martín, the market did the opposite of caring for the ecological and cultural sustainability of this *artesanía*. As more tourists arrived to the village the availability of the copal tree declined rapidly. Caring for primary resources was not a priority when woodcarvers had to compete in a globalized market. For woodcarvers, what used to be a casual harvest of copal in the nearby hills suddenly became a clandestine act as strict laws against the harvesting of wood were put in place. Manuel, a staff at the cooperative Casa de las Artesanías, said the biggest threat to the sustainability of artisan livelihood in Oaxaca has been the overwhelming inflow of international goods into Mexico, displacing traditional utilitarian home goods made by local potters, weavers, and woodcarvers. Finding a market was crucial to the survival of these traditions and this search came at the cost of identity. Traditional goods had to evolve and they soon became decorative souvenirs that tourists enjoyed. Manuel states, “[these women] start to open a market, but it’s a generation that faces a society that aspired to speak English, that aspired to travel to the United States, that aspired to be everything but indigenous!” Artesanos had to learn about industry, sales, and marketing for creating new products and designs.

However, international trends in the market can also support the sustainability of folk art, especially the traditional values of environmental sustainability by ensuring their participation in niche markets. The benefits of this participation can be seen in the economic stability and sense of pride of its monetary recognition. I was able to interview some weavers who reintroduced natural dyes in their wool rugs because they found a market that is catered to natural and environmentally friendly products. Alberto, a four-generation weaver from Teotitlán, commented on the recognition he gained for his bright

natural dyes made from organic local vegetables and plants. He said, “and that is what, what opens new doors and more people get to know these products. And they are interested! Because now really the natural is the most valuable, because it’s not toxic and also even more the colors are pretty! Colors that are bright and natural!” Alberto was so proud of his work and because it is more time consuming, it is natural and traditional there is an inherent higher value. Nicolas, another weaver from Teotitlán, agrees with Alberto in that there is dignity in this type of work. Their economic stability through this new market has paved a way for them to feel proud of a tradition and knowledge that had almost disappeared. Woodcarvers also found a niche market for locally sourced copal and even recycled wood. Roberto’s family workshop is the first one to be utilizing wood that would otherwise be disposed of for their *alebrijes*. They also started using tree roots and dead trees. Roberto said this helped their sales from international tourists: “We want the tourists to see that we are taking this initiative and we see that there are people who can give us such support.”

Tourism and market trends do not only impact the environmental sustainability but also the cultural sustainability of folk art. Culture and tradition can be overlooked by *artesanos* who must balance or choose between tradition and innovation. Therefore what counts as authentic, or traditional seems to have changed according to what the tourists want. In both villages I found a level of performance for tourism such as misrepresenting the origin of the *alebrije* and reappropriating indigenous identity or even utilizing that to appeal to the global market. I observed both new designs as well as traditional designs in the patterns painted in *alebrijes* and those weaved in wool rugs. Alberto said in respect to innovating his *artesania*: “Well what I see is that competition is really beneficial to one. Because always when there is competition one has to aspire to do a different thing, that you

are not stuck with your product and with your imagination!” For him innovation is inevitable to stay in the market. Roberto told me his purpose in making alebrijes has always been to innovate and offer a quality product, yet he has some customers who want to buy what they think is more authentic, meaning what is traditional: “part of our workshop, like I told you it’s dream, imagination and creativity. We don’t want to replicate what is original Zapotec culture or what is from Monte Alban [pyramid site]. Many [tourists] ask us for such *grecales*, *codices* [zapotec designs] but we have to take into consideration that by replicating that the cost lowers a lot, it gives it a minimum value to that piece.” For Roberto, *alebrijes* must be imaginative and unique; there are not two alike. Yet, some *artesanos* have made efforts to strengthen tradition in their *alebrijes* production. This is the case of the workshop of Mauricio y Luisa. In an interview, Luisa told me how they decided to focus their workshop 25 years ago:

[we had] a very clear objective and purpose. And that was the recovery... why *alebrijes*? Why *tonas*? Why *nahuales*? Why copal? Not to just do it! [...] What was the meaning of the animals? Why the animals? Why were they carved as part of culture? Ah, because it’s something spiritual! It’s your animal protector! Your totem! Ah! According to this we decided to give continuity to the workshop. Yes, give it that base, that depth and that meaning. It’s not just a souvenir!”

Artesanos are always in this liminal space: battling to produce an *alebrije* or a rug that is both representative enough of Zapotec culture but also new and original in order to compete with the others. Tradition is shaped by new innovations and identities adapting to new environments and global market climates. This can produce consequences or opportunities for the sustainability of the primary resources used. I see in the diversity of *alebrije* designs, wood used, and dying and weaving techniques, that which is authentic to these artisans’ constantly changing identities.

El Día del Arbol: Traditional Organizing Systems and Nature Conservation

In Oaxaca, indigenous communities are recognized as self-governing autonomous villages by the Mexican government under indigenous customary law (Martin Angel, 2007). The traditional systems of organizing known as *usos y costumbres* have been used since colonial times in Mexico. My findings suggest that an emphasis on community organizing based in these traditional systems can be the most successful in raising community awareness to the exploitation of primary resources for folk art production. Community organizing around reforestation can empower *artesanos* to continue with their tradition as long as this environmental component remains. This can have long-lasting impacts for the cultural, economic, and ecological sustainability of their craft.

The *Día del Arbol* is such an example of community organizing focused on the reforestation of the copal tree in San Martín Tilcajete. This event gave me the opportunity to explore community organizing in action as well as perspectives on conservation and community relations. *El día de la reforestación* started as a collaboration between artisan village leaders, notably the Isidoro Cruz family, and the popular painter Rodolfo Morales from Ocotlán de Morelos. The event has been happening for 23 years and the number of trees planted has risen throughout the years. Luis Antonio said last year the community planted 5,000 trees including copal as well as pine and jacaranda. As mentioned before, this event is key to the community's sense of economic security since they do not have a self-sustained copal resource. The *artesanos* I interviewed said strict ecological laws make it impossible for the community to cut the remaining *copales* in the village. Thus, they are forced to buy copal wood from villages that are two hours away: copal branches that are cut, many times illegally, and transported to be sold in the Central Valley of Oaxaca for *alebrije* production. I asked Roberto, a woodcarver: why is the reforestation of copal important? He said,

“[Reforestation] is the most perfect proof of acknowledgement towards natural life. Very important, and perhaps the most important until now for our community! I would consider the reforestation as giving life to nature, our planet, our village, our work. [...] This is an event that unifies our community! We unite and we all go together! The hill is the place. Here is where we have to plant.”

This event is key to this community’s environmental awareness. In past years they said surrounding communities came out to join the reforestation process. The extra manual labor helped them get a high number of copales planted. Unfortunately, this year’s turnout was not as big as in the past and Tileños felt abandonment instead of support from their neighboring communities. I attended the event as one of two outsiders and as we worked in groups to make the holes and plant the trees, Tileños deeply thanked me for being there and showing my support. I can conclude that community organizing must be the only way for such events to happen; government programs have lacked in this region leaving the community to solve such issues on their own.

Organizations such as non-profits, or in this case the Rodolfo Morales organization, can have a role in the process of bringing awareness to social and environmental issues in artisan communities. The Rodolfo Morales organization was crucial to pushing the woodcarving community to care for its primary resource. Coming from a respected native painter, this push was well received and developed a 20-plus years reforestation program. However not all organizations have seen such success. I found that there is a community-wide resistance when well meaning organizations step in. The response produced by the community is one of resistance and push back, which I can conclude comes from a colonized consciousness that is still present in the minds of *artesanos*. They see these organizations as capitalist and exploitative, so they would rather organize themselves so they can ensure the community will be benefited.

However the community is not only threatened by outside organizations and their unclear intentions. It can get more complicated when we take into account community relations amongst *artesanos*. My findings opened up a new issue in raising community awareness; this is the *envidia*, jealousy and envy that can break relationships. This was particularly clear in both communities: in Teotitlán the wealth disparity is so noticeable that *envidia* and competition can impede collaborative efforts of raising the environmental sustainability of primary resources. In San Martin, the success of one artisan workshop over the rest developed a strong feeling of envy amongst the community, and collaboration on actions related to artisan livelihood issues is nearly impossible. This artisan workshop has significantly expanded over the last 15 years and currently employs over 150 people from various communities. It is a top tourist destination amongst the *alebrije* making workshops. Additionally, it is an education center for young generations of artisans-in-the-making, and has a side organization called “Palo que Habla” as an experimental project on copal conservation. The founding couple, Mauricio y Luisa, said:

“This is a compromise, it is not only a compromise with the environment anymore, or with my children, or with them... it is also a compromise with all of the social impact, economic, and environmental that this workshop is generating under a strong awareness of what it is to respect the environment and our fellow artisans.”

I directly asked Luisa about their relationship to other *artesanos* in the community. She said her workshop wants to have a communal vision for the sustainability of *artesanía*; however, she said the community is not ready to leave such feelings behind for a collaborative conservation effort of copal seeds and biodiversity. From these two examples I learned that the initiative must be taken from within the community and by someone who has equal standing ground as most of the community.

Community organizing has taken many forms in Oaxaca. The traditional systems of organizing can be seen in village politics as well as in artisan cooperatives in Oaxaca City. Casa de las Artesanias is an example of an organization that is empowering artisans by giving them a market in which to sell their folk art, and utilizing the indigenous *calpuli*: the zapotec version of a communist cooperative. The founding group of artisans at Casa de las Artesanias wanted to compete with the cheap goods available that replaced hand-made Oaxacan goods and they all economically contributed to rent a space in the *centro* where most tourists stay. This provided an economic stability for small family workshops, as the *calpuli* system ensures everyone a salary from an equal division of the sales.

“The *calpuli* is the system of community organizing in which there is language, there is spirituality, there is philosophy, there is identity, there is artesania... there is territory! [...] We created this organization [Casa de las Artesanias] to utilize these systems of organizing and we incorporate the mainstream system of commerce but the heart of this is community, the group, the society.” (Manuel, founding member at Casa de las Artesanias)

This example illustrates the successful use of an indigenous traditional system to run an organization for the artisan families and unlike a capitalist-based system does not exploit its producers and actually provides economic stability as an incentive for the cultural sustainability of folk art.

Concluding Thoughts

This ethnographic research project covers three important aspects of folk art production and artisan livelihood in two artisan communities in Oaxaca, Mexico. Environmental and cultural sustainability of the craft is explored through traditional values, and market and tourism influences from the artisans’ engagement in the international market. The woodcarvers and weavers in each community claim an important role to the preservation of their craft in the ways they choose: from rescuing traditional dye

knowledge, setting up strict ecological laws, respecting and adapting their craft to commercial trends. Community and traditional systems of organizing come together to raise awareness for the exploitation of primary resources as well as provide protected spaces for artisans to fairly price and sell their *artesanías* under their own terms and conditions. There is much future research to do in order to explore community systems of organizing and their further potential for grassroots activism.

References

- Baskes, Jeremy. 2005. "Colonial Institutions and Cross-Cultural Trade: Repartimiento Credit and Indigenous Production of Cochineal in Eighteenth-Century Oaxaca, Mexico." *The Journal of Economic History*. 65(1): 186-210
- Chibnik, Michael. 2008. "Advertising Oaxacan Woodcarvings." *Human Organization*. 67(4):362-372
- Cook, Scott. 2014. "Land, Livelihood, and Civility in Southern Mexico: Oaxaca Valley Communities in History." University of Texas Press: Austin
- Donkin, R. A. 1977. "Spanish Red: An ethnographical Study of Cochineal and the *Opuntia* Cactus." *Transactions of the American Philosophical Society*. 65(5):1-84
- King, M. Stacie. 2011. "Thread Production in Early Post-Classic Coastal Oaxaca, Mexico: Technology, Intensity, and Gender." *Ancient Mesoamerica*. 22(2):323-343
- Los Municipios. "Municipios de Mexico: Teotitlán del Valle" 2019 <https://www.los-municipios.mx/municipio-teotitlan-del-valle.html>
- Los Municipios. "Municipios de Mexico: San Martin Tilcajete" 2019 <https://www.los-municipios.mx/municipio-san-martin-tilcajete.html>
- Peters, M. Charles, Silvia E. Purata, Michael Chibnik, Berry J. Brosi, Ana M. Lopez, and Myrna Ambrosio. 2003. "The Life and Times of *Bursera Glabrifolia* (H.B.K) Engl. In Mexico: A Parable for Ethnobotany." *Economic Botany*. 57(4):431-441
- Rubio Padilla, Martín Ángel. 2007. "Usos y costumbres de la comunidad indígena a la luz del derecho positivo mexicano." *Revista del Instituto de la Judicatura Federal* Rubio