



# **“Perish or Globalize:” Network Integration and the Reproduction and Replacement of Weaving Traditions in the Thai Silk Industry**

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## **Abstract**

The practice of handmade silk weaving has disappeared from much of the world, but continues to be practiced by thousands of people in Northeastern Thailand. However, as the Thai economy becomes increasingly embedded into global flows and networks of commodities, capital and culture, there are worries that silk weaving as a practice will either cease to be reproduced or will have to radically change in order to service the global market. This paper, based on in-depth interviews and surveys with sellers of silk, examines this dilemma faced by the industry. It finds that the means through which economic information is codified and transmitted over space and the tastes of non-local markets are ultimately resulting in changes to production practices throughout the country. Despite the fact that the internet is enabling trade and thereby allowing production practices to continue, fears are being realized about traditional practices being replaced as producers become ever more integrated into global networks.



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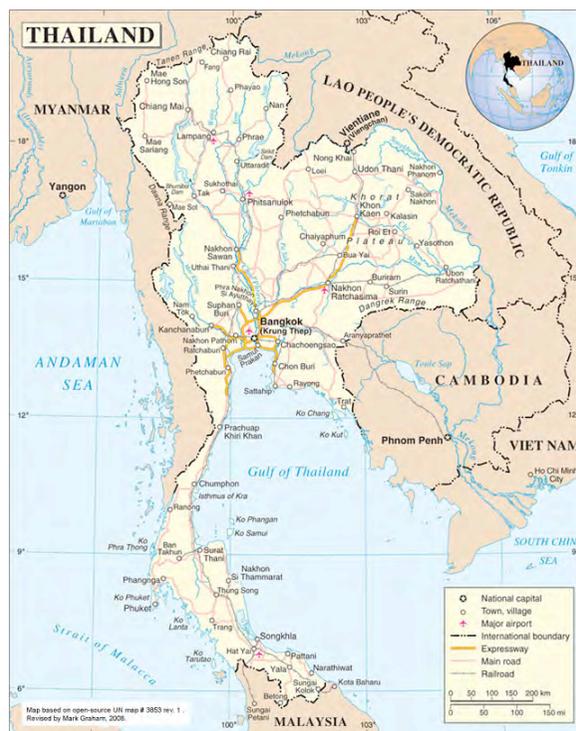
*One day surely I will be gone.  
 You, children, can continue to weave,  
 With mother's silk and children's yarn,  
 So the old cloth can turn a new leaf.*

Taken from the poem: "Real Silk From Mother's Hand" by Paiwarin Khao-Ngam (1995: 39).

**Introduction**

A common critique of economic globalization is that traditions, crafts, art, music, and beliefs that are not profitable or compatible with a global marketplace and will ultimately cease to be practiced and reproduced. As the internet is slowly becoming integrated into production networks of silk, and employed as a central plank in myriad "ICT for Development" strategies, many of these fears are surfacing in Thailand. In order to examine this topic, this paper asks whether silk-making traditions are being replaced as producers interact with distant customers through the internet. The research presented here is based on interviews and surveys that were conducted in 2007 with 173 Thai silk sellers.<sup>2</sup>

Figure 1: Map of Thailand



Source: Map based on open-source UN map #3853 rev 1.

<sup>2</sup> All sellers are anonymized in this paper.

Demand for silk within Thailand is waning and sellers are increasingly turning to the internet to find new customers. While the strategy has proved highly effective for some sellers, both the means through which economic information is codified and transmitted over space, and the tastes of non-local markets are resulting in a realignment of production practices throughout the country. This study indicates that while the internet potentially offers significant economic benefits to the producers of crafts around the world, it is not a neutral medium and its ability to influence cultural change should not be overlooked. Myriad cultural practices, symbols and meanings are neither easily codifiable, nor appealing to most consumers in a global market. This paper shows that ultimately a combination of instant connections to distant buyers and the need to transform tacit knowledge into marketable explicit knowledge results in shifts in selling and production practices.

### **Unsustainability of the Silk Industry**

Silk weaving is predominantly carried out in Northeastern Thailand (see figure 1), where there are many unique weaving patterns that have been handed down from mothers to daughters for generations. Ms. A, a weaver in Khon Kaen province, told me, "I have been weaving some of these designs since I was born." The weavers sitting next to her laughed at the statement, but then agreed that they too have been producing certain styles since they were taught to weave. Almost any weaver in the Northeast can point to unique designs and patterns that they have seen and woven all of their lives and that are distinct to their village, town, or province (Conway, 1992).

Most weaving is still done on hand-loom. Some woven silk remains in Northeastern Thailand and is manufactured into garments and other products at the village level or in larger factories. The rest is typically transported to Central Thailand and is either sold to foreign buyers or converted into other products (UNCTAD/WTO, 2002; Thailand's National Economic and Social Development Board and the World Bank, 2005; Datta and Nanavaty, 2005). Although a wide variety of silk types are produced in Thailand, this paper focuses on three of the most common varieties: plain silk, mudmee (see figure 2 for an example of the tie-dyeing of threads before being woven into mudmee fabric), and praewah Mudmee. Praewah, created by dyeing weft yarn into distinct patterns prior to weaving, is made from a combination of continuous and discontinuous supplementary weave.

Throughout Southeast Asia, fabrics have been seen as a reflection and container of surrounding cultural influences (Naenna, 1990; Maxwell, 2003; Bowie, 1993; Cheesman, 2004; Green, 2000). Thai silk is often assigned powerful meaning in constructions of Thai identity. However, despite the strong links between silk and Thai identity, there is widespread concern amongst politicians and commentators that many practices of silk production are economically unsustainable (especially due to strong competition from machine-made silks

Figure 2: Detail of tie-dyeing threads before being woven into mudmee fabric



Source: Author

produced in China) and will therefore slowly cease to be reproduced (Thailand's National Economic and Social Development Board and the World Bank, 2005). Government support for the industry is not focused, and can be intermittent due to endless political maneuvering in Bangkok. Some politicians are simply indifferent to the livelihoods of silk weavers and see the industry as a relic of the past. For example, during the February 2007 Praewah Red Cross festival in Kalasin city, I asked the then-governor of Kalasin province, Kawi Kittisathaphon, about his thoughts on the possibilities of increasing the flow of money to preawah producers in his province. Against my expectations he insisted that the producers are making too much money. During our meeting, he argued that:

You shouldn't think like a capitalist. Silk here is far too expensive. I need to go to Bangkok a lot and take gifts and I have the most expensive gifts [compared to gifts that other governors have to bring to meetings in the capital]. We need to get the silk makers to lower their prices so that it is more affordable. They are harming themselves by charging so much.

Part of Kittisathaphon's objection to the suggestion that producers might capture more of the value from the final sale price of their silk might be explained by the fact that governors rarely hail from the province that they govern and are frequently moved around. This practice is aimed at preventing corruption, but it also prevents governors from developing an intimate understanding of all of the economic problems in their provinces.

The clearest sign of unsustainability in the silk industry is the fact that very few young Northeastern women are willing to become weavers. During my fieldwork I encountered hundreds of weavers, yet only a handful were in their teens or twenties. Many Northeasterners associate the production of silk with the past, and while they lament its disappearance, young women remain largely unwilling to

engage in the practice. In line with Mills' (1999) account of the significance that Northeastern women place on modernity and their desire to participate in modern ways in living, I was told on numerous occasions that weaving is not modern, and that it is backwards. Young women often prefer to work in large Japanese and European owned factories in Bangkok and the Northeast. They acknowledge that the pay is similar, but cite air conditioning, uniforms, and ability to work with friends as reasons for preferring factory work. Some women also cite health issues inherent to the silk industry (back problems, and rashes from chemical fumes) as reasons to find employment in factories (Nilvarangkul et al., 2006). For many of these young women, the practice of weaving seems to be associated with an older generation, and the fact that salaries in the silk industry are rarely higher than those in any other profession gives Northeastern youth little incentive to learn their mothers' trade.

Further exacerbating the decline of traditional production practices is the fact that machine-made silks (on electric looms) are cheaper and more efficient to produce. Many buyers actually prefer machine-made silk. Bulk buyers who convert fabric into products such as clothing or bags value the fact that machine made silk is much easier to standardize than handmade silk. Handmade silk is always produced in relatively small batches, and as such it becomes difficult to reproduce the exact color and thickness of the fabric for a large order. Individual buyers often prefer machine-made silk to traditional handmade varieties for a similar reason. One of silk's most renowned qualities is the fact that it has an extremely smooth texture. Yet, in contrast to machine-made varieties, handmade Thai silk is rarely smooth: coarseness is actually a defining characteristic of traditional Thai silk.

As a result of the unique qualities of handmade Thai silks, many producers and merchants worry that international consumers, and even many urban Thais, will not understand the ways in which designs, techniques, and patterns have generally been assigned value by informed buyers. Or, in other words, a worry exists that consumers will see no reason to buy anything other than the cheapest silk. Ken Sura, the vice-president of the Korat Silk Association, summed up this fear by commenting, in March 2007, that:

I am worried that in 20 years the only silk left will be Indian silk with made in Thailand stickers on it. We are cutting our quality, have no good fashion, and can't compete on price. Everyone is trying to compete on price and this is impossible.

### ***The Transformative Effects of the Internet***

Within the context of the decline of the Thai silk industry there has been a forceful push by government and various civil society groups to encourage internet marketing as a key development strategy for both producers and merchants in Northeastern Thailand. Historically, the Northeast of the country was gradually and often forcibly integrated economically, culturally, and politically into the Thai state. This integration happened on generally exploitative and unequal terms,

paving the way for the current form of uneven development<sup>3</sup> (Dixon, 1999). Despite relatively high levels of economic growth over the last few decades, much of this growth occurred in the Bangkok Metropolitan Area. The rest of the country remains largely rural (Dixon, 1999; Glassman, 2004b). However, following the Asian Financial Crisis, the new Prime Minister Thaksin Shinawatra and his Thai Rak Thai (TRT) party came to power on a modernization platform and massive investment in rural provinces (Glassman, 2004a; Phongpaichit and Baker, 2004). Most importantly for the discussion in this paper, Thaksin launched a range of ICT-based programs throughout the country in order to eliminate the Thai digital divide. Thaksin himself stated that:

We are looking inward to our original strengths, our unique local know-how, and matching them with new marketing and communications technology. The aim is to create a new class of entrepreneurs who could marry local skills with international technology and hence move up the value chain (Phongpaichit and Baker, 2002: 3).

Thaksin's focus on harnessing economic globalization and making it work for rural economic growth brought him into direct conflict with the King of Thailand and his Buddhist-inspired 'sufficiency economy' philosophy (Murphy, 2006; UNDP, 2007). The philosophy is aimed at encouraging traditional ways of life (such as the reproduction of ancient methods of silk production) and a minimization of engagement with the global economy. These conflicting development priorities have been a key source of conflict between various groups jostling for power in Thailand since Thaksin was deposed in a 2006 military coup (Prasirtsuk, 2010; Ungpakorn, 2009). According to Shawn Crispin (2006):

Thaksin had co-opted and subsequently subverted the monarch's message through his heavily touted "dual-track" development strategy...Rather than encouraging Buddhist moderation over market-driven acquisitiveness, Thaksin's rural strategy aimed to convert the country's poor peasantry into a new class of export-oriented, profit-maximizing capitalists.

These disagreements have failed to neatly align with different sides of the debates about using the internet to encourage economic growth in the Thai silk industry. Most Northeastern producers and sellers are highly supportive of TRT-started projects to use the internet to find markets for Northeastern silk (the most famous project is Thaitambon.com – a large government funded project to market Thai crafts to the rest of the world).<sup>4</sup> Interestingly, every silk producer and

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<sup>3</sup> When measured by province, most of the lowest average incomes and lowest average levels of education are found in the Northeastern region of Thailand (UNDP, 2007).

<sup>4</sup> Even if based on anecdotal evidence, the widespread support that Thaksin and TRT had in the silk industry was unmistakable (e.g. sellers would show me framed pictures of Thaksin that they kept

merchant that I spoke with and who used the internet claimed that they were also following the King's sufficiency economy philosophy through their contributions to the reproduction of traditional silk making practices<sup>5</sup>.

Because of widespread belief in the economic and cultural benefits of internet use (Graham, 2010), the potential effects of the internet can be viewed in two ways. On the one hand, some believe that digital technologies can be used by producers to market the cultural value of their silks, thereby providing a market for goods and allowing practices of handmade weaving to be reproduced. On the other hand, others argue that the internet will encourage producers to significantly alter their production practices in order to appeal to global markets, thereby transforming the traditional uniqueness that they are worried about losing.

The first argument contends that through digital technologies, connections between producers and consumers can be opened up in order to "push" out selected narratives, pictures, and methods of economic and cultural communication without producers being "pulled" into participating in non-local practices<sup>6</sup> (c.f. UNESCO, 2006). It is possible that multimedia-rich websites will allow consumers to learn more about why Thai silks (and especially why certain textures and designs) cost more than machine-made fabrics. One in-depth research project in Thailand has found that firms with web sites are generally able to increase sales (UNCTAD, 2007). Perhaps because of such studies, Vanichvisuttikui and Jungthirapanich (2004) are similarly optimistic about the potentials of the internet to promote Thai craft industries. Seen this way, the internet would help to sustain traditional work practices in the Thai silk industry by simultaneously opening up a market for Thai fabrics and educating customers about the often complex meanings and traditions woven into the silk. Such ideas, of course, rest on particular ways of understanding the impacts that production network alterations can have.

There are assumptions that not only can the internet open up connections and reconfigure network topologies, but that those topological changes will in turn alter power-geometries, in ways that benefit producers (Graham, 2008 and 2011a; Massey, 2005). It is often argued that market forces will solve the world's development problems by effectively governing and creating wealth for all participants (Hirschman, 1981; Lal, 1983 and 1985; Berthoud, 1992), and that production for non-local markets is required for any producer to become familiar with global standards and norms and thus remain competitive (Roessner and Porter, 1990; Baily and Gersbach, 1995). Such ideas are not new, and early commentators

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hidden away in drawers, or make veiled criticisms about how the market for silk had evaporated since Thaksin's removal from power).

<sup>5</sup> It is highly likely that strict *lèse-majesté* laws in Thailand have led to widespread attempts by Thais to adopt the philosophy despite misunderstandings and downright confusion about exactly what it entails (Chanyapate and Bamford, 2007).

<sup>6</sup> See Gereffi (2001) for a similar use of the pushing and pulling analogies.

on development stressed the need for producers to be integrated into distant markets (Myint, 1954).

Arguments such as the ones presented above have become imbued in a variety of development discourses (c.f. Toye, 1993). Authors such as Byrom and Medway (2004) laud the fact that electronic connections to world markets have the potential to offer physically remote areas access and proximity to increase income streams. More specifically, there is a powerful discourse that firms in the Global South can use transparency brought about by the internet to find new customers in order to escape local de facto monopolies (UNCTAD, 2002; UNCTAD, 2005; Goldstein and O'Connor, 2000). In a borderless world, it is argued that historical competitive advantages such as firm size become irrelevant because the internet can “level the competitive playing field by allowing small companies to extend their geographical reach and secure new customers in ways formerly restricted to much larger firms” (OECD, 1999, 153; see also UNCTAD, 2006).

However, others counter that globalization and improvements in communication and transportation technologies enable processes of neo-colonialism and exploitation (Hardt and Negri, 2000; Richmond, 1994; Balakrishnan, 2003). Early dependency theorists observed that the integration of “Third World” economies into “First World” markets created a state of dependence (Baran, 1957; Frank, 1966 and 1979; Prebisch, 1981). Dos Santos (1970: 231) describes such dependence as “a situation in which the economy of certain countries is conditioned by the development and expansion of another economy to which the former is subjected.” Loosely drawing on the work of dependency theorists and post-colonial theorists, commentators such as Sardar (1996) see the internet “as a new phase in a long history of the West’s attempt to colonize not only the territory and the body but also the mind of the Third World ‘other’” (Schech, 2002, 18; see also Visvanathan, 1988). Domination can be extended to distant spaces through the knocking down of virtual and physical barriers (Adams, 1995).

By taking places out of their isolation and placing them in a global village, such places are thrust into the hegemony of Western knowledge and capitalism (Alvares, 1992; Escobar, 1995a and 1995b; Pieterse, 2001). Producers then grow dependent on unstable niche market conditions and distant consumer preferences (Dahles and Zwart, 2003; Ohno and Jirapatpimol, 1998; Brenner, 2006). Profitable elements of local cultures (such as silk making) are packaged and integrated into the network, while others are potentially ignored, both by distant consumers and local people. This dynamic can also have harmful effects on the crafts being produced: “the decline of craftsmanship, their simplification, the denigration of aesthetic and material culture and the loss of their symbolic and functional value, [...and] the subjection of indigenous groups to the external exigencies of the commercialization process” (Dahles and Zwart, 2003, 146; see also, Ariel de Vidas, 1995; Escobar, 1995a; Parnwell, 1993).

It is also possible that the internet could also lead producers to alter or cease to reproduce ancient patterns and techniques because of codification schemes that are necessary for knowledge to pass through production networks (either virtually or physically) (Balconi, 2002; Baldwin and Clark, 2000; Sturgeon, 2003). Drawing on Kessing and Lall (1992), Gereffi et. al. (2001) observe that as suppliers in developing nations are integrated into global production networks, they are often required to meet production requirements not applicable in their local markets (see also Lyon, 2006; Mutersbaugh, 2004; Mutersbaugh et al., 2005). This, in turn, increases the amount of control required and exerted by buyers and sets up a gap between capabilities needed for domestic markets and capabilities for export markets. The internet can be seen as having a “pulling” effect on producers by facilitating relationships based on uneven power relations. Producers, in other words, lose even more bargaining power and are forced to alter production practices (Dahles and Zwart, 2003; Sardar, 1996; Ohno and Jirapatpimol, 1998).

### **Responses to the Market**

As this project is not a longitudinal study, it is difficult to judge the precise effects that the internet has had on silk patterns<sup>7</sup>. However, there remain a number of ways to approach this research question. To do so, the paper will first draw upon interviews and open-ended responses to surveys to explore the ways in which producers and merchants talk about how they respond to market forces in ways that do not always lead to the reproduction of traditions. I will then examine sales data from sellers (producers and merchants) that operate websites in order to determine whether the types of silk sold vary significantly among producers and merchants who do not have websites.<sup>8</sup>

Most comments on the theme of market forces and the reproduction of traditions were in response to the question: “Please describe or list the main types and designs of silk products that you sell.” The responses can be divided into three categories: claims to only make traditional patterns, claims to combine the production of traditional styles with newer or non-traditional elements, and the production of only non-traditional fabrics.

At this point it should be noted that the construction of a binary of ‘traditional’ and ‘contemporary’ (or ‘modern’) silk is problematic given that the two phrases cannot capture the myriad local and non-local influences that become woven into any piece of fabric. However, the two phrases are widely used by

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<sup>7</sup> Between 2000 and 2010, internet use in Thailand has grown from two million users to over seventeen million users (internetworldstats.com).

<sup>8</sup> These data were collected using a combination of interviews and surveys with 173 sellers that were selected using cluster and convenience sampling methods. The initial sampling strategy was designed in order to enlist at least twenty sellers each from four sub-groups: (a) silk merchants in Bangkok; (b) silk merchants in the Northeast; (c) silk producing firms in Northeast Thailand; (d) self-employed silk weavers in Northeast Thailand. All major fieldwork was conducted in 2007 over a period of six months.

producers and merchants within Thailand to describe the silk that they sell. The phrases are also used by many of the commentators who lecture and write about Thai silk in trade and academic forums (c.f. Achavasmit, 2008). 'Traditional silk' is often used to refer to silk that is handmade and woven with techniques, colors, and patterns considered indigenous to Thailand. The concept of 'indigenous' is similarly problematic due to the fact that a number of characteristics of silk that are considered traditional are actually non-native. Nonetheless, when used by producers and merchants, the idea is instead most often used to describe techniques that are commonly repeated and practiced in Thailand. As a result, I will employ the phrases 'traditional' and 'contemporary' in the manners in which they are used by producers and merchants, instead of using these terms to imply national origins.

A majority of comments that I received from producers and merchants related to the fact that they either sell traditional as well as non-traditional silk, or hybrid fabrics that combine contemporary or non-local elements into older Thai designs and patterns. The sellers that sell traditional and non-traditional styles usually mention that traditional styles comprise a smaller amount of their total sales. For instance, Mr. G, the manager of a made-to-order silk business in Khorat province, told me that the styles of fabric that their company makes are entirely up to the customer. However, he mentioned that it is usually only old women who request traditional patterns. Most other customers want designs similar to ones they see in designer shops or in magazines. As a result, Mr. G's weavers weave only a small number of traditional designs.

Hybrid silks that combine traditional and non-traditional elements are created in a variety of ways. The HA Company, based in Bangkok, employs weavers who make mudmee using traditional methods (i.e. the use of handlooms and tie-dyeing of the silk). However, what sets them apart from other producers is the fact that they design all of their patterns electronically using Adobe's Photoshop software (see figure 3). Those patterns are then converted into instructions for weavers on how to dye the warp and weft strands of each piece<sup>9</sup>. HA's designs have proven popular, albeit only among non-Thais. The manager of HA noted:

These patterns are very different from the silk you find everywhere else in Thailand. Maybe that is why Thais don't buy a lot of our silk. Also, we sell mostly wall hangings and scarves. People here [in Bangkok] don't buy many wall hangings and don't wear scarves, so that is why we focus on foreigners.

Although HA sells their mudmee-styled silk almost exclusively to foreigners, most mudmee sold in Thailand is bought by Thais. This fact was a common

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<sup>9</sup> This method contrasts sharply with traditional ways of communicating designs. Designs are most often passed from mother to daughter, and between weavers in the same area using written notes, fabric samples, or simply through observation and memory.

observation echoed by mudmee producers with whom I spoke. For instance, Ms. I, a shopkeeper in Korat province, remarked:

Foreigners prefer plain silk, not mudmee. . I tell the weavers what to weave and we make about 40% traditional and 60% modern. We focus on mudmee and kit [another type of silk] though to make a difference from other shops.

Figure 3: An employee of HA holding up the computer generated design next to the fabric that was created using the design.



Source: author.

A majority of mudmee producers echoed the idea that foreigners do not understand the complexities inherent in mudmee production and are therefore less likely to become customers.

Ms. J, the head of a weaving group in the Pakthongchai district, rarely sold any traditional designs any more, and even refused to sell me a traditionally styled mudmee cloth that she kept in her display cabinet because she was worried about

forgetting the pattern. However, when asked if she feared that customers would lose interest and forget about old patterns, she did not display any signs of concern:

I don't think so [that people will forget the old fashioned designs], we keep teaching. But anyway, customers love new patterns. I focus almost entirely on modern designs, and only make a few old fashioned designs, but sometimes mix with new.

These comments, however, should not give the impression that a dichotomous relationship exists whereby traditional silk is consumed by Thais and non-traditional silk by foreigners; such a view is disputed by other merchants. Mr. K, the manager of LA silk, a Bangkok-based merchant, remarked that:

We sell some traditional silk and some modern silk to various kinds of customers. Japanese and Americans and Europeans all like different things. The Japanese like our ancient textures [traditionally styled silks] and they make clothes from it. They make dresses and blouses from mudmee and kimonos from plain silk.

Mr. M, a merchant in Bangkok, offered yet another explanation of the relationship between the location of buyers and the type of silk sold:

We sell both traditional and modern designs. Thais like modern silk and turn it into clothes, while foreigners like traditional things for decoration.

Ms. N, the manager of the OA Thai Silk shop similarly claimed:

Thai people like plain colors and bright colors. My stuff is subdued and dull. Foreigners like these ancient soft silks very much. In the past the Japanese liked it a lot, but now mostly Europeans.

Among this group that sells both traditional and non-traditional types of silk, then, there is not widespread agreement as to whether links to distant customers are an instigator of change or a way to preserve existing weaving methods. And while many producers and merchants distinguished between the tastes of local and non-local customers, it was age rather than location or nationality that respondents identified as the factor behind consumers' choices. In a similar vein, Ms. Q sold:

yellow silks and shiny threads; also silver threads a lot. Traditional things don't sell well except to a few locals and old people.

Finally, there is a small group of merchants and producers that sell only what they consider to be non-traditional or modern silk. Interestingly, these sellers of silk focus almost entirely on domestic customers. Mr. R of the SO company, for example, discussed the topic at some length:

Elephant designs sell very well: elephant cushions, keychains, anything with elephants really. Gold printed patterns are our best sellers. We stock no traditional stuff really. We have a cotton polyester blend that

looks a lot like silk, but is much cheaper. We invented it because the [name of a large Bangkok] hotel had to reduce their costs. It is three times cheaper and the weavers weave this mudmee on the same hand looms. It costs 800bt per yard. There is much competition from China; and we can't compete on price.

In this situation, it is not distant customers that are precipitating ripples of change, but rather external competitive forces causing the company to alter their production process.

However, while there are a variety of reasons for producers straying from traditional styles, many of the interviews that I conducted demonstrated that the presence of international links in the production networks of silk usually has tangible effects on the ways in which silk is produced. This finding is in line with other research, including Tantong's (2003) observation that successful Thai exporters are likely to adapt their products to foreign market conditions, while less experienced exporters are less prone to do so. However, not all foreign consumers of silk precipitate change in the production process through a combination of purchasing power and tastes that do not match the styles and methods of production that have been (until recently) reproduced by relatively isolated weavers. Differing tastes among generations of Thais are likely an equally powerful agent of change.

The fact that such a large proportion of Thai silk is ultimately exported makes the finding that non-local links are affecting silk-making practices somewhat unsurprising. However, one argument frequently made about the internet is that in contrast to previously existing economic links with the outside world, the internet can bring about more powerful and intrusive cultural effects (c.f. Sardar, 1996, Ohno and Jirapatpimol, 1998). Using survey data, the following section will examine that proposition more closely.

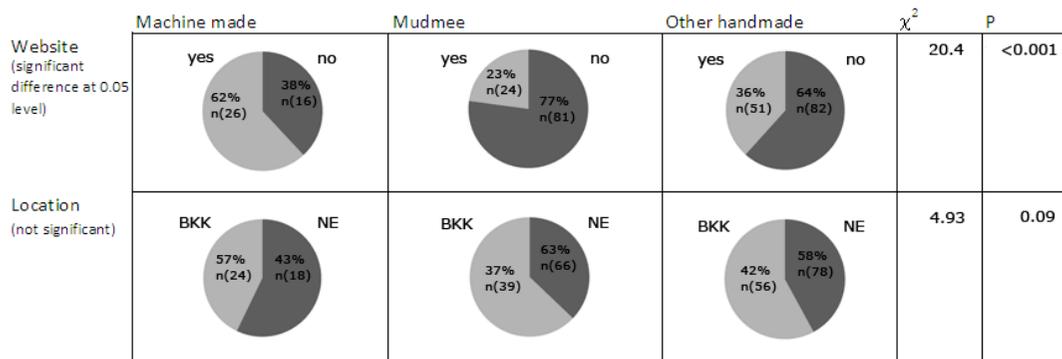
### **The Internet and Silk Styles**

In each survey conducted, respondents were asked to specify the amount of machine-made, plain handmade, and mudmee silk that they sell. Producers and merchants noted whether they sold 'none', 'little', 'medium' or 'most' of each type of silk. Figure 4 displays the amount of silk sold by sellers, categorized by both location and use of a website. For the following analysis, the categories 'little', 'medium' or 'most' have been folded into a single 'some' category in order to more clearly observe presence versus absence of each type of silk.

The figure demonstrates that machine-made silk is far more likely to be sold by sellers that have websites than those that do not. Conversely, plain handmade and mudmee silk are more likely to be sold by sellers that do not have an online presence. Specifically, the table shows that 62 percent of machine made silk vendors have a website, while only 23 percent of mudmee sellers and 38 percent of other handmade vendors have a website. This difference is significant at the  $p < 0.05$  level, lending support to the idea that few sellers have been able to use the Internet

to transmit local tacit knowledge about a complex craft into marketable explicit knowledge that would appeal to distant consumers.

Figure 4: Sales of silk organized by silk type<sup>10</sup>.



A final observation to be made from these data arrives from looking at differences in sale location by silk type. Chi-squared tests indicate that machine-made silk does not differ significantly from the distribution of mudmee production and other handmade silk production by location. This finding indicates that the medium through which silk is being sold may have more of an effect on the types of silk that are being sold than either the site of the sale itself, or the location of end-customers. It should be pointed out that there are undoubtedly a range of other factors (e.g. access to mechanized production sites, access to investment and business networks) that contribute to the types of silk that are sold. However, it remains that the interviews and survey data presented in this paper do suggest that the medium through which silk is sold is a key influencing factor in the ways in which silk is produced and marketed. In order to explore the ways in which the internet is specifically influencing how silk is sold and made, the final section of this paper presents two case studies with representatives of companies (TA and UA) that have been successful in running internet-based businesses.<sup>11</sup>

**Case Study: TA**

The Bangkok-based TA made a profit of 45 million baht (approximately \$1.5 million USD) last year and it is one of the most successful silk exporters in the country. Ninety percent of their silk is exported to foreign distribution companies. In my interview with Mr. V, the sales manager, he revealed that:

<sup>10</sup> “BKK” represents sellers located in Bangkok and “NE” represents sellers located in the Northeast.

<sup>11</sup> These two firms have been specifically chosen because they were the only two firms interviewed that claimed to successfully run all transactions non-proximately through the internet.

We buy what the market wants and keep stock. If we would manufacture, we would lose our focus. We are purely a stocking company: stock and sell. We are also going to keep a warehouse in the US in order to stay close to market. We can't compete with the manufacturers, so we wanted to compete in the markets where there is a need for B2B [business to business] services instead of here.

Some of Mr. V's most interesting comments were within the context of a conversation about his ability to track and codify transactions. He noted:

Our stock in the ordering system can be shown to all showrooms. We have a real time ordering system and we have all of this active so people can keep track of our stock. We get this from [our online yield management provider]. Everything needs a record and data are very important for us. Our stock in the system can be shown to all showrooms. We have a real time ordering system.

TA has become integrated into the purchasing networks of distribution companies throughout the world. This was achieved through the use of an online yield management provider and the company's own electronic links with other firms. TA does rely on showrooms operated by their distribution companies, but a combination of the codifiability of all of their fabric and the ability to transmit that information across the internet remains crucial to their business strategy<sup>12</sup> This situation was perhaps best summed up by Mr. V when he stated, "now the internet is our life."

TA's reliance on codifiable electronic transactions appears to have a significant influence on the types of silk that they are able to sell. The company primarily sells machine-made silk, although also sells a significant amount of plain handmade silk. Yet, they do not even attempt to sell some of the more complex handmade styles such as mudmee or praewah.

Much of this appears to be due to the fact that standardizing color is a significant problem for Thai silk sellers. From his own experience, Mr. V conceded that "People [customers] accept color variations by about ten percent<sup>13</sup>." TA and other large silk sellers invest significant resources into ensuring that dye chemicals are mixed at exactly the right proportions and boiled at exactly the right temperature using silk of similar grade and quality in order to adhere to a pre-defined color code (one of TA's color charts is shown in figure 5). Smaller producers are unable to maintain such rigid quality controls and therefore end up with silk that cannot be standardized or precisely reproduced. This topic came up as

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<sup>12</sup> The need for standardized codification schemes has been argued to be necessary for the transmission of codified knowledge (Balconi, 2002; Baldwin and Clark, 2000; and Sturgeon, 2003).

<sup>13</sup> Mr. V did not elaborate on how he derived the figure of ten percent, but from the rest of our discussion it is clear that he was articulating the general unwillingness of customers to accept any significant color variations in the silk that they purchase.

a significant issue with a few other sellers. Ms. W, the manager of a production company in Pakthongchai, told me:

Some people asked me to use the internet, but I am scared. Some companies from Bangkok asked me. They wanted exact colors, amount made per week. I said forget it. I don't know how to do anything with the internet. The company was too strict: exact colors, exact amount.

The most important implication of this difference in capabilities between large and small producers centers around the different types of silk produced by each group. Complex silk designs such as mudmee or praewah are rarely, if ever, produced by weavers working for large companies. These complex and uniquely Thai designs often contain multiple colors, and they are usually produced by weavers who work either independently at home or as part of a village weaving group. As a result, it is practically impossible to order a large batch of mudmee or praewah fabric and have the colors match. Again, it should be pointed out that a range of factors undoubtedly contribute to the types of silk that are sold by each firm. However, it remains that the inability to codify and standardize leave most, if not all, traditional production methods incompatible with internet marketing strategies.

Figure 5: A standardized color chart used by silk producers



Source: author

I asked Mr. V why his company did not sell any uniquely Thai styles of silk. He responded:

Well, first of all there is not much market for these traditional silks. The distribution companies and the designers that buy from us wouldn't know what to do with them. They are really not that appealing for people who aren't Thai. You would never see anyone anywhere else in the world walking around in a Thai silk shirt made from some of the mudmee you see here. Nobody else appreciates it. But even if there was a market for it, it doesn't fit into our business model. You can't repeat

the same patterns exactly and they [the producers] are not good at matching colors. We need to be a reliable supplier to our customers and we wouldn't be able to through no fault of our own.

### ***Case Study: UA***

It is also informative to look at an interview about the business practices of the UA company to examine the ways in which the internet can influence the types of silk that are sold. The UA company is one of the few firms I encountered that was able to sell all of their silk via the internet. A central theme that came out of my interview with Mr. X, the owner of UA, was that he was annoyed at the perceived unwillingness of Northeastern weavers to adapt to non-local production practices. He noted:

...they are out of touch; they are not up to date, they are not doing things the modern way. They are still trying to do it their own way. It's like they are not very competitive any more. This is the big problem; they are not very efficient and they are not very competitive... They really don't care either that they are not competitive. They won't cut prices, they won't reduce margins, they will not do anything to make themselves more competitive. It is kind of like the Frank Sinatra way of doing business. I'll do it my way. The fact that the country is going down the tubes economically; crime is higher than New York. It's quite a mess. Unless they adjust I don't know how they are going to improve... Unfortunately we want to help them, but they are not helping themselves. They are not being flexible and not doing what anybody wants.

Despite his frustration at what he saw as an unwillingness to adapt on the part of his Thai suppliers, Mr. X did acknowledge that his company was having very tangible effects in the Thai silk industry.

We have designers in Houston and the weavers themselves were so impressed they adopted some of the concepts and ideas and ran with it. So their orders have influenced the direction. I would take much credit for it. The designers asking us to create custom work has created designs Thais could never conceive before.

So a lot of the cool new stuff you see around is actually not local; they have just copied stuff our customers ordered custom made: Even some of the traditional weavers. And the Thais were shocked 'wow that's like really nice'. Because in the beginning they were locked into doing things like this is the way we have always done it. So who cares if the colors are really garish, and they call it Indian colors. It's not very nice looking at all. It looks very nice in a folksy way a long time ago but you know if you want to deal internationally, then you need earth tones.

There were no earth tones! And there was no subtlety. It was like contrasting motif mudmee kind of stuff.

Weavers make mudmee the way their parents and grandparents did it, and the way they know how. And then here comes a designer who says throw out all of those ridiculous colors...Nobody did any earth tones. So if you see any earth tones, I would give the designers in Texas credit for that.

Many of the above comments point to more than simple dismissals of Northeastern production practices. The company is actively striving to persuade their suppliers to change silk to meet the demands of customers, rather than encouraging customers to buy existing styles, patterns, and colors. Indeed, Mr. X has noted that “some of our success is because we can erase the local flavor. We try to add objectivity and remove subjectivity”. UA’s position as a connection point between foreign buyers and local suppliers, therefore, does seem to instigate change in production practices. Yet, while the divergent tastes of non-local customers certainly seem to be a strong influence, the actual medium through which information about silk is transmitted (i.e. the internet) seems to be at least an equally powerful factor in Mr. X’s explanations; that is, certain types of silk seem almost impossible to sell online.

## **Conclusions**

Both the production and consumption of silk in Thailand are embedded with cultural meaning and significance. Silk production in the Northeast of the country has long been a way of life for many women, and silk occupies a unique position as a signifier of many aspects of Thai identity. However, the entire industry is now faced with problems from multiple sides. On the production side, many young women are unwilling to engage in what they see as a dated profession and prefer to work in export-oriented factories throughout the country. The silk industry is, in turn, unable to offer prospective weavers a competitive salary. On the consumption side, Thai silk is uncompetitive on the global market and offers few advantages over Chinese silk to foreign buyers. Thai silk bears a higher cost than its Chinese counterpart, and the patterns and designs woven into the fabric are often meaningless and unattractive to non-locals.

The industry is therefore faced with a survival dilemma. Without significant change, it is unlikely that weaving will continue to be as widely practiced as it is today. Change could come in a variety of forms. Silk production practices could be made more economically efficient, and styles of silk could be altered to match the tastes of foreign buyers. If this happens, though, the practices and the products in the Thai silk industry would be fundamentally transformed.

This paper has sought to examine whether change is being instigated through the value chains of Thai silk and to discuss the potential effects that the internet is having. The internet is often seen to offer silk producers a lifeline: by opening

connections and bridging geography the internet enables potential customers to learn about the meanings and value embedded into each piece of fabric, thus adding economic value to a practice that has in many cases become economically unsustainable. Yet fears exist that the internet will simply amplify globalizing economic pressures by bringing producers relationally closer to sites of production and privileging the types of knowledge that are more profitable in the global network.

Although a small group of sellers are able to use the internet to highlight the unique nature of *praewah* or *mudmee* styles of silk, this group remains a minority and is only able to sell to a niche market. This paper demonstrates that contemporary Thai silk is not a container of static, unchanging design elements. Producers and merchants revealed that in many cases, buyers' non-traditional or non-local preferences and tastes are filtering through nodes in silk production networks.

Survey data and two in-depth cases studies indicate that the medium through which silk is sold is related to the types of silk that can be sold, with firms that use the internet more likely to sell machine-made silk and less likely to sell complex or traditional styles. Any use of the internet requires knowledge to be codified. Sturgeon (2003), for instance, argues that the transfer of codified knowledge through production networks often requires the creation of codification schemes (see also Balconi, 2002; Baldwin and Clark, 2000), and a number of production network-specific codification schemes (such as color charts) are used by the producers and merchants with whom I spoke. Yet, as the case studies indicate, the most straightforward way to smoothly transmit codifiable knowledge about silk is to sell machine-made and standardizable fabrics.

The tastes of non-local markets and the nature of the internet appear to be forces that amplify each other's effects. Most producers or merchants in the Thai silk industry have not developed a presence on the internet (Graham, 2011b). However, the ones that have have developed a strong international focus. Companies such as UA are attempting to both change Thai silk to match international tastes and to adapt silk to make it compatible with virtual transactions. The internet then is doing both things for different people. A limited number of merchants are able to use it to reach across space to highlight what makes their silk unique (and consequently valuable). If conceived of spatially, sellers that perform this feat can be understood to be opening up connections through which they actively push targeted information toward customers. Yet, based on the interviews presented in this paper, it seems that most sellers are actually being pulled through internet connections into the socio-economic orbits of the customers with whom they interact, while being encouraged by them to change their practices.

It has been seen that this pulling certainly occurs in traditional production networks (i.e. networks lacking cyber-mediation). The simple fact that much of the silk produced in Thailand is seen to be internationally uncompetitive has

encouraged many sellers to adapt and change. However, a combination of the nature of the commodity (the uniqueness of every piece of silk) and of the internet (the need to standardize) seems to intensify this pulling effect.

Despite the need for further research into a broader range of economic sectors, this study indicates that while the internet potentially offers significant economic benefits to the producers of crafts around the world, it is not a neutral medium and its ability to influence cultural change should not be overlooked. It is therefore likely that attempts to integrate the internet into value chains of other crafts are having similar outcomes. There are myriad cultural practices, symbols and meanings that are neither easily codifiable, nor appealing to most consumers in a global market. This paper has shown that it is a combination of both instant connections to distant buyers and the need to transform tacit knowledge about a complex craft into marketable explicit knowledge that ultimately results in shifts in selling and production practices.

Interviews and case studies demonstrate that the internet is enabling these connections with distant buyers, but at the same time does not provide an efficient conduit for the transmission of complex tacit knowledge about traditional practices of silk production. In the case of Thai silk, many of the fears about traditional practices being replaced as producers become ever more integrated into global networks are therefore being realized. Replacements of earlier production practices are in few cases instigated by weavers themselves. Instead, the impetus for change usually arrives in the form of an order from a downstream merchant or wholesaler, and the desire of some merchants to sell silk online in most cases only intensifies the need for altered practices.

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