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### From Plains Space to Cyber Space

Textile Society of America ~ 12th Biennial Symposium ~ Lincoln, Nebraska ~ October 6 - 9, 2010

# NEW INSIGHTS FROM THE ARCHIVES: HISTORICIZING THE POLITICAL ECONOMY OF NAVAJO WOOL GROWING AND WEAVING

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Over 200,000 Navajos, or Diné, currently occupy an 8000 hectare reservation in the southwest US, straddling northeast Arizona, northwest New Mexico and southeast Utah. Historically they managed a broad subsistence base that included farming, herding, raiding and trading, but they gained a major portion of their subsistence from weaving and livestock production (Bailey and Bailey 1986, White 1983). Van Valkenburg and McPhee (1974) claim that the Navajo blanket was the mother from which all external trade developed. After the formation of the reservation in 1868, the federal government licensed traders to buy and sell Navajo products. An enormous amount of archival evidence reveals how the inimical effects of free trade over a century ago triggered Navajo impoverishment. Although the Navajos are one of the most studied Peoples on earth, the negative effects of free trade apparent in the research have been hitherto ignored. The extant history does not reflect how the complexity and volatility of the global wool market, coupled with changes to the domestic tariff which disfranchised Navajo wools, accelerated the transformation of the Navajo blanket into a rug. The absence of this overarching context from Navajo weaving history led me to draw 80% of the information utilized in my forthcoming book from primary source materials not utilized by other scholars of Navajo studies.

**Wool** – **the "missing link"**: The following information, initially unearthed at the Newberry Library, Chicago, provides the context to reposition Diné woolgrowers and weavers within an international context of commercial competitiveness. The National Association of Wool Manufacturers and the National Wool Growers' bulletins provide the most fulsome context to understand the workings of the US market in relation to fluctuations in quantities and values of wool internationally.

For centuries wool was one of the most volatile internationally traded commodities, and England controlled 70% of the global market until WWI (Hultz and Hill 1931:216). Next to Great Britain, the US was the greatest consumer of wool in the world, and although domestic growers clipped 300 million pounds annually after 1880, manufacturers required twice that amount (Carmen et.al. 1892, NAWM, Ponting 1961, Treasury Department 1894). The US produced 10% of the world's wool but consumed over 25% (Connor 1921). By 1890, textile manufacturing was the third most important domestic industry, following agriculture and steel. Unwilling to risk dependence on foreign sources for a vital resource, Congress legislated high duties to protect domestic growers who raised fine-wooled sheep (Class I), and cross-breds which produced combing wools (Class II) (Towne and Wentworth 1945). Schedule K, as the wool tariff was known, was deemed "the keystone of the arch of protection," an ideal tariff that protected domestic growers without greatly increasing the cost of manufacturing wool garments and blankets. During post-1880 election years, Schedule K was fiercely debated in Congress: Democrats agitated for free trade whereas Republicans supported tariff protection (Bensel 2000, Lewis 1890, NAWM, NWG, Taussig 1897). By 1890, domestic growers had upbred their flocks to clothing quality wools (Classes I and II) (Towne and Wentworth 1945). Such wools were subject to much higher duties and ad valorem. In contrast, the livestock issued to Diné after Bosque Redondo (1869-70), were churros. The hardy churro was a lightweight in both meat and fleece, yet it was well adapted to the Navajo range, and it produced an excellent coarse wool for rug weaving. Although only .003% of the population, Navajos owned 2% of the sheep (Aberle 1983). A growing number of Anglo traders, licensed by the federal government, acquired the annual clip which was sold by regional merchants to wool brokers located in Boston and Philadelphia (Gross-Kelly and Company, Grubbs 1958, Hubbell Papers, Parish 1961). The extended family of Lorenzo Hubbell of Ganado, AZ, owned over thirty posts or businesses on or adjacent to the reservation after 1890, and controlled a sizable portion of Navajo trade (Blue 2000:284). Their business records and

correspondence reveal the challenges faced by traders trying to market the Navajo wool clip in a globally competitive environment.

Domestic Carpet Manufacturing: By 1890, with the rapid development of the industry, Americans used more carpets than the rest of the 'civilized' world (Ewing and Norton 1955:71), and 75% of the wool imported into the US was carpet-quality. By 1900 there were 133 carpet manufacturing plants, with an output valued at nearly \$3 million; sales soared to over one-half billion dollars by mid-century (Ewing 1953:332-3). On average, carpet mills were larger than clothing mills, and after 1880, the number of mills declined by half while their output increased sixty-fold. By the mid-1920s, a handful of plants produced the bulk of the output (Morris 1928:29). Production on such a large scale requires 'standardized' raw materials to sustain efficiency and keep down costs. Sheep bearing Class III carpet wools were inexpensively raised in over thirty countries, primarily by 'barbaric' peoples, and imported as raw material:

Carpet wool varies so greatly in quality, comes from so many remote sources, and has so long a time in transit, that wise purchase places a premium on experience and judgment. ... the price of wool is subject to wide and fast fluctuations, changes that can make the difference between profit and loss in a company's annual operations (Ewing 1953:125-6).

The Bigelow Carpet Company was co-founded in 1850 by Erastus Bigelow (1814-1879) and his brother Horatio. A hand weaver while in his teens, Erastus is best known as an inventor, a man who registered over fifty patents in his lifetime. Prior to 1850, he revolutionized carpet manufacturing through his development of several looms which mechanized the production of ingrain carpets, coach lace, wire cloth, Brussels, Wilton, tapestry and velvet carpets. A protectionist, Bigelow also published two volumes (1862, 1877) on the role of tariffs in the American economy. The Company underwent several mergers, and by 1929, became the largest carpet manufacturer in the world when it joined with its principal competitor, Sanford.

Since Erastus Bigelow served as the first president of the NAWM, formed in 1864, carpet manufacturers enjoyed the fruits of a split tariff, which not only ensured that low or no duties were placed on carpet wools "since the American farmer was a negligible factor as a supplier," but were protected by high duties (\$0.90 sq.yd.) on imported carpets (US Tariff Board 1912:184). For decades the Carpet Institute had backed such protection through lobbying efforts, while insisting that imported carpet wools remain duty free. Between 1864 and 1912, the price of domestically produced "Brussels" carpets declined two-thirds, from \$3.50 to \$1.30 sq.yd. respectively, due to increasing mechanization of the industry and cheap wools (Ewing & Norton 1955:153). The rapid entry of China in 1879 decreased the value of Class III wools globally. Many factors influenced the purchase of coarse wools most suitable for the variety of carpets woven by large firms. Climate, geography, geo-politics, supply and demand, transportation, fluctuating exchange rates, tariff agitation, and changes to the wool tariff--these and a multiplicity of other factors affected the prices and availability of dozens of types of carpet wool imports (Cole 1941, NAWM, BSCC records, Treasury Department 1894).

The Bigelow-Sanford Carpet Company archives, housed at the Baker Business Library, Harvard University, provide unique insight into the competitiveness and complexities of carpet manufacturing in the US. The company's ledgers and journals provide a barometer of carpet wool prices, and coupled with the correspondence between treasurer C. F. Fairbanks headquartered in Boston, and their

buyer/representative E. P. Graves based in Buenos Aires, Argentina (1898-1913), enhances our understanding of how US tariff policy played a pivotal role in affecting carpet manufacturers' acquisitions of enormous amounts of carpet wools for the lowest cost: "One thousand bales of wool, if we are to have any business, is a Bagatelle for us." (Fairbanks to Graves May 9, 1913).

One large Bigelow ledger (H-8, April 17, 1865 to January 31,1898), details "Test of the Loss in Different Lots of Wool," and includes rating information on shipments of Chinas, Cordovas, Donskoi, Aleppo, Scotch, East India, Persian, Bagdad, Salonica, Valpariso, and other wools. There are very few entries under "Rio Grande" and no mention of "Navajo" or "Reservation" wools. Graves and Fairbanks cabled each other four or five times a month and transmitted the most sensitive information in code. On July 21, 1899, Fairbanks informed Graves that carpet wools were low: "the very low price of English wools and Irish wools today, shrinking 18% ... keeps down third class wools. Scotch wools...about 21c scoured here" (Graves carton 5, file 3). Although the market for carpet wools continued quiet into the new century, Fairbanks anticipated purchasing over 5.5 million pounds of Cordova (2/9/00). During April 1900, China wools were listed at \$.135 landed Boston (Bigelow A-5 Journal 1899-1911) or \$.23 per scoured pound (Carton 5 correspondence – file with Bigelow Carpet Co letters). The following month, Fairbanks wrote "China is and will be a strong competitor of the Cordova clip. When they take better care of the packing in China, which they will soon learn, I think there will be little to choose between them." By 1902, Bigelow was purchasing \$3.5 million in wool annually with China as the largest supplier since Chinese wools were cheaper than they had been in years.

[N]AFTA for Navajos: Meanwhile, after 1890, Navajos were the only domestic growers who continued to raise *churros* and thousands of women wove an estimated 30% of the annual coarse wool clip into sturdy saddle blankets and rugs (M'Closkey 2002, and forthcoming). However, the rest of the clip acquired by traders amounted to *one week's* supply for carpet manufacturers, whose looms consumed one-half million pounds per day. These powerful captains of industry demanded permanent removal of the wool tariff for Class III carpet wools, because, as they testified to Congress, only a "negligible" amount was grown in Arizona and New Mexico territories (NAWM 1897:195-98), and imported coarse wools of better quality were available (Wright 1905: 616).

In 1893 President Grover Cleveland, a Democrat, removed duties from all classes of wool and one billion pounds were imported duty-free over a four year period, bankrupting one-third of domestic wool growers (Bensel 2000, NAWM 1908[IV]:409). Yet the nascent Reservation trading post system not only survived, it thrived - how to explain this paradox? Women weaving fleece into textiles provided a more secure means of diversification for dozens of traders faced with continual oscillations in the international wool market. By 1898, over 90% of Lorenzo Hubbell's business accounts were for textiles (M'Closkey 2002). In his correspondence during the free wool period, he refers to himself as a "blanket dealer" and not as an Indian trader (M'Closkey forthcoming). After 1897, high duties on Class I and II clothing wools were restored, but an estimated 70,000 tons of carpet wool valued under \$.12 per pound were imported annually at a minimum ad valorem rate (expressed as a percentage of the commodity's value), generating revenue but not offering protection. Between July 1906 and January 1909, Bigelow purchased over \$183,000 of Navajo wools primarily from Babbitt Brothers, Flagstaff, AZ, and Gross-Kelly and Company, Albuquerque, NM, and paid \$.18 per pound prior to the Panic of 1907 (BSCC A-7 Ledger A 1899-1912). However, the acquisition of Navajo wools was short-lived. Of seven transactions over a 3.5 year period, Bigelow rejected portions of two shipments. The final transaction notes the return of 37 bales of black wool and mohair to Gross-Kelly and Company (Bigelow A-5 Journal 1899-1911 and A-7 Ledger 1899-1912:380). Bigelow purchased over \$1.2 million of Chinese combing wools between July 1906 and

December 1907. Whereas Navajo wools exhibited nearly 50% shrinkage, the Chinese, Mongolian and Cordova clips shrank about 30%. Navajo wool values declined by 33%, to \$.125 after the Panic; whereas all other imported wools purchased by Bigelow ranged from \$.14 to \$.21 per pound (BSCC 319 & 341). The most probable cause of domestic carpet manufacturers rejecting Navajo wools concerns the haphazard attempts of the Bureau of Animal Industry, Indian agents and various traders introducing new breeds which ultimately compromised wool quality for both handweavers and textile manufacturers. Sandy soils combined with increased lanolin which augmented shrinkage resulted in unstandardized Navajo wools requiring extensive preparation prior to commercial processing (M'Closkey forthcoming).

**Domestic & foreign competition**. As manufactured carpets and rugs became more popular, competition also increased. Alexander Smith and Sons, an enormous company based in Yonkers, NY, marketed their rugs in a unique manner. When their warehouses were full, the company announced an auction. This strategy, disliked by other manufacturers, set prices for the industry due to the Company's size (Ewing 1953:7). During 1891, Smith and Sons auctioned \$2.5 million in inventory over four days, which forced competitors to immediately lower their prices (Ewing and Norton 1955:95). Smith and Sons typically held several auctions annually, earning \$5 million at a single auction in 1910, and during May 1924, the company offered 45,000 bales of Axminster rugs at another auction. However, by 1914 Bigelow was the industry leader in contract business with hotels, movie theatres, office buildings, and passenger ships (Ewing 1953:22). Bigelow sold their seamless 9' x 12' "Beauvais Axminister" for \$18.75 each (BSCC G-2 scrapbook). In comparison, a 9' x 12' Navajo rug retailed for \$150 (HTP 1902 catalogue).

Although subject to high duties, 'oriental' rug imports increased from \$300,000 in 1892 to \$4 million in 1907. Domestic carpet manufacturers off-set that competition by appropriating 'Persian' designs and manufacturing a range of 'exotic' patterns in standardized sizes on their power looms (Ewing and Norton 1955:171). In 1906 Bigelow copied the Ardebil Mosque carpet, which later sold at auction for \$57,000, and triggered the appropriation of other 'Persian' favorites (Ewing 1953:25). Prior to the war, Bigelow spent \$50-60,000 annually on developing new designs. Most of the best grades were 'inspired' by oriental rugs or Navajo blankets (Ewing and Norton 1955:195). To boost sales further and remain competitive, Bigelow also appropriated motifs taken from Fiji Islands, Samoa, Africa, the Aztecs, Incas and other Native American tribes, in addition to the more traditional American and Persian designs, The company also introduced 'ensemble styles' coordinating furniture, draperies and upholstery (Ewing 1953:79). Bigelow executives aggressively promoted higher duties on imported manufactured carpets that directly competed with their lines. In 1917, company representatives successfully persuaded Congress to increase ad valorem duties on imported seamless Wilton and tapestry Brussels rugs from 20 to 50% (Ewing 1953:28). Bigelow demonstrated a high degree of diversification, not only through offering consumers a broad choice of designs, styles and colors, but through rapidly shifting from domestic production by retrofitting their carpet looms to serve military needs during both world wars (BSCC Carton 6:B-H 31-2).

Marketing Navajo wool under free trade: By 1910, carpet manufacturers imported 25,000 tons of coarse wool from China alone—more wool than domestic producers clip today. Prior to the Depression, the US consumed 95% of the carpet wools exported from China (Morris 1928:22). The Hubbells' ledger books reveal that nearly all textiles were acquired from weavers by weight until the 1960s. Women received credit, (three to eight times the value of Navajo fleece), not cash, and their textiles were baled and shipped weekly to pay down traders' accounts with regional wholesalers (M'Closkey 2002). Today

these "pound blankets" fetch record prices at international auctions and galleries. The Indian agents' annual reports to the Commissioner of Indian Affairs often included the quantity and value of weaving (Superintendents' Annual Reports...). They embedded the information in the livestock and wool production statistics, confirming how bureaucrats perceived weaving as a "by-product" of the livestock industry (M'Closkey forthcoming). Between 1900 and WWII, both the Navajo population and the number of reservation trading posts doubled, (from 79 to 170) (Weiss 1984:151), while the value of textiles shipped from the reservation rose twenty-fold. Thus, the ideology which perceived thousands of Navajo weavers as "domesticated housewives" weaving "part-time for pin money," masked the relations linking their labor to tariff revisions legislated by Congress.

I calibrated the consequences of free trade for Navajo woolgrowers and weavers by scrutinizing both quantitative and qualitative information contained in pertinent records including the National Association of Wool Manufacturers' and the NWG bulletins, and the Bigelow-Sanford Carpet Company Papers. The business records and correspondence among eastern wool brokers, southwest regional wholesalers, and reservation traders like the Lorenzo Hubbell family were also analyzed. In his 1933 report to the CIA, Lorenzo Hubbell Jr., stated that "competition regulates the price paid the Indian for his products. All transactions [are] on a barter basis" (HTP Bx 527:56). Analysis of the family's business records reveals that weavers averaged two cents per hour in book credit for decades, expending forty to sixty hours of labor for every pound of weaving produced. Lorenzo Hubbell Sr. shipped over 200 tons of hand-spun, woven textiles from Ganado between 1891 and 1909 (M'Closkey 2002:76). Thus the economic dictum "when the value of the finished product is tied to the raw material, the latter value will affect the former" invokes the stunning realization that the price of weaving was pegged to the price of duty-free carpet wool. Indeed, the \$0.90 sq. yd. duty on imported carpets was often higher than the exchange value per pound received by weavers for their rugs at the trading posts (HTP, M'Closkey 2002, US Tariff Board 1912:184).

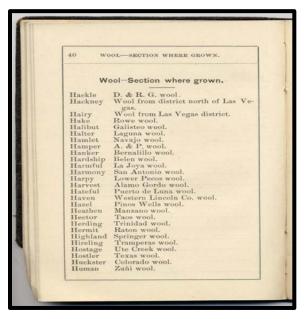


Figure 1.Page from Gross-Blackwell & Co Private
Telegraph Code Book circa 1888. Southwest Center, Zimmerman Library, Univ. of New Mexico, Albuquerque.

Gross-Blackwell and Company, regional wholesalers headquartered in Las Vegas, New Mexico with many branches, utilized private telegraph code books dating from 1888, that contain over eighty pages of words used as ciphers to encrypt information related to buying, selling and grading wools (Fig. 1). Telegrams containing encrypted information are located in the Hubbell Papers and the re-named Gross-Kelly records (M'Closkey forthcoming). These code books demonstrate how regional buyers maintained close contact with eastern markets, whose brokers were in daily contact with their buyers in England and agents in other countries in order to purchase wools at optimum prices. This analysis reveals Navajos' embeddedness in global commodity chains by illuminating the transborder connections linking Diné to overseas carpet wool growers, domestic manufacturers and carpet retailers, since both Navajo weavers and carpet manufacturers used carpet wool. Yet the extant history of weaving continues to recycle a dual strand explanation of the genesis and escalation of rug production: the growth of tourism coupled with anti-modernism's preference for the handmade over the commercially manufactured article, as expressed by the Arts and Crafts Movement, (Bsumek 2008, Wilkins 2008). These phenomena drove consumption, but free trade in carpet wools drove production. Due to the broad selection and availability of suitable low cost imports, coupled with lack of adequate tariff protection, Navajo wool values remained depressed until price supports materialized for all domestic growers after 1950 (M'Closkey forthcoming). Thus, traders' wholesaled weaving as an alternative means to market the unstandardized Navajo wool clip. Their business records and correspondence with regional wholesalers reveal a near-continuous surfeit of rugs and blankets (M'Closkey 2002:36, 95-140, and forthcoming).

In 1987, anthropologist Gary Witherspoon (1987) conservatively estimated that 100,000 women had woven more than one million textiles over the previous two centuries. Although their productivity peaked at \$1 million a year by 1930, providing one-third of the reservation residents' income, weavers were never integrated into development planning within the Navajo Nation. Economic self-sufficiency was to be achieved through extraction of non-renewable resources brokered by the federal government. And non-renewable resource extraction of coal, oil and uranium, has resulted in numerous environmental and health consequences (Brugge et al 2007, Chamberlain 2000, Pasternak 2010).

With few exceptions private enterprise continues to control marketing, a consequence of the influence exerted by the United Indian Traders' Association. The UITA, rapidly formed in 1931, to thwart the development of reservation co-ops as promoted by John Collier prior to his appointment as Commissioner of Indian Affairs. If a system-wide marketing scheme had been developed, weaving held the potential to generate millions of dollars in annual revenue, just as the marketing of Inuit art does in Nunavut and northern Quebec today (M'Closkey and Manuel 2006). Instead, entrepreneurs and middle-men continue to make most of the profits with mark-ups averaging 400-600%, thus facilitating production and sales of knock-offs (M'Closkey fieldnotes). The huge reservation lacks market towns, over 80% of the roads are unpaved, and half the population still lacks plumbing and/or electricity (Choudhary 2000). Until 2002, only 20% had phone service. With per capita income at 20% the national average, an estimated twenty thousand weavers are deeply affected by decreasing demand for their rugs. In fact in terms of median family or individual income levels, the Navajo Nation ranks the poorest of the ten largest tribes in the US. The number of dealers who retail contemporary weaving exclusively has declined dramatically over the past three decades, concomitant with escalation in the number of retailers selling historic textiles or "knock-offs" (Henson and Henson 2001). The Reservation trading post system has vanished, primarily a consequence of the FTC's ruling imposing long overdue stringent regulations on pawning and credit practices (Powers 2001). Consequently, no reservation-wide infrastructure exists to provide artisans with marketing assistance. The monthly rug auction held in a Crownpoint, New Mexico school (Fig. 2), is over an hour away from the closest motel in Gallup, NM. The auction began during the 1960s, by the local

trader and several weavers because the latter averaged \$6 to \$8 per rug (Connor 1991). By the 1990s, weavers averaged less than \$250 per rug; attendance has declined recently (Yazzie 2009).



Figure 2. Crownpoint, NM rug auction. August 2006. Photo by author.

Not only have weavers' economic contributions been airbrushed from the historical record, but until very recently many scholars failed to recognize the crucial role that weaving played in relation to *cultural* survival (Fig.3). Although the religious aspects of Diné culture have undergone extensive examination for over a century, the context and importance of weaving remains detached from Navajo spirituality in most publications. This is due to fragmentation of Navajo lifeways into categories based on dualistic thinking. Generations of scholars juxtaposed the ceremonial practices of medicine men with women's reputedly secular commodity production for external markets (Kent 1985, Reichard 1934, Tanner 1968, Underhill 1983 (Fig. 4). Currently a select number of weavers, perhaps one hundred out of a population of ~20,000, enjoy national or international standing. Their success as tapestry artists blinkers the public's understanding of threats to Navajo lifeways engendered by the increasing importation of 'knock-offs' coupled with escalation in the investment market for old rugs. An estimated \$100 million have changed hands within the last three decades (M'Closkey 2002:175-78).

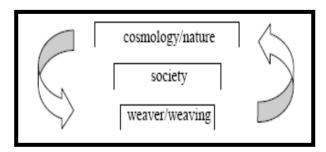


Figure 3. Recursive Navajo Relations (Non-empirical)

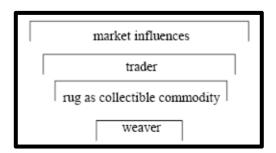


Figure 4. Visible (Linear) Commodity Relations

Andy Abeita, an Isleta Pueblo fetish carver recently acknowledged "the world renowned recognition of southwest arts and crafts does not reflect what goes on within impoverished makers' homes" (2006). Given the numerous publications authored by generations of scholars, this is an astonishing statement. Because poverty among artisans is a much neglected topic, consumers lack awareness of current circumstances. For generations, publications by scholars and others depicted artisans as "cultural performers" and downplayed the labor involved (Kaufman and Selser 1999, Rodee 1987, Wade 1985, Weigle and Babcock 1996, Wheat 1984). Lacking communal copyright protection, historic patterns reside

in the public domain, and thus are amenable to appropriation and currently knock-offs are produced in twenty countries and imported into the US. As long as the textile is not labelled "Indian made", this is perfectly legal and does not violate the IACB Act, a truth in advertising act that protects consumers, not producers. According to Abeita, because of such massive appropriation, craft production by Native American artisans, (a crucial aspect of cultural preservation), *is being driven to oblivion*. Internet sites selling knock-offs have risen exponentially.

Most publications position weaving as "art," thus analyses of the importance of textile production to the regional economy historically are lacking (Bahr 1999). Navajo textiles were the only finished product leaving the reservation – the wool, livestock, sheep pelts, goatskins and pine nuts were 'processed' after shipment. My forthcoming book *Why the Navajo Blanket Became a Rug: Excavating the Lost Heritage of Globalization* highlights noteworthy parallels between this 'hidden' history of weavers and woolgrowers, and the dilemmas currently confronting producers worldwide, in their struggles to cope with free trade and globalization. These interrelated factors, linking local events to national and international processes, are crucial to historicize the contributions of the largest group of Native Americans within a global framework.

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