

The final version of this article has been published in
Vol 15, Rocky Mountain Fur Trade Journal, 2021.

Deconstructing a Fur Trade Account Book: Retail Sales Patterns and Seasonal Cycles at Fort Hall 1834-1835^{©2022}

Michael Schaub

This study of the Fort Hall ledgers will be of interest to fur trade enthusiasts, living history interpreters and researchers who have an interest in the retail side of the business as it relates to the needs and desires of the hunter/trappers, activities in camps, on the trails and at fort. It will also demonstrate how methods commonly used in scientific investigations can be applied to data of a historical nature.

This analysis is based on in-depth examination of the ledgers and both statistical and trend analyses to reveal correlations between categories of trade goods, and patterns of sales which can be linked to changes in season, occupational requirements, availability of credit, types and numbers of social interactions, duration of employment contracts and availability or absence of merchandise. This analysis will also show through purchasing trends how budgeting priorities changed and measures were taken to economize through time by the fort's employee/customers.

Fort Hall: On August 14, 1833, Nathaniel Wyeth contracted with Milton Sublette of the Rocky Mountain Fur Company (RMFC) to supply that company with \$3,000 worth of trade goods at the 1834 Rendezvous.¹ To do this Wyeth, with the backing of investors, formed the Columbia Fishing and Trading Company (CRFTC).

The RMFC was deeply in debt to William Sublette with little prospect of being able to reduce these liabilities. The contract with Wyeth was entered into by the partners of the RMFC because it appeared to represent a means of relieving the stranglehold that William Sublette retained over the firm. Subsequently, William Sublette learned of the arrangement, and in the spring of 1834, there ensued a race between competing pack trains heading to Rendezvous which William Sublette was easily able to win through his long experience in the mountains. At Rendezvous Sublette called in the debts of the RMFC, resulting in the dissolution of the company. When Wyeth arrived a few days later, his merchandise was refused. Wyeth, however, was able to collect a \$500 forfeit in addition to cash advances he had made to Milton Sublette in St. Louis.² Wyeth was more than a little distressed by this outcome as he now had \$3000 worth of goods with no simple way to dispose of them. In answer to the excuses of the former company's partners he is said to have responded "Gentlemen, I will roll a stone into your garden that you will never be able to get out."³ That stone would be Fort Hall. In letters Wyeth writes to his eastern investors he states, "The contracts which I made with the companys (sic) here have not been complied with and in consequence I am obliged to establish a fort..."⁴

However, this was a stone that Wyeth always intended to roll. He discussed this in a letter to investors dated November 8th, 1833, in which he laid out his business plan for the CRFTC. As envisioned, the company would send trade goods via sailing ship to the headwaters of navigation on the Columbia River, which represented a substantial reduction in transportation costs contrasted to overland costs from St.

Louis. From there Wyeth would supply either his own trappers or trapping parties of other concerns out of a fort constructed within the upper Columbia River basin. The ship would then return with the collected furs. Wyeth also planned for salmon harvesting operations on the Columbia River. Salted salmon, packed in barrels, would be sent by the return ship along with the furs. Wyeth calculated that the salmon would pay all the expenses of the vessel plus a substantial allowance. In the business plan Wyeth did consider the possibility that the RMFC would default on the contract. " I propose to fulfill this contract [to the RMFC]...If they should not do so, then I will proceed to a safe country on the Columbia River where some furs may be traded and there leave them with a few men leaving some men and a trusty person to keep them and trade as many more as he can."⁵ Also, to a supplier in Missouri he wrote on January 8th, 1834 "...you can also be looking up 2 bulls and 8 cows for driving overland to stock a fort..."⁶

Fort Hall was operated by the CRFTC from its establishment in August, 1834 until 1836 when it was sold to the Hudson's Bay Company for \$8,179.94. The Hudson's Bay Company abandoned the post in 1856, though the structure was occupied intermittently for short periods in 1859 and 1860 by U.S. troops and Oregon Volunteers.⁷

The Ledgers:

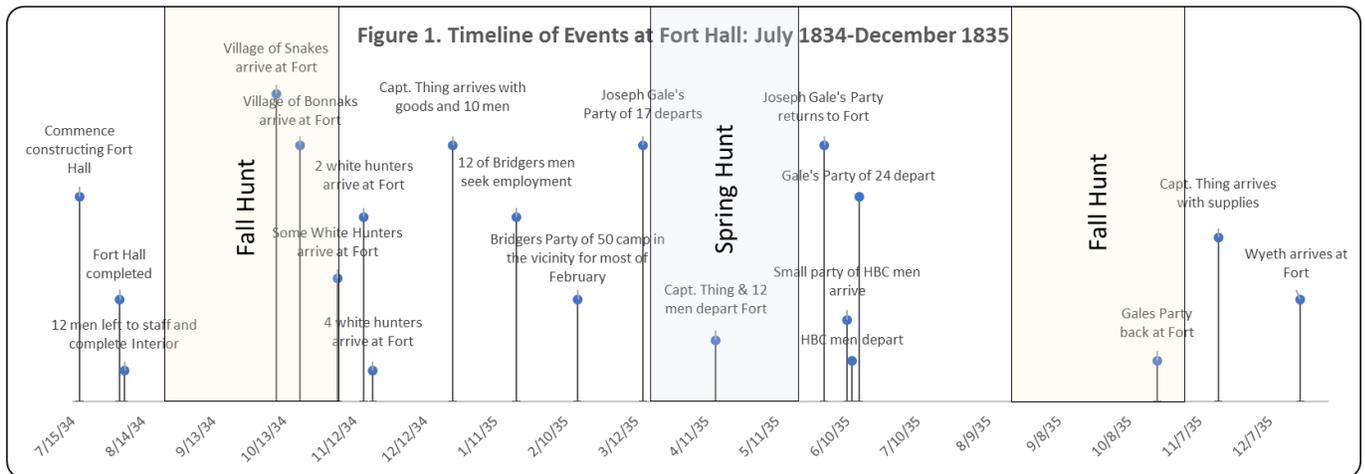
The Fort Hall ledgers represent one of the most complete listings of retail prices in the West during the fur trade period.⁸ The ledgers run from August 4, 1834 through December 31, 1835. Fort Hall at the time the ledgers were recorded was owned and operated by Nathaniel Wyeth's Columbia River Fishing and Trading Company and was named for one of the principal investors in the venture. Over the period covered by the ledgers nearly 7,400 line items are listed showing retail prices of merchandise and often wholesale costs as well. The total retail value of sales during this period was \$19,400. CRFTC Employees were not given any kind of a discount or cost break. The ledgers show that company employees were charged at the same rate for goods and supplies as free trappers and/or men employed by independent and competing companies that were occasionally making purchases at the fort. The only advantage in being a company employee was that employees were allowed to run an account, whereas others had to settle up at the time of the purchase.

At Fort Hall there were 140 men documented on the ledgers over the period of record and annual wages are either given or can be calculated for 43 of these men. Wages ranged from a low of \$120/year (about 33 cents/day) for the Kanakas (Hawaiians) and the "negro" (unnamed), to a high of \$600/year for David Crow, the company hunter.⁹ As company hunter, Crow must have been provided by the company with shooting supplies because he is not listed on the ledgers as ever having purchased powder, lead, gunflints or percussion caps at any time during the period covered by the ledgers. Interestingly, the two men that were successively in charge of operations at the fort, Robert Evans and Able Baker Jr. were only compensated at a rate of \$300/year, although they did receive their purchases of goods at cost plus 50% and cost plus 75% respectively, which represented a huge discount from what the other employees were being charged.¹⁰ Although not documented, we may speculate that perhaps these men were promised a share of profits and were thus willing to accept a lower salary. The average compensation of the Fort Hall employees based on wages which are listed in or calculated from the ledgers comes to \$213.37/year, or about 58 cents/day.

Figure 1 depicts a timeline of events recorded as taking place at Fort Hall during the time interval covered by the ledgers. The timeline shows that construction of the fort commenced on July 18th and was completed by August 4th, 1834. On August 5th, the "Stars and Stripes" were raised at sunrise and a

bale of liquor was opened in celebration.¹¹ That the fort wasn't entirely finished at this time is evident from the 7th directive in Wyeth's instructions to Robert Evans: "After my departure you will first bend your attention to finishing the fort completely after which you will build such buildings as are required for Store Houses and habitations for the men."¹² On August 6th Wyeth departed, leaving only 12 men, behind to finish construction of the fort and ancillary structures.

The timeline generally indicates the presence of more men at the fort during the winter and summer periods with relatively fewer during the Fall and Spring Hunts. During the winter of 1834-35 a number of "white" hunters arrived at the fort, and Captain Joseph Thing, an employee of the CRTFC, arrived from the mouth of the Columbia River with 10 men on the 24th of December. Thing and his party were bringing in supplies and merchandise from the mouth of the Columbia River. In February, 12 men belonging to Jim Bridger's brigade deserted and sought employment with CRTFC at the fort, and for most of February Bridger, with a party of 50 trappers, wintered in the vicinity of the fort. By that time Bridger is associated with the Fontenelle-Fitzpatrick and Company, reconstituted from the remnants of the defunct Rocky Mountain Fur Company and Christy.¹³ Only one of Bridger's men, Kit Carson, can be identified as having made purchases at the Fort during this period. Based on quantities, Carson was probably making purchases for numerous men, possibly the entire party. On March 15th, 1835 Joseph Gale, another of the CRTFC employees, and a party of 17 trappers left the fort to commence the spring hunt. Osborne Russell, known on the company ledgers as John Russell, was a member of this party. The timeline also shows that company trappers as well as Hudson's Bay Company men were present at the fort during the summer period of 1834, however, their stay was rather brief. By October 20th Joseph Gale's party of trappers was back at the fort. Osborne Russell indicates in his journal that at that time most of the CRTFC men had completed their contracted term of service and were awaiting the return of Wyeth to the fort to give them their discharge.¹⁴



Rocky Mountain Rendezvous and Retail Sales Cycles:

For the trapper/employees of the Rocky Mountain Fur Company and the Upper Missouri Outfit of the American Fur Company, as well as for many of the free trappers, purchasing consumer goods and the equipment and supplies necessary to pursue their profession was largely an annual frenzy of shopping/purchasing/partying, which took place at the mountain rendezvous. James Beckwourth described rendezvous as "Mirth, songs, dancing, shouting, trading, running, jumping, singing, racing,

*target-shooting, yarns, frolic, with all sorts of extravagances that white men or Indians could invent, were freely indulged in. The unpacking of the medicine water contributed not a little to the heightening of our festivities.”*¹⁵ According to Captain B.L.E. Bonneville, *“Many of the trappers have squandered in one drunken frolic the hard-earned wages of a year; some have run in debt, and must toil on to pay for past pleasure. All are sated with this deep draught of pleasure, and eager to commence another trapping campaign; for hardship and hard work, spiced with the stimulants of wild adventure, and topped off with an annual frantic carousal, is the lot of the restless trapper.”*¹⁶ Although it was possible for goods and supplies to be obtained by these men at other times throughout the year, availability and selections at these alternate times would have been much more limited than those at rendezvous.

Thus, the rendezvous system produced an annual cyclical retail sales pattern, but would this have been typical of sales/purchase patterns at a fixed trading posts open throughout the year? Certainly, the annual rendezvous were universally known to trappers in the mountains, and even if not attending rendezvous, it’s conceivable that these men might be inclined to continue the custom of a mid-summer reunion and celebration.

Occupational Seasons

Although trapping was conducted nearly year-round, the most favorable time for taking prime beaver skins was in the fall and spring of the year, times when the streams were not blocked by winter ice and the beaver’s inner coat of fur was at its densest. The seasonal nature of trapping, with a spring and fall hunt, would result in regular intermediate slack periods during which company trappers might congregate at or near their central supply point. This suggests that sales of consumer goods and professional equipment needs would increase during these off-season periods.

The length and timing of the spring and fall hunts would have been variable from year to year depending both on location, weather and snow conditions. Generally, the fall hunt commenced by early September, continuing till either ice or snow shut down activities, usually in November. The spring hunt commenced with ice breakup around mid-March and continued till mid-June.¹⁷ The following figures will depict an approximate calendar position for the Spring and Fall hunts.

Functional Categories

In order to assist in analyzing the Fort Hall sales data, merchandise sales have been consolidated into functional categories modified from those described by historian Dean L. Anderson.¹⁸ Anderson’s categories are adapted for this study because these categories can be applied as a standard for comparing merchandise distributions on inventories from different business entities, forts and time periods. Obviously, some types of items could be used for multiple, different or overlapping purposes and assignment to a specific category can be arbitrary. For example, a gun could be used for hunting or as a weapon; buttons could be used for clothing closures or as an item of adornment. In these instances, assignment to a category is primarily based on its intended or primary use, and not on limited or speculative uses. Table 1 lists Anderson’s categories and some of the types of merchandise that Anderson determined to fall into those categories. The merchandise listed on this table does not necessarily match those items recorded on the Fort Hall account books.

Category	Types of Items
Adornment	beads, hawkbells, gold chain, gilt necklace, military plumes, finger rings, silver and gold tassels, vermillion.
Alcohol Use	alcohol, brandy, liquor, rum, whiskey.
Amusement	playing cards.
Clothing, Fabrics & Sewing	boots, brogans, moccasins, india rubber shoes, shoes, socks, woolen caps, Scotch caps, felt hats, india rubber caps, capotes, cloaks, coats, gurnsey frocks, woolen gloves, mittens, monkey jackets, jackets, blankets, awls, cotton binding, stroud, calico, flannel, cloth, drawers, pantaloons, trousers, pants, suspenders, shirts, vests.
Cooking	chocolate, coffee, corn, essence of peppermint, fire steel, flour, black & red pepper, kettles, butcher knives, scalpels, Indian knives, jackknives, meat, mustard, large & small tin pans, iron porringer, rice, salt, spoons, brown & white sugar, tea.
Fishing	fish hooks, cod & mackerel fish hooks.
Grooming	horn, ivory & wood combs, looking and pocket glasses, razors, shaving boxes, brown & shaving soap, soap.
Hunting	ammunition, musket balls, beaver traps, bullet moulds, beaver castors, trap sacks, fusil, rifle & gun flints, flint & percussion gunlocks, fusils, rifles, guns, shotguns, percussion tube, gun powder, gun worms, patch knife, lead bars, percussion caps, powder flasks, powder horns.
Maintenance	various types and sizes of files, draw knives, rasps, screwdrivers, whetstones.
Tobacco Use	smoking pipes, cavendish plug, Indian, chewing, leaf and twist tobaccos.
Weapons	dirk, dagg, pistol.
Woodworking	axes, tomahawks.
Transportation	horses, mules, riding & pack saddles, shoes, horse gear
Miscellaneous	eversharp pencil, pencil case, lead pencils, silver watch

Two functional categories were added to Anderson's categories to account for different types of merchandise traded at Fort Hall: Transportation and Miscellaneous.

Table 2 shows the relative importance of the different functional categories by both total value in dollars and as a percent of total sales at Fort Hall during the period of record. Table 2 also shows the weighted average markup of the various types of merchandise in each functional category. The total given on this table is different from that given in paragraph two above. The reason for this apparent discrepancy is that some lines in the ledger list multiple items but show neither quantities or individual prices, giving only a purchase total, and therefore assignment to unique functional categories was not possible.

Functional Category	\$ Value of Retail Sales by Category	Percent Value of Total Retail Sales	Weighted Average Retail/Wholesale Markup
Total Sales-All Categories	\$ 18,694.43	99.9%	
Clothing, Fabrics & Sewing	\$ 7,092.49	37.9%	4.4X
Cooking & Foods	\$ 3,497.39	18.7%	13.5X
Hunting	\$ 2,382.72	12.7%	6.5X
Adornment	\$ 1,519.91	8.1%	13.0X
Alcohol Sales	\$ 1,489.62	8.0%	23.9X
Transportation	\$ 1,187.98	6.3%	Insufficient Data
Tobacco Use	\$ 1,067.37	5.7%	11.1X
Grooming	\$ 206.38	1.1%	9.8X
Amusements	\$ 90.90	0.5%	16X
Woodworking	\$ 42.00	0.2%	6.2X
Maintenance	\$ 38.75	0.2%	5.96X
Miscellaneous	\$ 32.25	0.2%	Insufficient Data
Weapons	\$ 23.76	0.1%	6.7X
Fishing	\$ 22.92	0.1%	7.8X

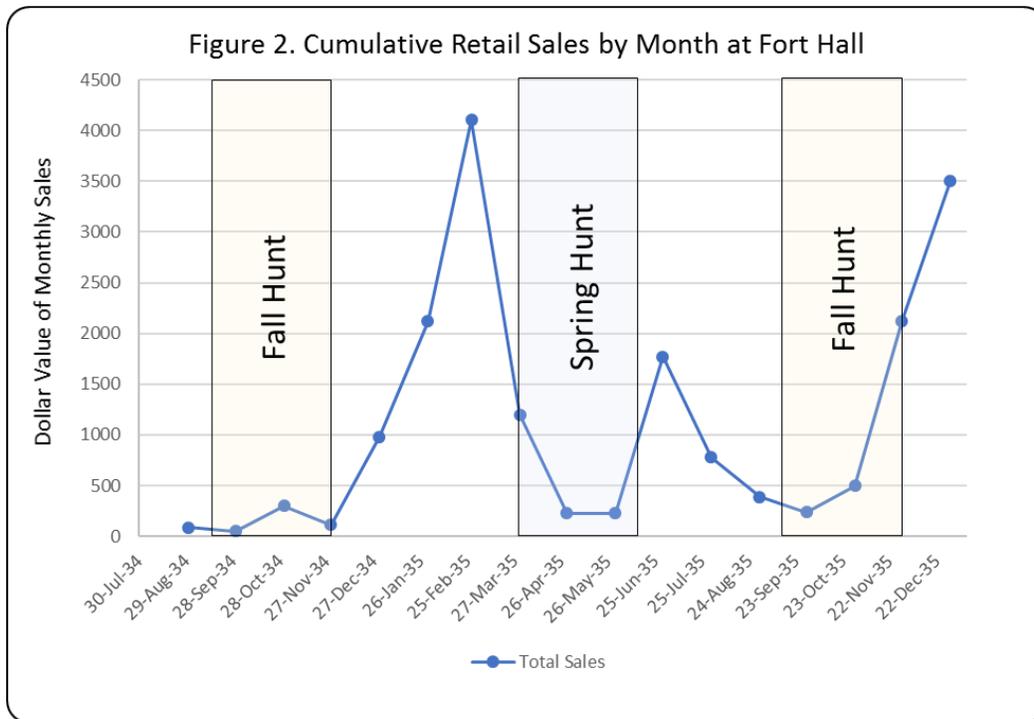
The weighted average markup is based on both wholesale costs and retail prices found in the Fort Hall ledgers, and is specific to the mix of goods and merchandise sold during the calendar period recorded by the ledgers. In specific instances where wholesale costs could not be determined from the ledgers, wholesale costs are based on those found in Bent & St. Vrain Company or in the Upper Missouri Outfit ledgers.¹⁹ A different mix of goods would produce different category markups as all merchandise items in a category do not have the same markup. For example, in the Hunting category, the wholesale cost of lead was 4¢ and retail price was \$1.25, a 31X markup, the wholesale cost of gunpowder was 12¢ and retail price was \$2.50, a 21X markup while a fusils with wholesale costs averaging \$4.36 were marked up to \$30.00, a 6.9X markup. If different relative quantities of lead, powder and guns were sold then the weighted average markup would change. Even though these markup values are specific to this Fort Hall ledger, the values are felt to be broadly indicative of general category markups at other locations and times. The December 2nd, 1837 Fort Jackson inventory of goods taken to the Cheyenne Indians on the Arkansas River, the 1833 Fontenelle, Dripps and UMO inventory of goods taken to rendezvous, and the Montreal Merchants Records all show roughly comparable weighting of functional categories and types of goods.²⁰

The top three functional categories at Fort Hall are Clothing, Fabrics & Sewing; Cooking & Foods; and Hunting. These categories constitute nearly 70 percent of total retail sales. The table shows that alcohol was not an article of highest priority at Fort Hall. Though alcohol was highly profitable with a markup of nearly 24X, the category only comes in fifth place at 8.1 percent of total retail sales. The top seven categories on Table 2 constitute 97.5% of total monthly sales while the bottom seven categories total

2.5% of sales. Because of the small dollar values and often irregular sales in these minor categories, statistical comparisons and conclusions drawn from these categories must be viewed with some suspicion as sales of only a few items, more or less, and the timing of those sales can have a significant impact on interpretation of the data. The Miscellaneous category includes unusual items such as a silver watch, silver pencil cases, a silver ever-point pencil, lead pencils, an empty mustard bottle, a tent, and a padlock. Clearly, these items were not a normal part of the fort's sales inventory, but rather represent one-of-a-kind types of items and from the ledger it is not possible to estimate the wholesale cost of these items. The Weapons category includes ten dirks, one dagg, and one pistol. Although the Transportation category includes various types of horse gear and saddles, the category is dominated by the sales of horses because these were comparatively much more expensive than any other item in any category. The sale price of horses ranged from a low of \$70 to as much as \$160 each. The ledgers do not give any indication of what the purchase cost of these animals were, or where they were purchased. Because mountain prices of horses and mules were substantially higher than costs in Missouri it is therefore not possible to estimate a markup for this category. Being such high value items, the sale of horses and mules dominates the Transportation category, constituting nearly 90% of category sales. As a result, Transportation category trends are defined by sales of these animals.

Retail Sales by Month

At Fort Hall total retail sales by month shows a very strong association with calendar periods, with sales spiking in the periods intermediate between the spring and fall hunts (Figure 2). Hereafter these intermediate periods will be referred to as the winter off-season or the summer off-season.



The first three months of record (August, September and October, 1834) are not considered to be representative of overall sales of later months for several reasons. Nathaniel Wyeth didn't leave

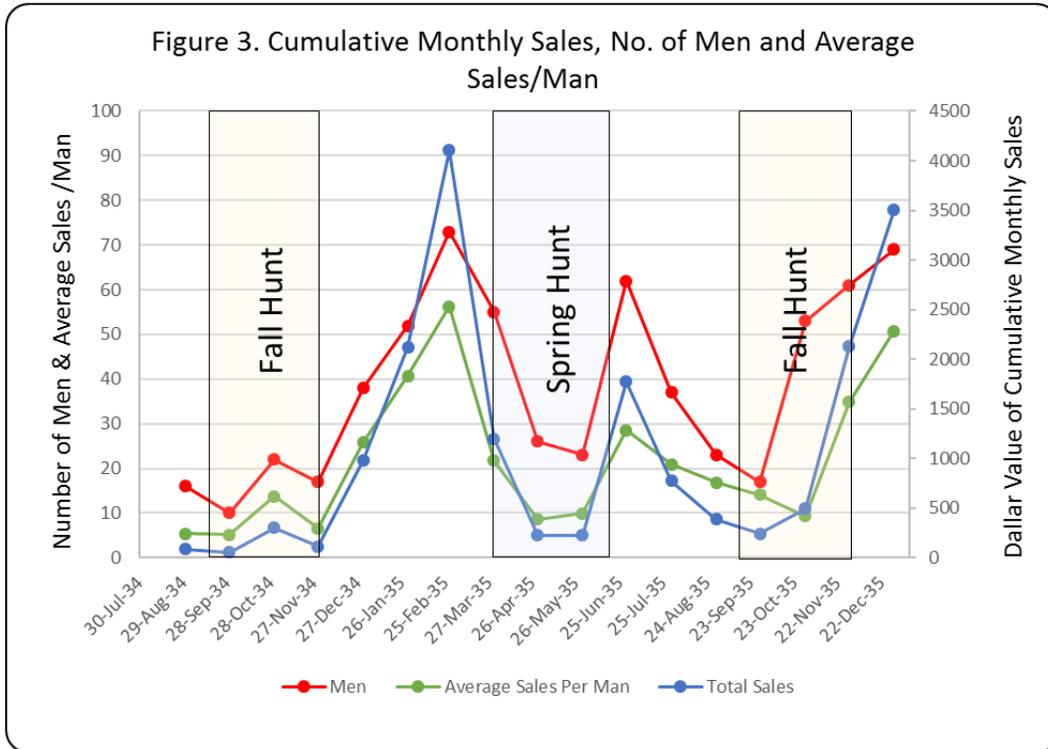
Independence, Missouri with his pack train until April 28th, 1834.²¹ Thus the clothing and equipment of his employees would still have been in relatively good condition by the late summer and early autumn of 1834 and not yet requiring replacement. Also, Wyeth was very conservative about advancing his employees credit. This is established the 3rd directive in his instructions to Robert Evans regarding managing Fort Hall in Wyeth's absence: "*You will give no supplies to any of your men unless the company are \$20 in their debt by the accts which are handed you, you will be able to ascertain when this is the case.*"²² By late summer and early autumn of 1834, most of Wyeth's employees would have had credit for only three or four months wages, which would have greatly limited their purchasing power. Finally, within two days of the fort walls being up on August 4th, 1834, nearly all of Wyeth's men were sent out on trapping expeditions throughout the region, with only 12 men left behind to complete the facilities.²³ Because these early months are not considered to be representative of overall sales, they are generally not included in the analyses of the data set.

Total monthly sales reached a low of \$224.89 and \$240.35 during the spring and fall hunts of 1835 respectively. Low total sales are expected during these periods because except for unanticipated needs or emergencies the CRTFC employees were expected to be out trapping beaver. Off-season sales could be nearly as much as 18 times higher. February 1835 sales peaked at \$4,103.60 while December 1835 sales were \$3505.57. The December 1835 sales probably do not represent peak sales for the winter off-season of 1835-36, as records for months following December 1835 are not recorded on these ledgers. Retail sales during the summer off-season of 1835 peaked at total sales of \$1,772.39. Although there is only ledger data for one and one-half annual cycles, the data appear to indicate that winter off-season spending was much greater than during the summer off-season. This is probably because snow and ice were very effective at closing down trapping activities during the winter months. While trapping was conducted throughout the summer months, the retail sales data suggest that this activity was pursued at a reduced intensity.²⁴ For employees and trappers associated with a fort these patterns demonstrate bi-annual sales/purchasing cycles with peak sales during the winter off-season as opposed to the annual cycle associated with the rendezvous system.

In the autumn of 1835 retail sales appear to be trending upwards much earlier than in the same period during 1834. A likely explanation for this is that the term of service for CRTFC employees would have expired about this time. Sometime after October 16th, 1835 Osborne Russell wrote "... *the time for which myself and all of Mr. Wyeth's men were engaged had recently expired...*" and on November 15th, 1835, "*In the meantime the men about the Fort were doing nothing and I was lending them a hand until Mr. Wyeth should arrive and give us our discharge.*"²⁵ So at least some portion of Wyeth's employees were idling about the fort and spending down the credit available in their accounts, rather than out trapping during the fall hunt of 1835.

Increased retail sales during the winter and summer off-seasons is a function of both more men being present at the fort and a substantial increase in average spending by individuals (Figure 3). During the Spring and Fall hunts of 1835 the number of men recorded as making purchases at Fort Hall was 23 and 17 men respectively. During the winter off-season of 1834-35 and summer off-season of 1835, 73 and 62 men are recorded as having made purchases. Average spending per man was \$8.65 during the spring hunt of 1835 and \$9.37 during the fall hunt of 1835. Spending per man more than tripled during the summer off-season of 1835 to \$28.59 and surged nearly five-fold during the winter off-season of 1834-

35 to \$56.21 per man. A similar surge in spending is seen going into the winter off-season of 1835-36 with sales averaging \$50.81 per man up to the time that the ledger records end in December 1835. The surge in winter sales/man is probably a result of employees and trappers spending more time at and around the fort.



Sales trends for all functional categories demonstrate patterns similar to both total sales and a definite relation to the winter and summer off-seasons (Figures 4 and 5).

Figure 4. Sales by Major Functional Category

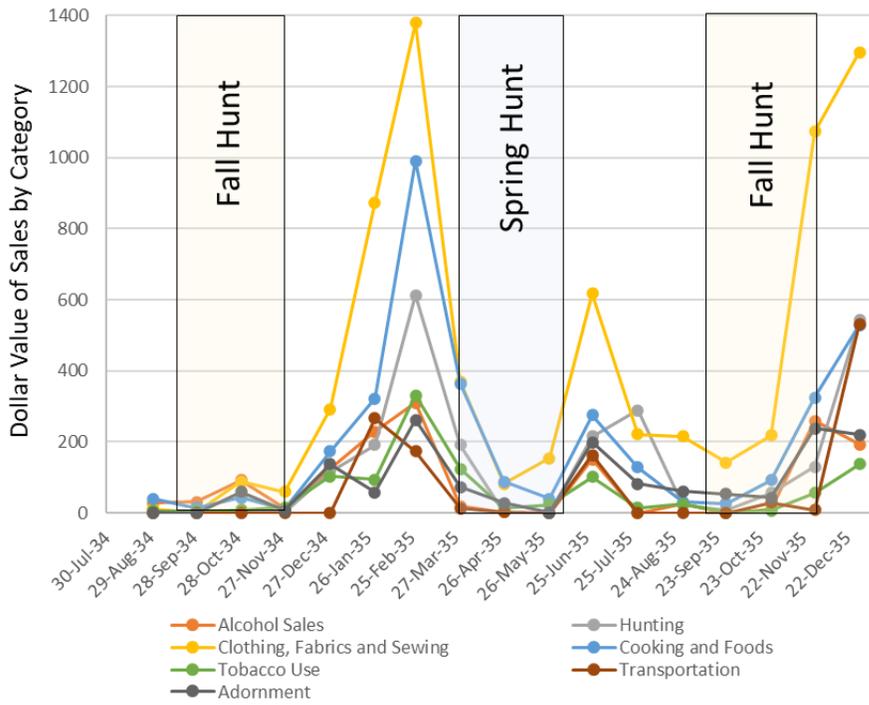
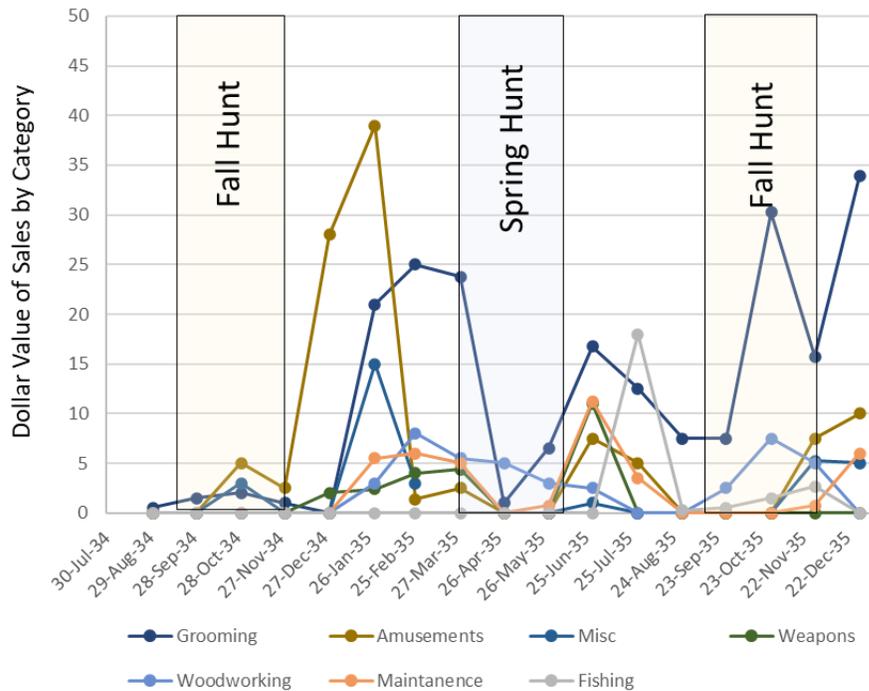
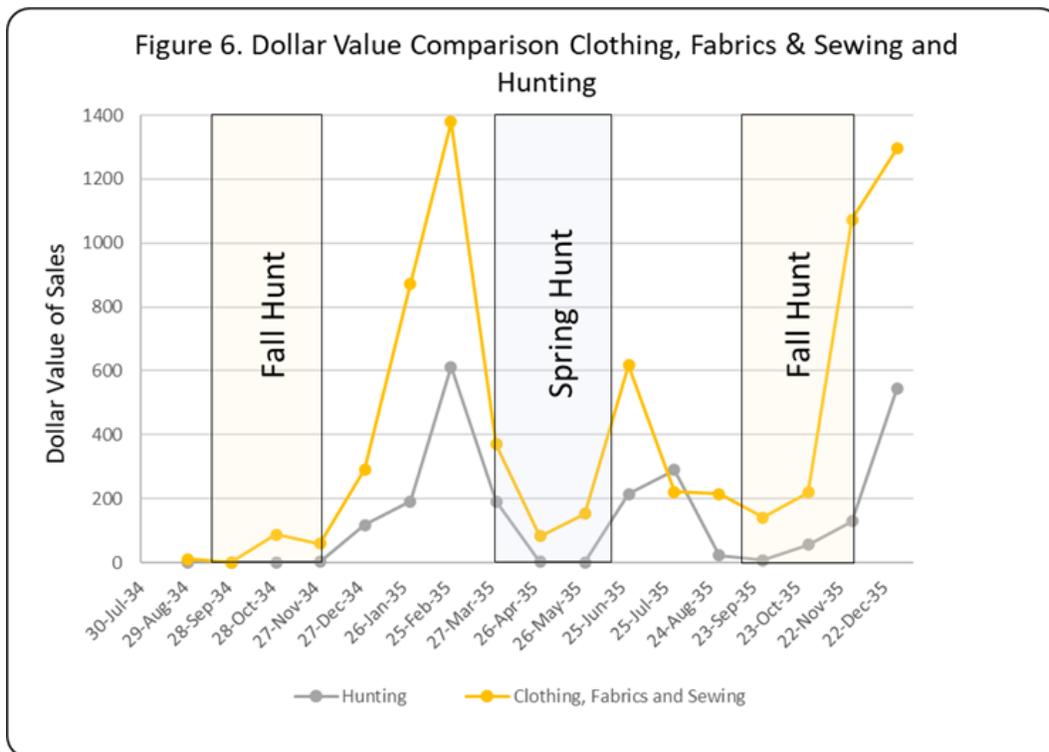


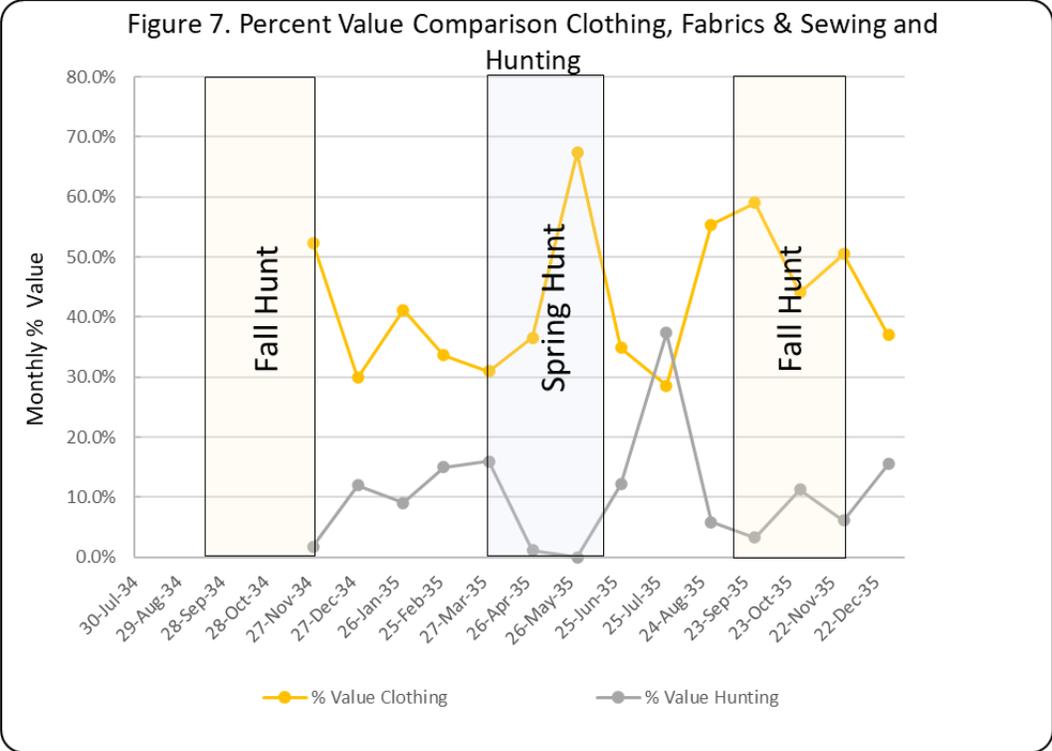
Figure 5. Sales by Minor Functional Category



Functional Categories as a Percent of Monthly Retail Sales

Figures 3, 4 and 5 generally show that all of the functional categories, total sales, and number of men present at the fort generally move in tandem. However, this doesn't indicate that these factors necessarily are correlative with each other. Analyzing functional category sales as a percent of total sales for each month rather than by dollar value produces very different trends which better show changes in month-to-month purchasing priorities and that give a better indication of correlation. As an example the raw dollar values of the Clothing, Fabrics & Sewing and Hunting categories are shown on Figure 6. This figure expresses very similar patterns for both, which suggests that they are correlative. Figure 7 portrays these functional categories as a percent of total monthly sales which expresses radically different and contrasting trends.





Evaluating functional categories as a percent of total monthly sales gives a much better indication as to how the employees, on average, were allocating their purchasing budget, and consequently is a good proxy for spending priority. Spending priorities would naturally change throughout the calendar year, as a function of changes in weather, professional activities, social opportunities and available merchandise. The relation between Hunting and Clothing, Fabrics & Sewing will be explored below as the functional categories are analyzed. Note that increasing or decreasing percentages do not necessarily mean rising or falling sales because month-to-month total sales could change significantly. Rather changes in percent values indicates a change in purchasing priorities.

Correlation Coefficients

Ideally, for statistical analysis, the Fort Hall retail sales records would have extended for two or more complete annual cycles. However, the records are of sufficient length for analysis by correlation

coefficients. In this study all functional categories and number of men are analyzed with the exception of the Maintenance, Miscellaneous, Weapons and Fishing categories. The latter are excluded because monthly and total sales in these categories are so limited that we cannot be certain whether an apparent correlation is simply a chance purchase. Also, the first three months of data, August, September, and October of 1834 are not included in the correlation analysis, because these months are not believed to be representative of sales as described earlier.

Of the 100 variable pairs analyzed, only 7 exhibited a significant correlation and 2 of these corresponded to the number of men. The low number of correlations between functional categories suggests that these categories are distinctly defined. Of the significant correlations, some are surprising, some not, and some that cannot easily be explained and may well be artifacts related to the limited duration of the data set or of other variables not captured in the data set.

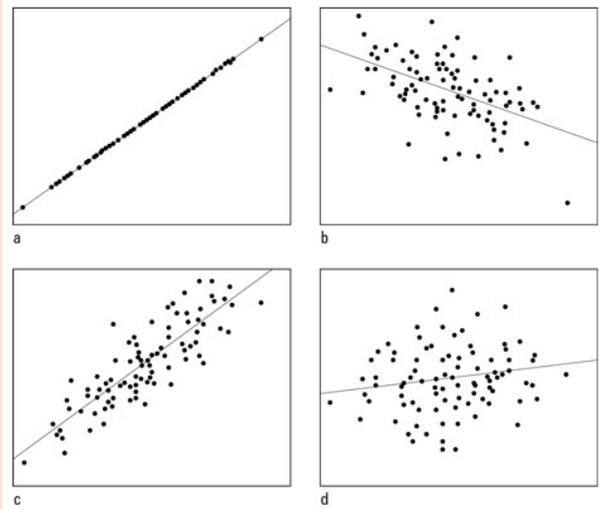
Analysis of the Functional Categories

At Fort Hall the Hunting category consists mostly of shooting supplies, fusils, rifles, beaver traps and trap springs. As can be seen from Figure 7, the percent of purchases devoted to Hunting increases during the off-season periods between the fall and spring hunts. This timing suggests that the trappers are prioritizing the replacement of equipment damaged or lost during the preceding hunt and were preparing for the upcoming hunt. Hunting correlates negatively with Clothing, Fabrics & Sewing, however, there is no clear explanation for why these categories should be negatively correlated. Perhaps Clothing, Fabrics & Sewing being the single largest category at nearly 40 percent of total sales was the easiest area to reduce purchasing priority when hunting equipment was required.

Figure 7 shows two peaks in the percent value of Clothing, Fabrics & Sewing, one each during the Spring and Fall Hunts of 1835. Trapping activities took place under arduous and difficult environments. Under these conditions cotton and wool clothing would have quickly become worn and unusable. At such times as men were able to return to the fort, they apparently prioritized the replacement of worn clothing. Other than the two peaks noted, sales of clothing related merchandise consistently make up 30-40% of monthly sales.

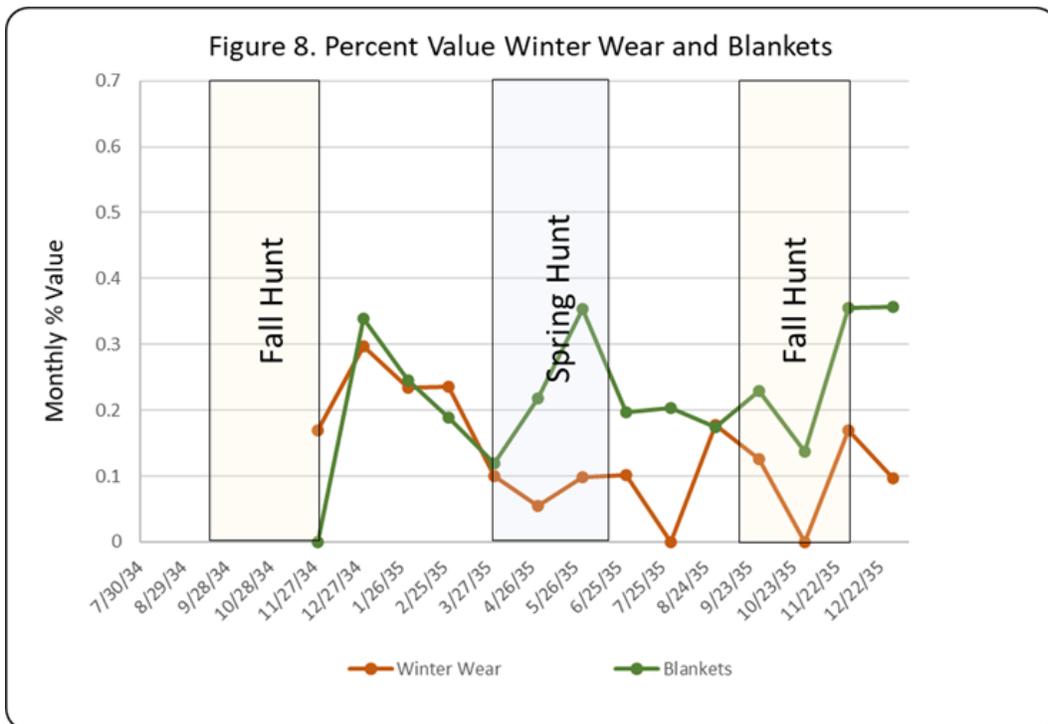
Inquiring Minds: What is a Correlation Coefficient?

A correlation coefficient is a statistical means to measure the strength of a relationship between two sets of variables within a data set. A caveat to remember is that just because two variables correlate does not necessarily indicate a causation; correlation could result due to changes in a third variable.¹ Furthermore the causative variable may not be included in the data set. Also, with very limited data, correlations may simply be a result of random alignments. Correlation coefficient values are generally expressed as "r" and range between -1.0 and +1.0 with these end values representing a perfect negative or positive correlation. An "r" value of zero would be entirely random. The figure below provides examples visually showing the relation between two variable sets with differing r values. Note that the r value indicates nothing about the slope of the line, only how closely the variable pairs cluster about a straight line. From the figure the correlation remains clear at a value of $r=0.85$, but has become much less distinct at $r=-0.50$. At r values of less than ± 0.50 the relationship patterns become increasingly difficult to ascertain visually, and determinations are entirely dependent on statistical analysis.



Scatterplots with correlations of a) +1.00; b) -0.50; c) +0.85; and d) +0.15.

Common sense suggests that sales of winter-wear clothing and blankets would be prioritized during the winter off-season. Winter-wear for this breakdown includes ledger items such as coats, cloaks, comforters, drawers, mittens and jackets. Figure 8 shows sales of winter-wear and blankets as a percent of monthly sales. Sales of these items are not as clearly related to the mid-winter period as logic suggests. Although winter clothing items appear to be of a somewhat higher priority during the winter off-season of 1834-35 there is no similar increase in prioritization going into the winter off-season period of 1835-36. Perhaps after their first year in the mountains, the hunter/trappers found that winter wear of native manufacture was warmer and more durable than any ready-made clothing available for purchase from the company store. Purchasing priorities given to blankets can be explained more easily. Spikes occur during both winter off-season of 1834-35 and going into the winter off-season of 1835-36 as well as during the spring hunt. Spring hunt purchases were likely boosted because the trapping parties would likely have continued to experienced cold nights with occasional wintery storms in the absence of any substantial shelter.

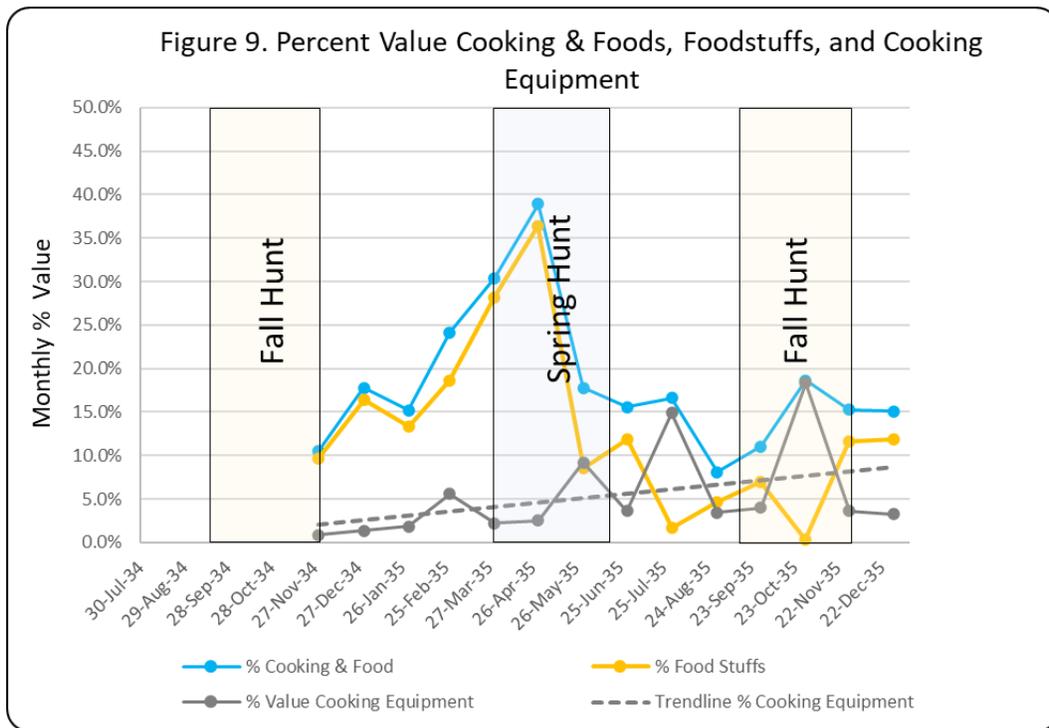


Correlation coefficients indicate a strong relation between the Cooking & Foods and Woodworking categories. At Fort Hall the Woodworking category is composed entirely of different types of axes, described as half axes, camp axes, but dominated by sales of squaw axes, a relatively light and inexpensive axe. A possible explanation for the correlation between these categories is that axes, particularly light axes would have been useful for gathering firewood for cooking purposes.

The Cooking & Foods category can be divided into two natural sub-categories. Foodstuffs (flour, rice, sugar, coffee, tea, chocolate, spices) and Cooking Equipment (knives, kettles, fire steels, pots, cups, etc.) Figure 9 illustrates monthly percent purchases of both the category and sub-categories. Note that Foodstuffs plus Cooking Equipment equals the functional category Cooking & Foods. Overall, the

category shows no seasonal or occupational relationship. There is a major spike in the purchase priority given Foodstuffs leading into and during the Spring Hunt of 1835 but this drops off to values generally between 8 and 20 percent for the remainder of the period of record.

There is no clear relation between Cooking Equipment and occupational seasons. The percent of sales allocated to Cooking Equipment, is very irregular month to month, but in general, increases through time which is more clearly shown by the best fit trendline. Trapping was a physically demanding occupation, on men, animals, and equipment and it's likely that with increasing time spent in the field, progressively more of the cooking equipment was damaged or lost, or otherwise needing replacement. This may also be due to an increase in numbers of Indian wives and partners who would have desired such equipment.



Foodstuffs dominates the Cooking and Foods category through April 1835, which corresponds to the peak for the functional group. Starting in May, 1835, the priority for the Foodstuffs subcategory drastically declines to a level roughly being equal or sub-equal to Cooking Equipment. The sudden drop-off is as spectacular as it is peculiar. It is extremely unlikely that the culinary tastes of the CRTFC employees abruptly changed. This suggests that perhaps this isn't a demand driven trend, but perhaps a trend driven by supply, or lack thereof.

In addition to the merchandise and goods Wyeth brought out with him from St. Louis in the spring of 1834, Captain Joseph Thing is recorded as having brought up supplies from the Columbia River on two separate occasions. The first resupply occurred on December 24th, 1834 and the second on November 15th, 1835. There is no mention of what these supplies consisted of.

There are ten sorts of food items which appear on the Fort Hall ledgers: chocolate; coffee; flour; essence of peppermint; mustard; pepper; rice; salt; sugar and tea. Essence of peppermint is probably being used for medicinal purposes rather than as a food or spice and mustard may have been as well.²⁶ Table 3 shows the dollar value of these foodstuffs and purchasing patterns over the period of the ledgers. There is only a single sale of salt and a single sale of essence of peppermint and therefore conclusions cannot be drawn for these items. The table shows that three foods dominate sales of foodstuffs, being sugar, coffee, and flour. These items as well as tea, are being sold in the earliest months that Fort Hall was in existence and it is apparent that Wyeth brought these out from St. Louis with him. Purchases of the other items do not commence until after Thing arrives at the fort with supplies on December 24th, 1834. The first purchase of pepper takes place on December 27th, 1834 and rice on December 29th, 1834. Purchases of mustard and chocolate don't begin until January of 1835. Clearly, these items must have been included with the supplies brought in by Thing.

Table 3. Dollar Value of Food Sales through Time at Fort Hall

Month	Chocolate	Coffee	Flour	Essence of Peppermint	Mustard	Pepper	Rice	Salt	Sugar	Tea
8/31/34	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	28.50	1.50
9/30/34	0.00	1.50	0.52	0.00	0.00	0.00	0.00	0.00	9.00	1.50
10/31/34	0.00	1.50	3.00	0.00	0.00	0.00	0.00	1.25	22.50	1.50
11/30/34	0.00	0.00	3.38	0.00	0.00	0.00	0.00	0.00	3.00	3.00
12/31/34	0.00	31.50	31.53	0.00	0.00	2.38	3.00	0.00	67.50	0.00
1/31/35	6.75	67.50	3.75	0.00	1.23	8.63	24.75	0.00	149.75	9.00
2/28/35	39.83	280.25	64.75	0.00	6.00	15.85	0.00	0.00	370.50	13.50
3/31/35	9.00	110.25	175.63	0.00	0.00	11.25	0.00	0.00	27.75	0.00
4/30/35	0.00	33.75	6.75	0.00	0.00	3.75	0.00	0.00	30.00	0.00
5/31/35	0.00	4.50	8.25	0.00	0.00	0.75	0.00	0.00	6.00	0.00
6/30/35	0.00	120.50	39.75	0.00	0.00	7.50	0.00	0.00	43.25	0.00
7/31/35	0.00	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/31/35	0.00	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/35	0.00	16.50	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00
10/31/35	0.00	15.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75	0.00
11/30/35	0.00	74.25	24.25	2.00	0.00	0.75	0.00	0.00	142.27	0.00
12/31/35	0.00	132.01	63.98	0.00	0.00	1.13	71.37	0.00	132.69	13.50
Category Totals	55.58	917.51	425.53	2.00	7.23	53.11	99.12	1.25	1033.46	43.50

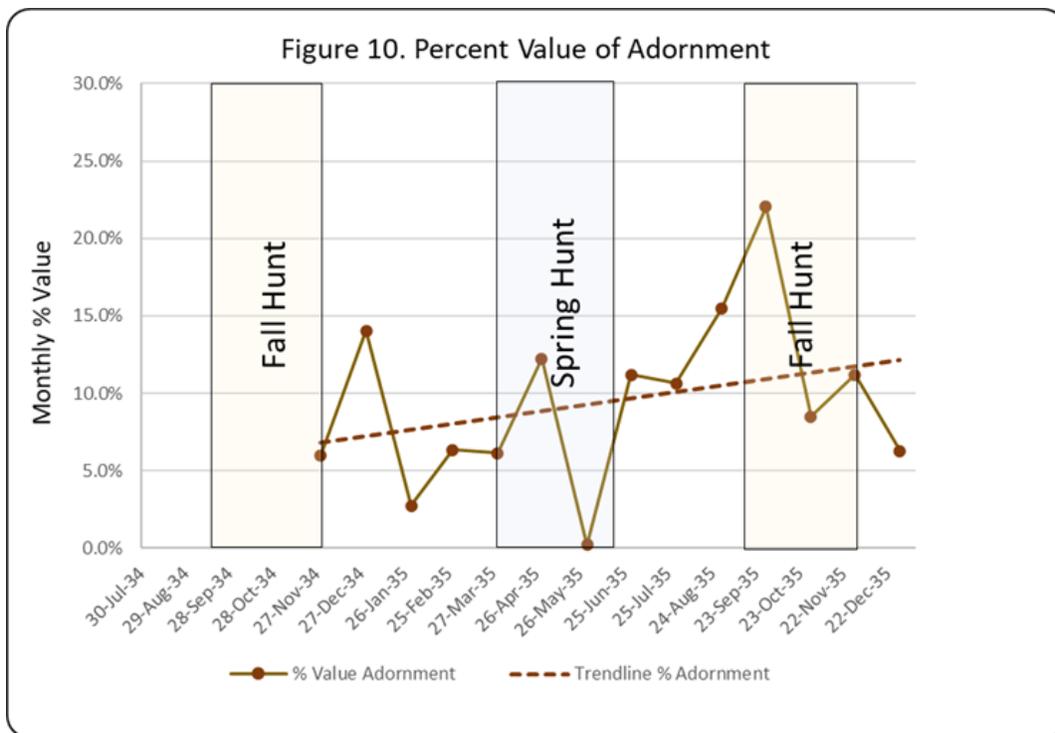
Purchases of tea, although small and irregular in quantity, took place from August through February 1835. After that tea is not purchased until December 1835, after Thing's second resupply. Rice only appears on the accounts after Thing's first resupply and are apparently depleted by January 30th, 1835. Rice is not purchased again until a substantial quantity is sold in December 1835 after the second resupply.

Of the three major food types sold, supplies of both flour and sugar appear to have been exhausted during the month of June 1835 and there are no purchases of these items during the months of July, August, September, and October (with the exception of 75¢ worth of sugar on October 30th, 1835). The absence of purchases of these foods, largely accounts for the sudden drop in percent of sales allocated to foodstuffs. Brisk sales of flour and sugar resume again in November 1835. It is more difficult to relate these sales to Joseph Thing's second resupply as these sales commence on November 2nd, and Thing is not recorded as having arrived until November 15th. Although undocumented, it is possible that with large numbers of men assembling at the fort, that an express with high-demand items was sent in advance of Thing's party with merchandise items that had been depleted.

Tea is purchased regularly from August 1834 through February 1835. After that the next purchases of tea do not start until December 1835 suggesting that this commodity also was exhausted and not replenished until Joseph Thing's second resupply. Coffee supplies appear to have been adequate as there are purchases documented for all months except for November of 1834

Thus, the evidence presented in Table 3 indicates that the sales/purchase patterns of food products at Fort Hall is a function of supply and availability, rather than demand alone. Had adequate supplies of foodstuffs been available, particularly sugar and flour, it is almost certain that the percent purchases and purchase priority patterns would have been considerably different.

At Fort Hall the Adornment category is the fourth most important category at 8.1% of total sales. The category consists largely of beads, with significant quantities of vermillion, finger rings, and hawk bells. Very minor quantities of gold and silver tassels, military plumes, gold chain, and necklaces are listed as well. Correlation coefficients indicate that there is no relation between this category and any other category, although the Grooming and Adornment categories do exhibit similar trend lines. From the nature of the items contained in this category, it is clear that these items are intended for Indian consumption, as presents to establish friendship or win favors. It's most unlikely that the trappers were purchasing vermillion, finger rings or necklaces for their own use. A plot of percent values of Adornment through time doesn't show any clear connection to spring or fall hunts or the off-season periods (Figure 10). However, a best fit trendline does indicate that the category gradually assumes greater importance through time. This could indicate that gradually increasing numbers of hunter/trappers are establishing temporary or permanent relations with Indian women and needing such luxury items to encourage these relations. That the men were not purchasing these items to trade on their own is made clear in the 20th directive in Wyeth's instructions to Robert Evans: *"You will not allow the men to trade the smallest article themselves but you will trade for them a reasonable quantity of leather, for their own use, but in no case exceed the price named in the announced Tariff."*²⁷

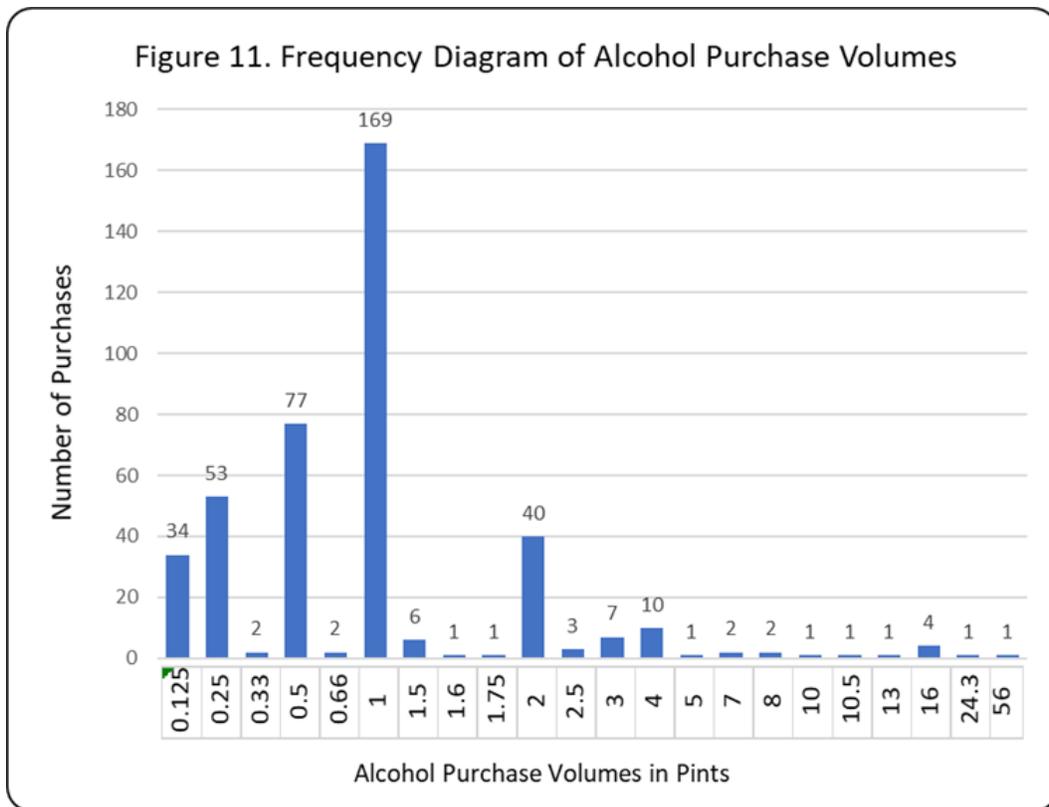


Alcohol was the 5th most important category at Fort Hall. Anecdotal descriptions of alcohol consumption by the contemporary accounts of trappers, scientists, clergy and others indicate that at rendezvous alcohol-fueled bedlam was universal. Common knowledge generally held by buckskinners at modern day rendezvous is that hunter/trappers during the heyday of the fur trade took every available opportunity to debauch themselves with alcohol. However, analysis of alcohol sales recorded in the Fort Hall accounts demonstrates, that at least this location, this would be an erroneous characterization. Unlike rendezvous, merchandise including alcohol was available year-round at Fort Hall and the pressure for binge consumption would have been absent. However, as shown above on Figure 3, during off-season periods, substantially larger numbers of men were present at the fort which would have led to reunions and greater opportunities for socialization. This might have created a social environment similar to those taking place at the mountain rendezvous, suggesting that sales of alcohol and items for amusement should correlate strongly with number of men. However, this is not confirmed by correlation coefficients which show no relationship with the number of men. Alcohol does show a statical correlation with the Amusements category, signifying that drinking and gambling were activities that generally accompanied each other.

A deeper examination of ledger records reveals an even clearer picture of alcohol use at Fort Hall. The dollar value of alcohol sales/man over the interval recorded by the ledgers never exceed \$4.30 per month, reaching that value during the winter off-season. During the summer off-season (corresponding to the when rendezvous was held) alcohol sales only reach a level of \$2.56/man/month. Notably, in July 1835, a month in which 37 men are recorded as having made purchases at the fort, there are no recorded sales of alcohol. During the interval of the ledgers, the retail price of alcohol/rum/whiskey was consistently \$24.00 per gallon, thus \$4.30 represents less than 1 ½ pints and \$2.56 represents 0.85 pints. Assuming the alcohol was not shared, this would be enough to have a good frolic for one day, but

certainly not enough for an extended drunken frenzy that reports indicate as commonplace at rendezvous. If spread out over the course of a month, 1 ½ pints would come to approximately ¾ ounce of alcohol daily. This analysis indicates that, at least at Fort Hall, alcohol-fueled revelry, was at most of very short duration, and that a generally sober condition existed amongst the hunter/trappers at the fort.

Individual alcohol sales on the ledgers confirms these broad conclusions. A total of 67 men are recorded as having purchased alcohol in 419 separate transactions. Transaction volumes range from 1/8 pint to 7 gallons (Figure 11). Of the men for whom no alcohol sales are recorded, some may have been temperance men, abstaining from use of alcohol, and some may have had alcohol shared with them. More than 80 percent (337 of 419 purchases) of recorded alcohol sales are for 1 pint or less and 40 percent (166 of 419 purchases) of sales are for ½ pint or less. There are only 11 alcohol sales of 1 gallon or more, and of these eight are to Thomas McKay. McKay was ostensibly leading an independent party of trappers at this time, though he continued to maintain extremely close ties to the Hudson Bay Company.²⁸ It is likely that at least some, if not most, of McKay's alcohol was intended for distribution amongst his trapping party. One sale of 3.25 gallons is to Joseph Thing on December 4th, 1835. This is almost certainly for sharing with the men as Thing was apparently a very light drinker with only one other alcohol purchase for 1 pint of rum over the 18 month period of the ledger accounts. Thing could easily afford to host some merrymaking. Thing was one of Wyeth's trusted partisans and received his purchases at a discount. Thus, Thing was charged only \$2.77 for alcohol that would have cost any other employee \$78.00. Surprisingly, with the exception of Christmas, widely recognized holidays of the period do not show exceptional alcohol sales. New Year's Eve and Day of 1835 had recorded alcohol sales totaling 0.5 pints. The entire month of July 1835 including July 4th had no alcohol sales. Christmas Eve/Day of 1834 had total sales of 21 pints, the largest sales up to that time. Also, the ledgers show that on Christmas Day 1835 fifteen pints were given to the men to "celebrate Christmas" with an additional four pints purchased by John B. Dushan.



The analysis of the Fort Hall ledgers indicates that essentially the hunter/trappers were not participating in extended periods of binge drinking or alcohol-fueled revelries. Rather the numerous, small-volume sales demonstrate that the men were likely consuming alcohol in a responsible fashion, perhaps as a release from professional aches and pains and/or to obtain a mild buzz while socializing with others.

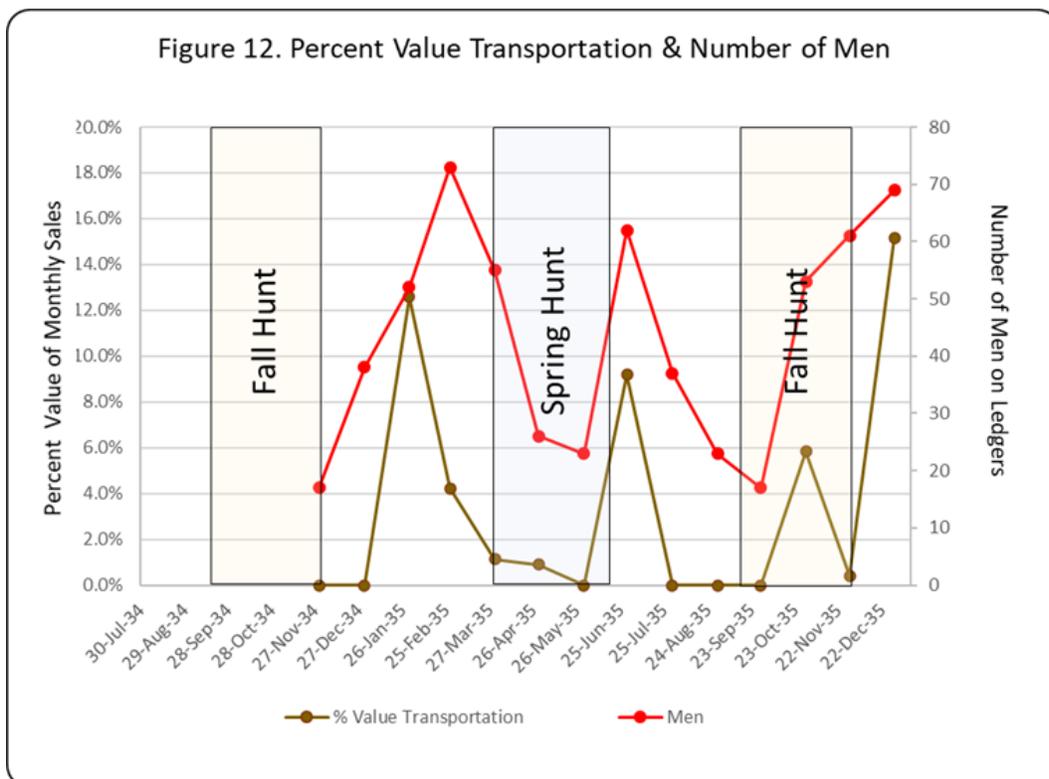
One factor which certainly would moderate the consumption of alcohol was the high cost of the product. With wages averaging 58¢ per day, a pint of alcohol at \$3.00 represented just over five days earnings.

We may also speculate that there was some kind of code of conduct governing personal behavior, including alcohol consumption and drunkenness at Fort Hall. Fort Hall was a business establishment first, and a stable environment would have been requisite to maximize profits and minimize risks. Even in the laissez-faire, chaotic setting of rendezvous there are hints of a code of conduct for health and safety reasons. During the “mad wolf” incident at the 1833 rendezvous, Charles Larpenteur reports that *“The wolf could have been shot, but orders were not to shoot in camp, for fear of accidentally killing some one, and so Mr. Wolf again escaped.”*²⁹

Pack trains proceeding to and from rendezvous operated under an almost military precision.³⁰ Nathaniel Wyeth, in writing to Francis Ermatinger from rendezvous on July 18th, 1833 states, “For efficiency of goods, men, animals and arms, I do not believe the fur business has afforded a better example or discipline.”³¹ Also attending the 1833 rendezvous was William Drummond Stewart, a former British

military officer, who earned a position as partisan with Sublette and Campbell's packtrain through the military discipline and order he brought to the outfit.³² Discipline and order allowed for efficiency of travel, as well as minimized losses of men, animals and merchandise along the way. It would seem natural that fixed trading forts would also establish rules regarding operating procedures and generally acceptable personal conduct in order to minimize business disruptions and damage to facilities.

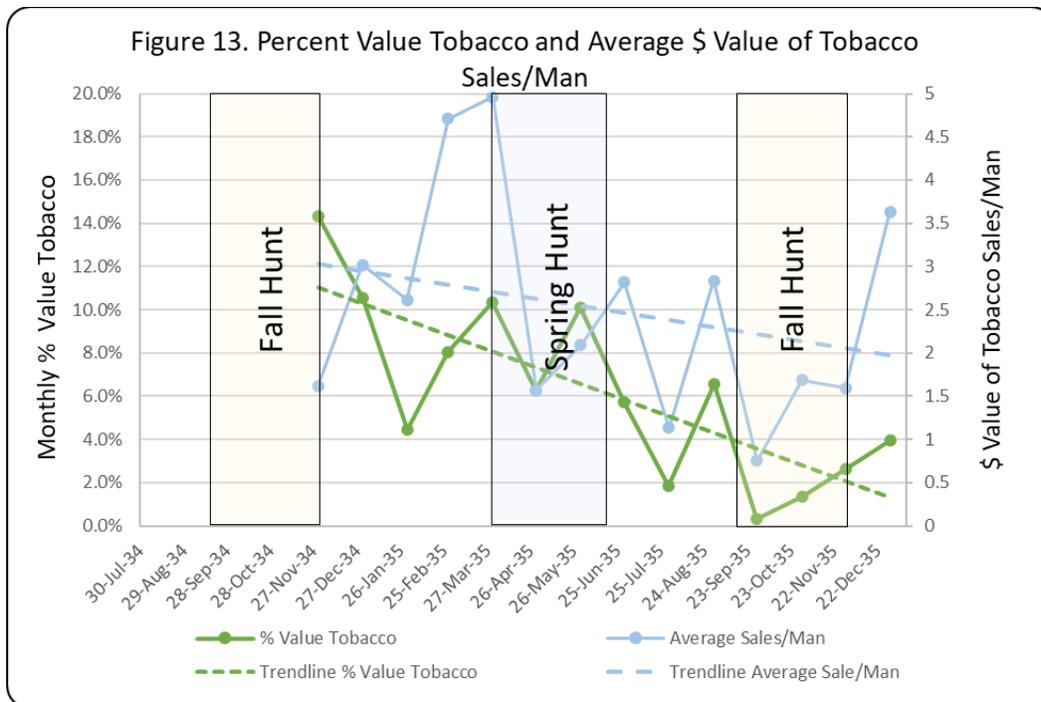
Transportation correlates with the number of men and shows a clear relation to the mid-winter and mid-summer off seasons (Figure 12). The category includes items such as apishemores, bridles, horse shoes and nails, horse rasps, lash ropes, riding saddles, sursingles, spurs and stirrups. There is no evidence that pack saddles were purchased by individuals, though two pack saddles were assigned to the Flathead Equipment on March 5th, 1835. The correlation to number of men is driven by the sale/purchase of horses, because these were the far and away most costly item in the category. A total of 13 horses are listed on the accounts as having been purchased with prices ranging from \$75 to \$160 per animal. Trappers were given credited for nine horses at similar prices, although Richardson & Co. was credited only \$25 each for three animals with the note "the above prices to be allowed provided the animals die or give out." Additionally, 24 horses are listed as having been "lent out for trapping." Mules are not listed as having been sold, although credit was given for mules on two separate occasions. On February 2nd, 1835, Christopher Carson is credited \$70 for one mule and \$84 for six beaver traps. On the same day Carson was charged \$154 for various consumer goods. At that time Carson was associated with Bridger's trapping party. On March 11th, 1835 Jean Baptiste Gervais (known on the ledger as Baptiste Jervey) is credited \$75 for a mule and \$3 for a tomahawk and is charged \$75 for consumer goods. Gervais was a partner in the defunct Rocky Mountain Fur Company and at the time of the transaction was partnered with Henry Fraeb as independent trappers.



Tobacco would have been consumed for both ritual purposes to bond with Indians and as a substance to satisfy an addiction. A gift of tobacco as a present was also an inexpensive way for trappers to show friendship with Indians that they encountered. From the ledgers there is insufficient information to determine the ratio of how tobacco was used. For this analysis the assumption is that the bulk of tobacco purchased was for personal consumption.

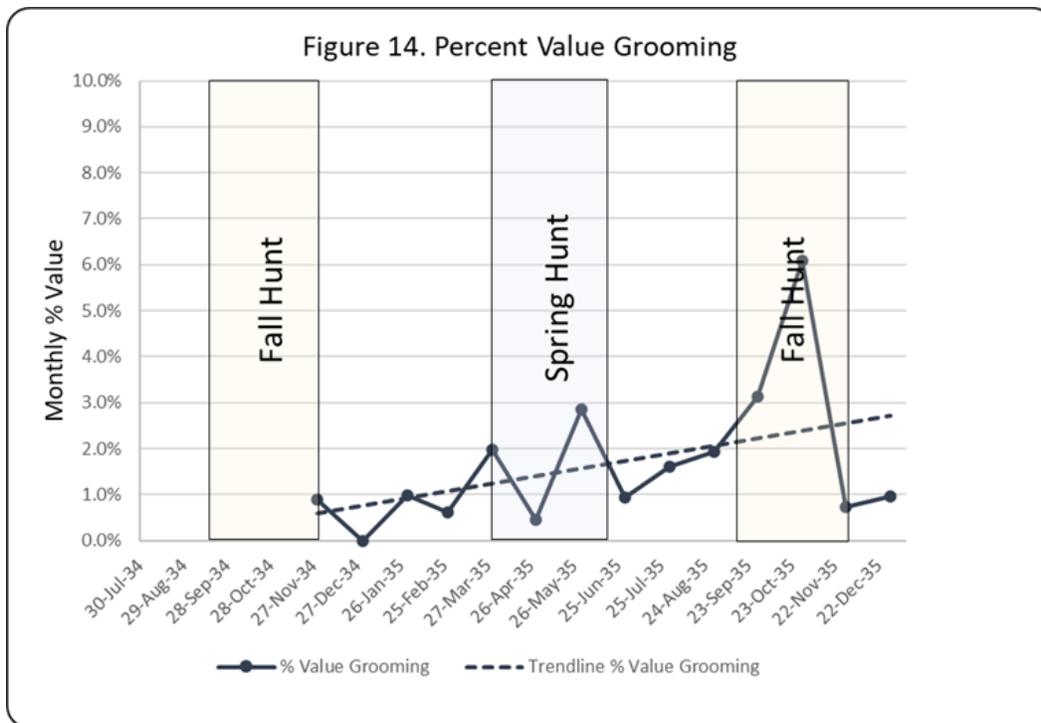
The Tobacco category, although making up only 5.7 percent of total sales, nonetheless, accounted for a considerable number of sales. Transactions of 1 pound or less of tobacco account for 465 sales, and transactions of more than 1 pound total 127 sales, including one to William Waller on February 1, 1835 of 15 pounds. Numerous grades and types of tobacco are listed on the ledger, including: No. 2, twist, plug, leaf, Indian, chewing and Cavendish. Most entries, however, simply, list tobacco.

Tobacco, being an addictive product, common sense says that individuals would always purchase sufficient quantities of this product to satisfy their need. Reason would further dictate that the dollar value of tobacco sales per man would remain relatively constant in satisfying that need. This is not confirmed by Figure 13 which displays tobacco sales as a percent of total sales and average tobacco sales per man. Note that that average sales per man is based only on the number of men purchasing tobacco (assumed to be smokers) and non-smokers are not included in determining this average. Also, sales which were clearly not intended for personal consumption were not included in this average. Antoine Godin, on December 24th, 1834, is charged for 32 pounds with the notation "equipment" and Kit Carson in four transactions on two separate days in February 1835 is charged for a total 29 pounds of tobacco. At this time Carson is associated with Jim Bridger's trapping brigade of the Fontenelle and Fitzpatrick and Company and appears to be purchasing supplies for the entire brigade.³³ The dollar value of sales per man displays a spike during the winter off-season of 1834-35 and again going into the winter off-season of 1835-36. These spikes are not simply related to increased social opportunities as there is no corresponding spike during the summer off-season of 1835. Perhaps the long winter nights were well suited for sitting around the campfire and telling tales, leading to extended smoking sessions. Other than these spikes, sales are irregular from month to month and generally show a persistent decline through time as indicated by the best fit trendline. Without a longer time frame, this trendline would be considered suspect, except that this is confirmed by the trendline for tobacco sales as a percent of total monthly sales which reveals a similar decline.



It's unlikely that the hunter/trappers were giving up the habit. In the 1830's the health costs of tobacco use were generally not recognized but rather tobacco use was commonly perceived as having health benefits. It's more likely that the hunter/trappers developed some means of extending their supplies of tobacco, either through more efficient use, or by supplementing/substituting with native smoking materials.³⁴

The Grooming category consists mostly of various sizes and types of combs, lesser quantities of soap, and very minor quantities of shaving equipment. Correlation analysis indicates that there is no relationship with any other category nor do monthly percent values indicate any connection to seasonal or occupational periods (Figure 14). However, the best fit trendline for Grooming demonstrates a progressive increase in the priority given to purchases allotted to this category through time.



It's not likely that this indicates that the hunter/trappers are gradually becoming more concerned with their looks and appearance, though combs were a useful implement for removal of lice and nits. Rather, it's more probable that through time an increasing number of men are developing temporary and permanent liaisons with Indian women, and demand for this category is being driven in part by their native partners. Although correlation coefficients show no relationship between the Grooming and Adornment categories, the overall trend line for Grooming is similar to that displayed by Adornment which is also thought to be increasing through time for a similar reason.

The Amusements category at Fort Hall consists only of playing cards and constitutes less than 0.5 percent of total sales. A total of 38 packs of cards were sold with a total value of \$90.90. Playing cards had a wholesale value of 15 cents but retailed for \$2.50 a pack. Joseph Thing purchased two packs of cards for which he was charged 15 cents each. Joseph Gale, a trapping party leader, made a single purchase of 4 packs which he got at a discounted price of \$2.25 each. Sales of playing cards show a strong relationship to the winter and summer off-seasons. During the winter off-season of 1834-35 23 packs of cards were sold which represents 61% of total card sales. Five packs (13%) were sold during the summer off-season of 1835 and sales during the early part of 1835 winter off-season totaled seven packs (18%). This limited data suggests that at Fort Hall, the primary time of leisure, celebration and reunion for the trappers took place during the winter months, and that there wasn't a mid-summer event that mirrored the mountain rendezvous.

The Maintenance category constitutes only 0.2% of sales at Fort Hall. The category consists of various types of files, screwdrivers and whetstones. The files and screwdrivers would have been important items for the upkeep and maintenance of both firearms and traps. Sales of these items, although very limited, do increase considerably during both the winter and summer off-seasons. These would have been natural times for the trappers to focus on the upkeep and repair of their equipment. These items would have easily been loaned or shared, which may be partly responsible for low sales in this category.

The Weapons category is extremely minor, constituting less than 0.1% of total sales recorded at Fort Hall over the period of record. The entire category consists of 9 dirks, 1 dagg, and one pistol. There is no apparent relation with seasonal or occupational periods. Even if there were correlations, they would be suspect because with the miniscule number of sales, as even sales of single items would potentially have an outsized influence on trends or patterns.

Sales within the Fishing category are very low, being less than 0.1%. Sales in this category are entirely absent in most months. Most of the recorded spike in sales to \$18.00 in July of 1835 is due to a single charge to one man. On July 16th, Benjamin Gersey is charged for 10 dozen fish hooks with a value of \$10.00. The ledger entry is accompanied by a note "*stolen.*" In another section of the ledger devoted to men's wages, Gersey is noted as having "*deserted.*" Sales of fishing related gear, limited on the ledgers to hooks, peak during the summer off-season of 1835 and remain somewhat elevated into the Fall Hunt. This would have been a natural time for fishing. Trapping activities appear to be pursued at a reduced intensity during the summer off-season resulting in time for fishing. By the summer of 1835 the men of the CRFT would have been in the mountains for more than a year and may have been craving a change in diet from lean, red meat. Unfortunately, the ledger doesn't extend into the summer off-season of 1836 so it's not possible to determine if this apparent seasonal relation is real, or an artifact of too little data.

Conclusions:

The Fort Hall ledgers clearly show spikes in retail sales during the winter and summer off-season periods. The spike in sales is in part due to a larger number of men present and an increase in average sales per man at the fort during these periods. The mid-winter spike is much greater than the mid-summer spike in sales. Deep snow, which inhibited transportation and movement, and iced-over rivers and streams were most effective in terminating trapping activities and driving trappers in to their supply base. Trapping was pursued through the mid-summer months, though the ledger records suggest that it was not conducted with the same intensity as it was through the spring and fall hunts during which beaver skins were in prime condition. Although the records show that the number of men and sales increased during the summer off-season, the relatively low sales of alcohol indicate that this was not a time of reunions and celebration similar to the mountain rendezvous. Rather, trapping parties probably took advantage of the mid-summer months to return to the fort with the fur harvest of their spring hunt, saving them from having to pack or cache these furs. This did result in a retail sales spike, but not nearly as great as the mid-winter sales spike.

Analysis of the functional categories and correlations between functional categories provides insight into the needs and desires of the hunter/trappers and how they socialized with others. Analysis of alcohol sales do not demonstrate that disproportionate sales took place during either the mid-winter off season or mid-summer off season, suggesting that any revelry or celebrations that took place at those times were relatively subdued compared to the celebrations taking place at the mountain rendezvous, and that these men were attentive to their professional and other personal needs. Trends apparent in the Adornment and Grooming categories strongly suggest that a gradually increasing number of men were establishing liaisons with Indian women.

The ledgers also show that sales of products were not always demand driven, that for some items supply availability controlled sales of these products. This is especially apparent in the Foodstuffs subcategory of the Cooking and Foods category. It's apparent that Wyeth had inventory control issues at Fort Hall, with supplies of some of the top selling items entirely depleted at times: flour and sugar, as well as having supply issues with chocolate, rice, and tea.

This investigation shows that a ledger is not merely a dull list of consumer and professional items but that an in-depth analysis of the types of merchandise, quantities, dates of sales and comparison to site history can be amazingly revealing as to business practices and the wants and needs of the trapper/hunter employees.

Finally, although the interpretations made based on the ledger data, and associated trends and statistics seem logical and rational, they are filtered through the perspective of the 21st Century outlook. The danger in this is that living conditions in the first half of the 19th Century were greatly different than today. Epidemics of cholera, small pox, yellow fever and others would occur multiple times within a lifespan that we would consider normal. Most medicines were ineffective, and at worst could be deadly. Obtaining sufficient food for oneself and family could be uncertain, and there was always the possibility of starving times. Financial panics were a regular occurrence and a social safety net didn't exist except for the generosity of extended family and neighbors. Transportation was slow and uncertain, and long distance communication could take months or years. These and other differences would have affected how the 19th Century person would have approached life, in ways that we, with our 21st Century technologies, safety and security cannot imagine and thus the interpretations, although they may seem sound must always be suspect. In the words of L.P. Hartley, "*The past is a foreign country, they do things differently there.*"³⁵

¹ William R. Sampson, Nathaniel Jarvis Wyeth, in *The Mountain Men and Fur Trade of the Far West*, V. 5, edited by LeRoy R. Hafen, (The Arthur H. Clark Company, Spokane, Washington, 2000), 391.

² IBID, 394.

³ Victor, Francis Fuller, *The River of the West: The Adventures of Joe Meek*, (Mountain Press Publishing Company, Missoula, Montana, 1983), 164.

⁴ Wyeth, Nathaniel, letter to F. Tudo Esq. dated June 20th, 1834, in *Sources of the History of Oregon, Volume 1 The Correspondence and Journals of Captain Nathaniel J. Wyeth*, (University Press, Eugene, Oregon, 1899), 134.

⁵ IBID, in a letter to Mr. Henry Hall and Mess Tucker and Williams dated November 8th, 1833, 73-78.

⁶ IBID, in a letter to Mess Samuel & More dated January 8th, 1834, 100.

⁷ Roberts, Robert B., *Encyclopedia of Historic Forts: The Military, Pioneer, and Trading Posts of the United States*, (Macmillan Publishing Company, New York, 1988), 251.

-
- ⁸ Columbia River Fishing & Trading Company Records, microfilmed from the collections of the Oregon Historical Society, MSS 938-1 B.
- ⁹ Crow must have been supplied with hunting supplies by the company as the only charge for shooting components is on September 26, 1835 is for 10 loads of ammunition, which an accompanying note indicates was paid to Chief Poewut along with other goods for returning a lost horse.
- ¹⁰ Able Baker Jr. was given a raise starting January 10th, 1835 to \$500/year.
- ¹¹ Russell, Osborne, *Journal of a Trapper*, edited by Aubrey L. Haines, (MJF Books, New York, 1997), 5; and Wyeth, Nathaniel, *The Correspondence and Journals of Captain Nathaniel J. Wyeth, 1831-36*, edited by F.G. Young, in *Sources of the History of Oregon, Volume 1* (University Press, Eugene, Oregon, 1899) 227.
- ¹² Columbia River Fishing & Trading Company Records, microfilmed from the collections of the Oregon Historical Society, MSS 938-1 B.
- ¹³ Hafen, LeRoy, R., *The Passing of the Rocky Mountain Fur Company*, in *The Mountain Men and Fur Trade of the Far West, V. 1*, edited by LeRoy R. Hafen, (The Arthur H. Clark Company, Spokane, Washington, 2000), 144-146.
- ¹⁴ Russell, 8-14, 38.
- ¹⁵ Bonner, T.D., *The Life and Adventures of James P. Beckwourth: Mountaineer, Scout, and Pioneer, and Chief of the Crow Nation of Indians*, (Harper and Brothers, New York, 1858), 107.
- ¹⁶ Irving, Washington, *The Adventures of Captain Bonneville, or Scenes Beyond the Rocky Mountains and the Far West*, (Baudry's European Library, Paris, 1837), 217-218.
- ¹⁷ Wishart, David, J., *The Fur Trade of the American West 1807-1840: A Geographical Synthesis*, (University of Nebraska Press, Lincoln/London, 1979) 175-178; and Kelly Mark William, *Lost Voices on the Missouri: John Dougherty and the Indian Frontier*, (Sam Clark Publishing Co., Leavenworth, KS, 2013), 103.
- ¹⁸ Anderson, Dean L., *The Flow of European Trade Goods into the Western Great Lakes Region, 1715-1760*, in *The Fur Trade Revisited, 6th North American Fur Trade Conference*, Mackinac Island, Michigan, 1991.
- ¹⁹ Ledger DD, 76-89, April 16, 1839-July 1840, and Ledger Z, 426-433, May 1838-July 1839, *Fur Trade Ledgers*, Missouri Historical Society Archives, St. Louis, copy accessed from the Bent's Old Fort National Historic Site Library, and Volume V: Post Accounts Current, Ledger D 1831-1836, Choteau Collection, unpublished material, Missouri History Museum Library and Research Center, 202 pages.
- ²⁰ Schaub, Michael, *The 1837 Fort Jackson Trading Camp Inventory: A Typical Outfit for the Plains Indian Trade and What it Tells Us About the Plains Indian Consumer*, in *Proceedings of the 2015 Fur Trade Symposium, September 23-26th, 2015*, 142-169.
- ²¹ Russell, 1.
- ²² Columbia River Fishing & Trading Company Records, microfilmed from the collections of the Oregon Historical Society, MSS 938-1 B.
- ²³ Wyeth, Nathaniel, *The Correspondence and Journals of Captain Nathaniel J. Wyeth, 1831-36*, edited by F.G. Young, in *Sources of the History of Oregon, Volume 1* (University Press, Eugene, Oregon, 1899), 227. On August 6th, 1834 Wyeth writes, "Having done as much as was requisite for the safety of the Fort...we left it and with it Mr. Evans in charge of 11 men and 14 horses and mules and three cows...."
- ²⁴ Russell, Osborne, *Journal of a Trapper: A Hunter's Ramble Among the Wild Regions of the Rocky Mountains, 1834-1843*, edited by Aubrey L. Haines, (MJF Books, New York, published by arrangement with the University of Nebraska Press), various entries. Russell has numerous journal entries through the spring and summer of 1835 showing that he and a party of trappers were active in the field.
- ²⁵ *Ibid*, 38.
- ²⁶ Hanson, James A., *The Encyclopedia of Trade Goods, Volume 6, Provisions of the Fur Trade*, (Museum of the Fur Trade Press, Chadron, Nebraska, 2017), 320.
- ²⁷ Columbia River Fishing & Trading Company Records, microfilmed from the collections of the Oregon Historical Society, MSS 938-1 B.
- ²⁸ Thomas McKay was ostensibly leading an independent trapping/trading party to the Snake River country. His party numbered 30 men who were employees of the HBC. McKay, who was HBC Chief Factor John McLoughlin's stepson, was an employee of the HBC both prior and subsequent to the summer of 1834. Although not the original intent of McKay's expedition, he spent considerable time with Wyeth and around Fort Hall sizing up the competition. Wyeth tolerated McKay's presence as Wyeth was still hoping to form a cooperative alliance with the HBC. Hardee, Jim, *Hope Maintains Her Throne: The Western Expeditions of Nathaniel J. Wyeth, Volume 2, 1834-*

1836, (Sublette County Historical Society, Pinedale, Wyoming, 2018), 149-169 and Townsend, John Kirk, *Across the Rockies to the Columbia*, (University of Nebraska Press, Lincoln and London, 1987) 115.

²⁹ Larpenteur, Charles, *Forty Years a Fur Trader on the Upper Missouri: The Personal Narrative of Charles Larpenteur: 1833-1872, Volume 1*, edited by Elliott Coues (Ross & Haines, Inc., Minneapolis, Minnesota, 1962), 37.

³⁰ DeVoto, Bernard, *Across the Wide Missouri*, (Houghton Mifflin Co., Boston, 1947), 33-34.

³¹ Wyeth, 69.

³² DeVoto, Bernard, *Across the Wide Missouri*, (Houghton Mifflin Company, Boston, 1947), 31-32.

³³ Hafen, 144-145.

³⁴ Hanson, Charles E. Jr., Tobacco in the Fur Trade, *The Museum of the Fur Trade Quarterly*, V. 24, No. 2, (Museum of the Fur Trade, Chadron, Nebraska, 1988), 2-11.

³⁵ Hartley, L.P., [https://en.wikiquote.org/wiki/L. P. Hartley](https://en.wikiquote.org/wiki/L._P._Hartley) [accessed June 18, 2020]