

LIBERTY UNIVERSITY

**Two Roads to Cornwall:
The Cornwall, the Cornwall & Lebanon, and Gilded Age Rail Competition**

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Abstract

Historians have devoted much attention to the overbuilding and excessive competition among railroads in the 1880s. However, they have mostly focused on larger railroads like the Pennsylvania Railroad and the Philadelphia & Reading Railroad (Reading).¹ Smaller railroads like the Cornwall Railroad and the Cornwall & Lebanon Railroad are less well known but play an important part in that larger story. Both railroads ran between Lebanon, Pennsylvania and Cornwall, Pennsylvania. Their primary purpose was to ship iron ore from the mines in Cornwall. Few outside of Lebanon County or Lancaster County, Pennsylvania know about these two railroads, yet they are a prime example of the excessively competitive attitude among railroad executives in the 1880s. However, they also differ from these trends in their profitability and lack of rate wars. Further, they are a forgotten chapter in the history of both the Pennsylvania Railroad and the Reading, both of which later took control of the smaller railroads. These railroads' rivalries have implications regarding railroads' status as natural monopolies and the railroad regulations and consolidation that followed in the wake of overbuilding and the Panic of 1893.

¹ Examples include H.W. Schotter, *The Growth and Development of the Pennsylvania Railroad Company: A Review of the Charter and Annual Reports of the Pennsylvania Railroad Company 1846 to 1926, Inclusive* (Philadelphia: Allen, Lane, & Scott, 1927); Georg H. Burgess and Miles C. Kennedy, *Centennial History of the Pennsylvania Railroad Company 1846-1946* (Philadelphia: The Pennsylvania Railroad Company, 1949); Jay V. Hare, *History of the Reading Railroad* (Philadelphia: John Henry Strock, 1966); Herbert H. Harwood Jr., *The Railroad that Never Was: Vanderbilt, Morgan, and the South Pennsylvania Railroad* (Bloomington: Indiana University Press, 2010); and Albert J. Churella, *The Pennsylvania Railroad, Vol. 1: Building an Empire 1846-1917* (Philadelphia: University of Pennsylvania Press, 2013).

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Introduction: Background and Historiography

One of the most interesting sights along the Lebanon Valley Rail-Trail in Cornwall, Pennsylvania today is a metal truss bridge. It is one of the most complete and visible remaining railroad structures on the trail. However, visitors may look down from the bridge and realize that it seems to span nothing. A sign explains that this bridge once allowed a railroad to cross not a creek or other natural feature but another railroad. These two railroads were the Cornwall Railroad and the Cornwall and Lebanon Railroad, which ran parallel to each other from Lebanon, Pennsylvania south to Cornwall and served Cornwall's iron mines and the local iron furnaces. This redundancy was not uncommon in nineteenth-century railroading, particularly during the 1880s. Railroads laid more track in that decade than any other time in American history. Many of these tracks were impractical, nearly useless lines merely designed as speculative investments or as ways to undermine a competitor's rates. This helped lead to the Panic of 1893 and the bankruptcy of many railroads.¹ The Cornwall Railroad and the Cornwall and Lebanon Railroad are a small part of that story and exemplify many, though not all, of the industry's trends during that time.

The construction of the Cornwall and Lebanon Railroad was an example of the aggressive, cut-throat competition of the 1880s rail industry. Not only were the two railroads largely redundant in purpose, but they were a small part of the larger railroad war between the Pennsylvania Railroad and the Reading. Both railroads resorted to extreme measures to stop the other's progress. However, the story of the Cornwall and the Cornwall and Lebanon differs from contemporary railroads in that there was enough business to keep both railroads running for decades and continue under the ownership of the Pennsylvania Railroad and Reading,

¹ Churella, *Pennsylvania Railroad*, 547.

respectively. While the Cornwall and Lebanon's construction was hasty and reflected the zero-sum-game attitude held by many railroad executives at the time, it did lower shipping rates and was an overall benefit to local shippers, defying railroads' classification as natural monopolies.

Few historians have directly covered the Cornwall or the Cornwall and Lebanon directly at all, let alone their rivalry or their connections to larger railroads. James W. Kercher's "Cornwall Railroad" (1969) was the first to directly cover the Cornwall. However, he only discussed the Cornwall and Cornwall and Lebanon rivalry in terms of the two smaller railroads with no cause beyond a simple business rivalry.² Kercher did not dwell on these issues as he was primarily concerned with giving a general overview of the railroad's history using local newspapers, government records, and the memories of local residents and former employees. Kercher himself worked for the Cornwall Railroad and was assisted by an engineer and the former superintendent of the railroad in his research.³ As a result, he may have been biased toward the Cornwall and reluctant to cover anything negative.

Richard E. Noble's biography of Robert H. Coleman does not focus much on Coleman's railroad itself. However, he does argue that Coleman was simply finding a way to get involved in the rail industry. While some historians argue that Coleman had a personal rivalry with his cousin William Coleman Freeman which either prompted the railroad rivalry or resulted from it, Noble makes no mention of this. In fact, he notes that Coleman and Freeman had recently made other business deals without incident just before Coleman started his railroad.⁴ As Noble dealt directly with extensive primary source material from Coleman's letters, business records, and

² James W. Kercher, "Cornwall Railroad," *Lebanon County Historical Society* 14, no. 4 (1969):103-5.

³ *Ibid.*, 98.

⁴ Richard E. Noble, "The Touch of Time: Robert Habersham Coleman 1856-1930," *Lebanon County Historical Society* 16, no. 1 (1983): 45-49.

newspapers, he was well equipped to cover Coleman's side of the story, but not the Cornwall's. Further, he does not discuss the larger rivalry between the Pennsylvania Railroad and the Reading Railroad.

Donald Rhoads and Robert Heilman's *Railroads of Lebanon County: A Pictorial and Descriptive History* (2000) covered both the Cornwall and the Cornwall and Lebanon. They argued that the Pennsylvania Railroad encouraged Coleman and, by extension, intensified the rivalry between the Cornwall and Lebanon and the Cornwall. They also hinted at a personal rivalry between Coleman and Freeman, though they do not make it clear which came first – the personal rivalry or the business rivalry.⁵ As they had no clear connection to either railroad, there is little reason to believe Rhoads and Heilman were particularly biased towards one railroad or the other. However, having to cover every railroad in the county left them little time to dwell on the rivalry between the Cornwall and the Cornwall and Lebanon. This also meant that they largely relied on newspapers and did not have time to explore the business records from each railroad.

John Ward Wilson Loose briefly addressed the rivalry of the Cornwall and the Cornwall and Lebanon in "The Mount Gretna Railroad War of 1887" (2002). Like Noble, Loose argues that Coleman wanted to buy the Cornwall Railroad because the Pennsylvania Railroad was trying to connect to Cornwall. However, he argues that Freeman's refusal to sell sparked an intense personal rivalry that led to the Cornwall and Lebanon's creation. Unfortunately, he provides no source for this and does not elaborate on his reasoning.⁶ Unlike Noble, Loose draws

⁵ Donald L. Rhoads and Robert A. Heilman, *Railroads of Lebanon County: A Pictorial and Descriptive History* (Lebanon, PA: Lebanon County Historical Society, 2000), 30-31.

⁶ John Ward Wilson Loose, "The Mount Gretna Railroad War of 1887," *Journal of the Lancaster County Historical Society* 109, no. 2 (2007): 137.

a clear connection between the Cornwall and the Reading, and between the Cornwall and Lebanon and the Pennsylvania Railroad. However, he does not explore how the larger railroads contributed to the smaller railroads' rivalry.

Fortunately, historians have covered the Reading Railroad and the Pennsylvania Railroad more extensively. Unfortunately, early works like H.W. Schotter's *The Growth and Development of the Pennsylvania Railroad* (1927) suffered from bias. The Pennsylvania Railroad itself sponsored the book and Schotter nearly avoided mentioning a rivalry with the Reading at all. On one occasion he merely said that their interests were at odds.⁷ He mentioned the Cornwall and Lebanon, as well as the Pennsylvania Railroad's acquisition of the line in 1918, but did not explore its history prior to that.⁸ In addition to Schotter's bias, he also mostly limited himself to the Pennsylvania Railroad's annual reports and therefore only the perspective that the board of directors wanted investors to see at the time. Though George Burgess and Miles Kennedy's *Centennial History of the Pennsylvania Railroad Company* (1949) was also tied to the Pennsylvania Railroad, they did use a greater variety of sources and explored more controversial subjects. They fully acknowledged the Pennsylvania's involvement in rate wars and overbuilding and its efforts to block the Reading from becoming a trunk line.⁹ However, like Schotter, they only mention the Cornwall and Lebanon in passing.¹⁰

Jay V. Hare's *History of the Reading* (1966) originally appeared as a series of articles between 1909 and 1914 in the Reading Railroad's own journal, *The Pilot and Philadelphia and Reading Railway Men*. This, combined with Hare's position as a secretary working for the

⁷ Schotter, *Growth and Development of the Pennsylvania Railroad*, 58.

⁸ *Ibid.*, 215.

⁹ Burgess and Kennedy, *Centennial History of the Pennsylvania Railroad*, 337, 408.

¹⁰ *Ibid.*, 540.

Reading, seems to have made Hare reluctant to cover anything controversial about the railroad. While discussing the Reading's rivalry with the Pennsylvania Railroad, he emphasizes events that make the Pennsylvania Railroad look like the sole aggressor such as its attempt to block the Reading's expansion by creating a shared railroad station.¹¹ He also focused on the earlier days of the railroad's history. He does address the Cornwall Railroad and its ties to the Reading system but only briefly.¹² His focus was the Reading itself, not smaller railroads that happened to connect to the Reading.

The passing of time and the collapse of both the Pennsylvania Railroad and the Reading Railroad appear to have mitigated bias and encouraged discussion of the railroads' rivalries. Herbert H. Harwood's *The Railroad that Never Was: Vanderbilt, Morgan, and the South Pennsylvania Railroad* (2010) finally explored the rivalry of the Pennsylvania and the Reading, as well as other railroads, in depth. Harwood used the methods of business history to show that the South Pennsylvania Railroad (South Penn) was a prime example of the bloated, excessively competitive nature of the 1880s rail industry. He argued that railroads in most parts of the country were either monopolistic or overly competitive. Hyper-competitive actions like rate wars often destroyed one company, creating a monopoly and higher rates.¹³ Harwood not only provides helpful context regarding the rivalry between the Pennsylvania Railroad and the Reading Railroad, but in so doing provides a gap to be filled by finding other examples of this larger trend.

¹¹ Hare, *History of the Reading*, 58-59.

¹² *Ibid.*, 203.

¹³ Harwood, *Railroad that Never Was*, 4-13.

Albert J. Churella's *The Pennsylvania Railroad, Vol. 1: Building an Empire 1846-1917* (2013) explores the history of not only the Pennsylvania Railroad, but also the Reading and other railroads that played key roles in the Pennsylvania Railroad's history. Churella explored official records of the Pennsylvania and other railroads as well as newspapers and government records. While Churella believes that railroads are natural monopolies, he did not dwell on the subject and also argued that railroad executives' false assumption that competition was a zero-sum game led to rate wars and overbuilding.¹⁴ This overbuilding led to the Panic of 1893 and subsequent calls for stabilization either through J.P. Morgan's community of interest model or through federal regulation.¹⁵ Churella argued that, while railroads helped influence some regulation to help stop rate wars, they unsuccessfully opposed other aspects.¹⁶ Churella and Schotter's discussion of regulation illustrates the ramifications of the rivalry between the Cornwall and the Lebanon and Cornwall.

Historians agree that the levels of aggressive competition seen in the 1880s were problematic but disagree on how the issue was resolved and the merits of attempts to do so. Unfortunately, the desire to influence railroad policy in their own day often clouded historians' interpretations. W.N. Leonard argued in "The Decline of Railroad Consolidation" (1949) that railroad executives lacked the initiative or cooperation to effectively consolidate. He directly advocated for consolidation, arguing both railroad executives and congress were too conservative to solve the problem.¹⁷ Gabriel Kolko argued in *Railroads and Regulation 1877-1916* (1965) that

¹⁴ Churella, *Pennsylvania Railroad*, 545, 184.

¹⁵ *Ibid.*, 449.

¹⁶ *Ibid.*, 664.

¹⁷ W. N. Leonard, "The Decline of Railroad Consolidation," *The Journal of Economic History* 9, no. 1 (1949): 24.

railroads supported federal regulation and twisted it to their own purposes at the expense of the public. He based this argument on the assumption that protecting private property could not be in the public's interest.¹⁸ However, historians initially ignored this aspect of Kolko's argument.

Robert W. Harbeson responded to Kolko with "Railroads and Regulation, 1877-1916: Conspiracy or Public Interest," (1967). He agreed that the railroads influenced regulation. However, he noted that regulation also helped protect the public from railroads, which were inherently either monopolistic or oligopolistic.¹⁹ In "Railroads and Regulation Revisited: A Note on Problems of Historiography," (1972) Robert B. Carson criticized Harbeson and other historians for only criticizing Kolko's methodology instead of discussing ideology. He claimed that they did so to avoid any implication that their own ideology could be at fault for the rail industry's problems in the modern day.²⁰ It is worth noting that these historians and especially Carson were writing at a low point in American railroad history. Railroads were declining and many were closing entirely. Many blamed federal regulations or a lack thereof. The Penn-Central Railroad, which was a merger between the Pennsylvania Railroad and New York Central Railroad, went bankrupt the same year Carson wrote his article and was the largest bankruptcy in American history up to that point.²¹ Business and railroad historians at the time grappled with the implications of earlier regulation to try and explain their contemporary debacles.

¹⁸ Gabriel Kolko, *Railroads and Regulation, 1877-1916* (Princeton, NJ: Princeton University Press, 1965), 231-33.

¹⁹ Robert W. Harbeson, "Railroads and Regulation, 1877-1916: Conspiracy or Public Interest?," *The Journal of Economic History* 27, no. 2 (1967): 230-32.

²⁰ Robert B. Carson, "Railroads and Regulation Revisited: A Note on Problems of Historiography and Ideology," *The Historian* 34, no. 3 (1972): 446.

²¹ Churella, *Pennsylvania Railroad*, xii-xiii.

After Carson, historians did discuss ideology. However, they rightly focused on the ideologies of those involved in the railroads and regulation efforts at the time, rather than anachronistically imposing their own ideology back onto the late nineteenth century.²² In “The Troubled Subject of Railroad Regulation in the Gilded Age – A Reappraisal,” (1974) Albro Martin argued that Americans at the time were too afraid of giving power either to the federal government or big business to make effective regulations.²³ In “Regulatory Conflict in the Gilded Age” (1988), Herbert Hovenkamp criticized Kolko for imposing his own ideology while ignoring the economic theories and federalism that regulators and businessmen believed at the time. He also argued that railroads were natural monopolies.²⁴ Robert E. Gallamore and John R. Meyer argued in *American Railroads: Decline and Renaissance in the Twentieth Century* (2014) that both the public and railroad executives supported regulations but regulations failed because of the false assumption that railroads are natural monopolies.²⁵ However, they primarily focused on the twentieth century.

Recently, historians have argued that there has been excessive ideological agenda in railroad historiography. Albert J. Churella noted that, while Gallamore and Meyer provided an excellent cautionary tale about excessive regulation, they were hampered by their overcommitment to promoting deregulation. Churella argued that, by ignoring the nineteenth

²² Carl R. Trueman, *Histories and Fallacies: Problems Faced in the Writing of History* (Wheaton, IL: Crossway, 2010), 139.

²³ Albro Martin, “The Troubled Subject of Railroad Regulation in the Gilded Age-A Reappraisal,” *The Journal of American History* 61, no. 2 (1974): 370-71.

²⁴ Herbert Hovenkamp, “Regulatory Conflict in the Gilded Age: Federalism and the Railroad Problem,” *The Yale Law Journal* 97, no. 6 (1988): 1017-20.

²⁵ Robert E. Gallamore and John R. Meyer, *American Railroads: Decline and Renaissance in the Twentieth Century* (Cambridge: Harvard University Press, 2014), 22-23.

century, they had conveniently ignored the fact that the regulations they complained of were often nineteenth century creations designed to help the railroads.²⁶ William D. Burt furthered Hovenkamp's criticism of Kolko's anachronisms in "Gabriel Kolko's 'Railroads and Regulation' at Fifty," (2016). Burt noted that Kolko admitted that he wrote all of his works to advance a socialist agenda. Burt rightly argued that historians should never force facts to fit a theory or agenda. However, he argued many historians were doing so, especially on this topic.²⁷ Interest in contemporary regulation seems to make this too tempting for many historians. However, these issues are nonetheless important to understand the rail industry of the late nineteenth century in its own right and early attempts to regulate it.

This demonstrates the importance of 1880s railroad competition and examples like the rivalry of the Cornwall and the Cornwall and Lebanon. Federal regulation and the surrounding debate are far beyond the scope of the history of the two railroads to Cornwall. However, the competition between the Pennsylvania Railroad and Reading, and by extension the Cornwall and the Cornwall and Lebanon, clearly has implications regarding the need for regulation. It also has implications for whether railroads are natural monopolies or not as debated by Harbeson, Hovenkamp, and Gallamore. If both the Cornwall and the Cornwall and Lebanon could thrive as parallel lines then it would be evidence that railroads are not natural monopolies. This, in turn, has consequences for railroad regulation. However, this is merely one piece of evidence that can be used in a larger debate. It is not conclusive in itself.

²⁶ Albert J. Churella, "Review: *American Railroads: Decline and Renaissance in the Twentieth Century* by Robert E. Gallamore and John R. Meyer," *Business History Review* 89, no. 1 (2015): 170-73.

²⁷ William D. Burt, "Gabriel Kolko's 'Railroads and Regulation' at Fifty," *Railroad History*, no. 214 (2016): 37.

The Cornwall and Lebanon and the Cornwall's rivalry also relates to the Panic of 1893. While historians generally agree that railroads and excessive railroad competition played some role in creating the panic, they disagree as to what the primary cause of the panic was. W.J. Lauck argued in *The Causes of the Panic of 1893* (1907) that fear over US monetary policy caused the panic.²⁸ He did note that rate wars and overbuilding helped contribute to earlier recessions. However, many new lines helped connect underserved rural areas and stimulated growth.²⁹ In "The Depression of the Nineties," (1957) Charles Hoffman argued that monetary policy alone could not explain the panic. Credit restrictions prior to the downturn combined with financial panic to intensify the depression.³⁰ He also noted that railroads were one of the biggest investments for both European and American investors. Thus, the downturn in railroad investment was a significant part of the depression.³¹ Mark Carlson argued in "Causes of Bank Suspensions in the Panic of 1893" (2005) that the panic was caused by a combination of problems in the banking system and the shock of businesses collapsing, especially railroads. He noted that the bankruptcy of the Reading on February 26, 1893, created a stock market collapse just before the beginning of the panic. Over 70 railroads failed, putting a quarter of American railroads in receivership. Carlson linked this directly to overbuilding.³² While the Cornwall and Lebanon may not have been overbuilt in that it was profitable, the intense rivalry between the

²⁸ W.J. Lauck, *The Causes of the Panic of 1893* (Boston: Houghton, Mifflin, and Company, 1907), 118-19.

²⁹ *Ibid.*, 1-6.

³⁰ Charles Hoffman, "The Depression of the Nineties," *The Journal of Economic History* 16, no. 2 (1956): 164.

³¹ *Ibid.*, 141.

³² Mark Carlson, "Causes of Bank Suspensions in the Panic of 1893," *Explorations in Economic History* 42, no. 1 (2005): 60-61.

Cornwall and Lebanon and the Cornwall exemplifies the broader behavior that helped lead to the panic.

While the Panic of 1893 affected the Cornwall and Lebanon's profits, it affected its owner and founder, Robert H. Coleman, far more than the railroad itself. Coleman lost much of his fortune in the Panic of 1893. However, the Cornwall and Lebanon played little part in that loss beyond serving as a small piece of Coleman's larger overspending issue. Historians like Edward Gross Campell noted that the panic affected railroads involved with overexpansion, but in particular it only hurt railroads that were otherwise poorly managed.³³ This only made railroads a safer investment for banks. If a railroad went bankrupt, the bank could take full control of it and profit from it more directly.³⁴ However, the Cornwall and Lebanon survived until the Pennsylvania Railroad bought it in 1918. The Cornwall and Lebanon continued to operate under the Pennsylvania Railroad and Penn-Central until the Cornwall mines finally closed in 1973 after Hurricane Agnes. The Cornwall Railroad likewise survived under the ownership of Bethlehem Steel and then the Reading Railroad until the mines closed.³⁵ While the Cornwall and Lebanon itself survived the Panic of 1893, it played a part in the excessive competition that helped create the panic and ruined men like Coleman.

The driving industry that spurred the creation of both railroads was the Cornwall Iron Mines and the various furnaces in the surrounding area, all of which needed effective shipping for their products and supplies. It is unknown who first discovered the presence of iron in

³³ Herbert E. Dougall, "Review: *The Reorganization of the American Railroad System, 1893-1900* by E. G. Campbell," 46, no. 3 (1938): 420-22.

³⁴ Jim Cohen, "Private Capital, Public Credit and the Decline of American Railways, 1840-1940," *The Journal of Transport History* 31, no. 1 (06, 2010): 45-48.

³⁵ Rhoads and Heilman, 63, 124.

Cornwall, but Peter Grubb was the first to take advantage of it. He bought 700 acres of land between 1733 and 1737 and named it after his father's homeland in Cornwall, England.³⁶

Cornwall's ore was attractive because much of it was exposed near the surface. It was also only five miles south of Lebanon and was surrounded by easy terrain and limestone, which was used in iron furnaces. While not relevant in Grubb's day, it also happened to be close to the anthracite coal region that later became critical for furnaces as coal replaced charcoal as their primary fuel.³⁷ In 1742, Grubb established the Cornwall Iron Furnace.³⁸ Though the area was mostly rural and focused on agriculture, Cornwall and other local furnaces became the backbone of local industry and drove the local economy for years to come.³⁹ However, the Grubbs did not remain the central figures in the story of the Cornwall mines.

The Coleman family took primary control of the mines and later featured heavily in the story of the two railroads in Cornwall. Grubb died in 1754 and left the mines to his sons Curtiss and Peter. The latter sold a portion of his share to Robert Coleman in 1786 but retained the right for himself and his heirs to mine ore for their furnaces on Coleman's land forever.⁴⁰ Coleman immigrated alone from Ireland in 1764 at the age of sixteen. He made important connections and worked as a clerk until Grubb noticed his work and recruited him in 1766. Coleman's position allowed him to see the workings of the iron industry.⁴¹ He gradually bought more of the mines

³⁶ Michael F. Weber, *Always More Production: The History of Mining Iron at Cornwall, Pennsylvania from 1737 until 1973* (Lebanon, PA: Cornwall Iron Furnace Associates, 2023), 12.

³⁷ F.K. Miller, "The Rise of an Iron Community: An Economic History of Lebanon County, Pennsylvania, From 1740-1865," (Ph.D. Diss., University of Pennsylvania, Philadelphia, 1948), 85-86, ProQuest Dissertations & Theses Global (301866293).

³⁸ Kenneth Ressler, "Cornwall's Iron Economy," *Journal of the Lancaster County Historical Society* 67, no. 2 (1963): 57-73.

³⁹ Miller, "Rise of an Iron Community," 83-84.

⁴⁰ Weber, *Always More Production*, 13.

until, in 1798, he owned five-sixth of the ore hills and Peter Grubb's grandson Henry Bates Grubb owned the rest. Upon his death, Coleman's shares were divided among his four sons. All five owners shared the mines in common.⁴² Unsurprisingly, this led to conflict. However, Cornwall's iron mines were in an advantageous position overall.

Good access to transportation contributed to that success. The Union Canal was completed in 1828. It passed through Lebanon on its route from Reading to the Susquehanna River in Middletown, just below Harrisburg. This gave the mines access to a system of canals that stretched across much of the state.⁴³ However, shipping heavy iron from the mines and furnaces in Cornwall to the canal in Lebanon proved difficult. Wagons sank into the dirt roads even with six-inch wide wagon wheels. In 1848, the North & South Lebanon Turnpike was formed to build a wooden plank road. Planks were laid perpendicular to the roadbed and calked with clay to prevent wagon wheels from sinking into the mud.⁴⁴ However, the Colemans were not satisfied with this arrangement for long.

In 1850, the Colemans desired even more effective transportation. Brothers George Dawson Coleman and Robert Coleman, along with their cousins Robert W. Coleman and William Coleman formed the North Lebanon Railroad. The North Lebanon was later renamed the Cornwall Railroad in 1870.⁴⁵ Work on the North Lebanon did not begin until 1853 as the Colemans desired to wait until they could connect with the new Lebanon Valley Railroad, which roughly paralleled the route of the Union Canal from Reading to Harrisburg. The Lebanon

⁴¹ Noble, "Touch of Time," 1-4.

⁴² Weber, *Always More Production*, 13.

⁴³ *Ibid.*, 20.

⁴⁴ Kercher, "Cornwall Railroad," 100.

⁴⁵ Rhoads and Heilman, *Railroads of Lebanon County*, 120.

Valley Railroad also technically had the right to build to Cornwall, nearly leading to an even earlier railroad war in the area as both companies started surveying and building. The North Lebanon agreed to reimburse the Lebanon Valley for their work and prevented the construction of a second railroad between Lebanon and Cornwall for the time being. The North Lebanon Railroad was finished in 1855.⁴⁶ However, the railroad still served as a mere feeder for the canal for a few years before the Lebanon Valley Railroad was finished.

The Colemans' collaboration in building the North Lebanon Railroad illustrates their complex business and family relationships. While they worked together to build the railroad that helped all of their mining operations, they also sued each other. In 1851, Robert W. and William sued George Dawson and Robert for supposedly taking more than their fair share of ore from the mines. They solved this issue by forming the Cornwall Ore Bank Company in 1864, replacing the system of shared ownership. This prevented fights between miners working for different owners and led to more efficient mining methods overall.⁴⁷ It is apparent that, whatever their personal relationships may have been like, they did not allow their rivalries to prevent them from working together when it was mutually beneficial.

The Colemans' efforts paid off for both the railroad and the mines. With an ample source of iron, nearby furnaces, and effective transportation, the iron mines steadily increased their production. The Civil War increased demand and high tariffs further encouraged prosperity. Cornwall became the largest producer of iron in the United States and retained that title until the 1880s.⁴⁸ The North Lebanon Railroad, by extension, profited as well. In 1859, only a few years

⁴⁶ Kercher, "Cornwall Railroad," 101-02.

⁴⁷ Weber, *Always More Production*, 24-25.

⁴⁸ *Ibid.*, 25.

into its operation, the railroad transported 196,821 tons of freight, 132,699.6 of which was iron ore. It also shipped pig iron, iron bars, copper, limestone, coal, and a small amount of general goods. It made \$18,330 in revenue and \$4,288 in profits for the year or \$689,764.53 and \$161,358.99 in 2024 dollars, respectively.⁴⁹ By 1877, the railroad carried 410,605 tons of freight for \$84,070.69 in revenue and \$50,246.01 in profits or over \$2.5 million and \$1.4 million in 2024 dollars, respectively.⁵⁰ All of this occurred on a railroad whose main line only ran six miles from Cornwall to Lebanon. From there, ore and iron bars could ship via the Lebanon Valley Railroad or the Union Canal.

The Lebanon Valley Railroad, which later became the Lebanon Valley Branch of the Reading Railroad, played a key role in the development of the Cornwall and its later rivalry with the Cornwall and Lebanon. The investors who created the Philadelphia & Reading chartered the Lebanon Valley in 1836. However, construction did not begin until 1854 and the line was not finished until 1858. The Pennsylvania Railroad, which also offered an east to west connection across eastern Pennsylvania, viewed it as a major threat and considered buying the Lebanon Valley's stock to prevent it from falling into the hands of a major competitor. However, the Reading bought out the Lebanon Valley almost immediately after its completion. The Reading itself was founded in 1833 to connect Reading, Pennsylvania and northeastern Pennsylvania coal fields to Philadelphia.⁵¹ Thus, the purchase of the Lebanon Valley Railroad gave the Reading a

⁴⁹ Henry Varnum Poor, *History of the Railroads and Canals of the United States* (New York: J.H. Schultz, 1860), 465-66; Adjustments for inflation were calculated using Ian Webster, *CPI Inflation Calculator*. Officialdata.org. Official Data Foundation. Accessed June 3, 2024. <https://www.officialdata.org/us/inflation>, which uses data from Robert Sahr, "Using Inflation-Adjusted Dollars in Analyzing Political Developments," *PS: Political Science and Politics* 37, no. 2 (2004): 273–84.

⁵⁰ Poor, *Manual of the Railroads of the United States 1878* (New York: H.V & H.W. Poor, 1878), 269.

⁵¹ Churella, *Pennsylvania Railroad*, 184-86.

line between Philadelphia and Harrisburg that directly competed with the Pennsylvania Railroad's main line, making the Pennsylvania Railroad's worst fears a reality.

The Lebanon Valley Railroad became part of the larger battle between the Pennsylvania Railroad and the Reading. The Pennsylvania Railroad offered to let the Lebanon Valley share a station in Harrisburg, which Reading Railroad officials quickly realized was just a ploy to block them from building further west and becoming a major east-west trunk line like the Pennsylvania.⁵² The Pennsylvania Railroad eventually accomplished this anyway by buying the Cumberland Valley Railroad. By the time Franklin B. Gowen became president of the Reading in 1870, one of his primary goals was to break out of eastern Pennsylvania and rival the Pennsylvania Railroad as a trunk line.⁵³ Gowen aggressively confronted the Pennsylvania Railroad and the Reading's other major competitors, often to the Reading's detriment. Gowen had a history of cut-throat competition. Gowen originally thought transportation and coal companies should be separate but eventually worked to take control of coal companies and form a cartel to prevent the rival Lehigh Valley Railroad from accessing the Reading's coal suppliers.⁵⁴ The British investors who funded the Reading gave Gowen full control, which he used to accumulate massive debt and lead the Reading into bankruptcy in 1880. However, with the help of New York Central President William H. Vanderbilt, Gowen retained control and the two railroads worked together to invade the Pennsylvania Railroad's territory.⁵⁵ This led to

⁵² Hare, *History of the Reading Railroad*, 58-59.

⁵³ Harwood, *Railroad that Never Was*, 25.

⁵⁴ Marvin W. Schlegel, "America's First Cartel," *Pennsylvania History: A Journal of Mid-Atlantic Studies* 13, no. 1 (1946): 4.

⁵⁵ Churella, *Pennsylvania Railroad*, 501-02.

several major confrontations with the Pennsylvania Railroad around the same time as the railroad war in Lebanon.

The Pennsylvania Railroad also played a major role in shaping the rivalry between the Cornwall and the Cornwall and Lebanon. The Pennsylvania was formed in 1846 with the goal of connecting across the entire state of Pennsylvania, from Philadelphia through Harrisburg and on to Pittsburgh. After much difficulty and creating a feat of engineering in the form of the Horseshoe Curve to climb the Allegheny Mountains, the Pennsylvania Railroad accomplished their goal in 1854.⁵⁶ The Reading was the Pennsylvania Railroad's most bitter rival for most of its early history. The Pennsylvania Railroad was bigger in terms of track mileage, but the Reading Railroad had more freight traffic and higher profits.⁵⁷ However, the Pennsylvania eventually surpassed its competitor. The Pennsylvania overtook the Reading as America's biggest freight hauler in 1875 and trapped it in eastern Pennsylvania through its purchase of the Northern Central Railroad and the Cumberland Valley Railroad. This forever relegated the Reading to being a regional anthracite carrier and not a trunk line and led to the Pennsylvania's battles with Gowen and the Reading.⁵⁸

The Pennsylvania Railroad and Reading Railroad's heated rivalry, which eventually spilled over into the Cornwall and the Cornwall and Lebanon's, was not unusual in the late nineteenth century. Competition actually increased overall economic prosperity and, in turn, increased traffic for all railroads in the long run. However, most railroad executives viewed the industry as a zero-sum game.⁵⁹ The South Pennsylvania Railroad is perhaps the best example of

⁵⁶ Churella, *Pennsylvania Railroad*, 190.

⁵⁷ *Ibid.*, 186.

⁵⁸ *Ibid.*, 326.

⁵⁹ *Ibid.*, 461.

this. In 1881, Gowen, Vanderbilt, and Andrew Carnegie came together to revive and construct the South Penn to rival the Pennsylvania Railroad's main line between Harrisburg and Pittsburg, whether it was practical or not.⁶⁰ In 1885, J.P. Morgan sought to end the chaos and negotiated a controversial truce, ushering in more cooperation and stable competition.⁶¹ This was not the only example of overbuilding or the only time Morgan intervened to try and stop it.

The Beech Creek Railroad also exemplifies the intense competition of the 1880s and shares some similarities with the Cornwall and Lebanon. When the Reading and the New York Central attempted to break into the coal fields of the Nittany valley, locals rejoiced over the prospect of more service and lower rates, as the Beech Creek would break the Pennsylvania Railroad's monopoly in the area.⁶² The Pennsylvania Railroad tried to block or impede the Beech Creek railroad in many ways, including starting a legal battle over the construction of an at-grade crossing with the Pennsylvania Railroad's own track. The Pennsylvania Railroad unsuccessfully argued that it was too busy and dangerous.⁶³ The Cornwall and Lebanon and the Cornwall had a similar dispute, with the Cornwall in the same position as the Pennsylvania Railroad was with the Beech Creek. The Cornwall, however, won their battle and forced the construction of the Cornwall and Lebanon's bridge over the Cornwall's tracks in Cornwall.⁶⁴ Morgan's South Penn deal also tried to give the Beech Creek to the Pennsylvania Railroad, though this fell through as

⁶⁰ Harwood, *Railroad that Never Was*, 4-13.

⁶¹ *Ibid.*, 11-13.

⁶² A. Michael Bezilla and Luther Gette, *Branch Line Empires: The Pennsylvania and the New York Central Railroads* (Indiana University Press, 2017), ix-x.

⁶³ *Ibid.*, 127.

⁶⁴ "Cornwall vs. the C&L," *The Lebanon Daily News*, January 13, 1888; Loose, "The Mount Gretna Railroad War of 1887," 137.

the state constitution forbid railroads from buying parallel lines in order to prevent monopolies.⁶⁵ However, shippers, investors, and the public began seeking more ways to control the railroads.

The Pennsylvania Railroad's fight for access to John D. Rockefeller's oil fields illustrated the inefficiencies and ridiculous outcomes of 1880s railroad wars. In 1879 the Reading and the New York Central threatened the Pennsylvania's access to Rockefeller oil. This sparked a rate war that resulted in a total loss of \$1.2 million between the three railroads, mostly from the Reading. To settle the fight and achieve stable shipping costs, Rockefeller built pipelines to bypass the fighting railroads and essentially bribed the Pennsylvania not to lower rates by paying them for shipments they did not provide. While most Pennsylvanians were happy with low rates from these wars, some noticed that the rates favored long haul through traffic over local traffic, which still had no competition. This led to some early efforts at regulation.⁶⁶ Someone shipping from Harrisburg to Philadelphia could choose between the Pennsylvania Railroad and the Reading. However, someone living at a point between those cities, such as Lebanon, only had one option. In those cases, the railroad was a monopoly and could charge whatever it pleased.

Along with the Pennsylvania Railroad and the Reading, the other major force in the fight between the Cornwall and the Cornwall and Lebanon was Robert Habersham Coleman, founder of the Cornwall and Lebanon. Ironically, his father William had helped form the Cornwall and Lebanon's rival, the Cornwall Railroad. Robert H. was born to William and Susan Ellen Habersham Coleman on March 27, 1856, in his mother's home of Savannah, Georgia. His father died in 1861, leaving five-year-old Robert and his younger sister Ann in the care of his mother and his uncle, Robert W. Coleman. Robert W. died in 1864. Until the children came of age,

⁶⁵ Bezilla and Gette, *Branch Line Empires*, 134-36.

⁶⁶ Churella, *Pennsylvania Railroad*, 461.

Robert W.'s lawyer Samuel Small controlled the family's share of the Cornwall Ore Bank Co. Small was a major influence on Robert H. Coleman and gave him his first toy train, which encouraged a fascination that followed him into adulthood.⁶⁷ Unfortunately, Small was not the biggest influence on Coleman's business tactics.

Coleman's biographer Richard E. Noble argued that Small's conservative leadership allowed the family to weather tumultuous events like the Panic of 1877. Small and Susan Coleman also thought that the young Robert H. was not ready for leadership and prevented him taking control of his inheritance until the age of 23. However, Cornwall superintendent Artemus Wilhelm criticized Small's conservative approach and told the young Coleman to take risks with one's income.⁶⁸ Noble argued that following Wilhelm's advice instead of Small's was the first step towards Coleman's loss of the family fortune in the Panic of 1893.⁶⁹ Most historians agree that Coleman's misfortune was a result of overextending himself, including investing in railroads like the Cornwall and Lebanon but especially the Jacksonville, Tampa, & Key West Railroad.⁷⁰ Newspapers of Coleman's day reached the same conclusion.⁷¹ Thus, Coleman's story fits in with the larger 1880s trend of overbuilding that contributed to the Panic of 1893. However, the Cornwall and Lebanon itself was not a case of overbuilding.

Upon taking control of the estate in 1879, Coleman began expanding it and taking risks. He immediately began constructing new buildings and making investments. After his wife, Jane

⁶⁷ Noble, "Touch of Time," 18-19.

⁶⁸ *Ibid.*, 37.

⁶⁹ *Ibid.*, 51.

⁷⁰ Rhoads and Heilman, *Railroads of Lebanon County*, 31; Kercher, "Cornwall Railroad," 103.

⁷¹ "An Iron King's Failure: Assignment of Robt. H. Coleman of Lebanon, PA," *The Savannah Morning News*, August 10, 1893.

Lillie Coleman, died on their honeymoon in Europe, Coleman distracted himself by further engrossing himself in his work. He desired to expand outside of iron ore due to the dual threats of foreign ore and Midwestern ore.⁷² In itself, this was a wise decision. The Mesabi Range of Minnesota began to overtake Cornwall as the nation's largest producer of iron and offered better quality iron. It fully surpassed Cornwall by the 1890s.⁷³ Fortunately for Coleman, he did not have to wait that long for his chance to branch out. While Coleman was still on his ill-fated honeymoon, Wilhelm wrote a letter letting Coleman know that the Pennsylvania Railroad intended to build a railroad from their main line in Conewago, Pennsylvania to Cornwall and compete with the Cornwall Railroad. Wilhelm told the Pennsylvania that they would support this move so long as Coleman had control of the new railroad. The Pennsylvania agreed. Since the Cornwall was only a supplement to the iron business, not a full freight and passenger railroad, it is unlikely that Wilhelm was focused on competing with the Cornwall. Wilhelm wanted Coleman to get into the railroad industry in a fuller sense than just shipping his own iron.⁷⁴ Wilhelm himself was president of the Cornwall Railroad and Coleman was on the board of directors.⁷⁵ Regardless of Wilhelm's intentions, the new railroad ended up rivaling the Cornwall.

At this point, the new line could have been a reasonable route that served its own unique purpose and offered healthy competition between the Pennsylvania Railroad and the Reading Railroad. A line from Conewago to Cornwall would allow iron ore to flow south and reach cities like Lancaster more easily. If connected to the Cornwall, freight and passengers to and from

⁷² Noble, "Touch of Time," 42-45.

⁷³ Ressler, "Cornwall's Iron Economy," 22.

⁷⁴ Noble, "Touch of Time," 45-46.

⁷⁵ Henry Varnum Poor, *Manual of the Railroads of the United States 1882* (New York: H.V. & H.W. Poor, 1882), 231.

Lebanon could also use a new southern rail outlet. Though the Cornwall would lose some freight moving south from Cornwall, both the new line and the Cornwall would benefit from any through traffic. It is not clear whether the Pennsylvania Railroad seriously intended to reach further north than Cornwall and build a redundant line at this point or only cared about accessing Cornwall iron. All of this occurred during a time when much of the Pennsylvania Railroad's growth was driven by the steel industry's need for pig iron.⁷⁶ As such, it is possible that the Pennsylvania Railroad's main goal was simply to access more iron, though this is not certain.

What is clear is that the Pennsylvania Railroad backed Coleman in his efforts to build the Colebrook Valley Railroad, which later became part of the Cornwall and Lebanon. On January 5, 1881, J.N. DuBarry, assistant to Pennsylvania Railroad president George B. Roberts, sent Coleman a letter offering one of the Pennsylvania Railroad's own engineers, Francis Lee Faries to assist in building the new railroad.⁷⁷ Wilhelm informed Coleman that the Pennsylvania Railroad had offered another candidate to serve as chief engineer on January 24.⁷⁸ Coleman and the Colebrook Valley Railroad kept up correspondence directly with the Pennsylvania Railroad over the next year, discussing purchasing cross ties from the Pennsylvania in May 1882. However, the relationship had its limits, as Coleman was allowed to purchase ties from the

⁷⁶ Burgess and Kennedy, *Centennial History of the Pennsylvania Railroad*, 419.

⁷⁷ J.N. DuBarry, Letter to Robert H. Coleman, January 5, 1881, Pennsylvania Railroad Company Correspondence to Robert H. Coleman, 1800-1882, Robert H. Coleman Collection, Lebanon County Historical Society, Lebanon, PA.

⁷⁸ Artemus Wilhelm, Letter to Robert H. Coleman, January 24, 1881, Artemus Wilhelm Correspondence to R.H. Coleman, Robert H. Coleman Collection, Lebanon County Historical Society, Lebanon, PA.

Pennsylvania Railroad but not go to the Pennsylvania Railroad's tie market directly.⁷⁹

Nevertheless, it was still a show of support.

Whatever the Pennsylvania Railroad's intentions, Coleman created a line to compete with the Cornwall Railroad. With the help of Thomas Roney Crowell, a Pennsylvania Railroad civil engineer who helped build the Colebrook Valley Railroad, Coleman chartered the Cornwall and Lebanon and later merged it with the Colebrook Valley. This was a significant threat to the Cornwall Railroad since the new Cornwall and Lebanon connected to both the Reading Railroad and the Pennsylvania Railroad and offered passenger service while the Cornwall focused on freight.⁸⁰ The Cornwall and Lebanon could do everything the Cornwall could do and more. The Cornwall could no longer content itself with being a mere ore carrier if it hoped to compete. Further, Coleman himself was a formidable opponent as one of the wealthiest men in the country. In 1889, he even ranked above J.P. Morgan and Vanderbilt on the list of men with fortunes over \$30 million.⁸¹ That, combined with the Pennsylvania Railroad's backing, gave the Cornwall and Lebanon vast financial resources despite being newer than the Cornwall.

The remaining chapters will show how the Cornwall and Lebanon Railroad and the Cornwall Railroad were examples of excessive 1880s rail competition, how both railroads survived despite their redundancy, and how having two fiercely competing railroads affected the public and shippers. Chapter one, in particular, will explore the railroad war that took place between the Cornwall and Lebanon Railroad and the Cornwall Railroad as well as their respective connections to the Pennsylvania Railroad and the Reading. It will detail the

⁷⁹ William H. Barnes, Letter to J. Taylor Boyd, May 2, 1882, Pennsylvania Railroad Company Correspondence to Robert H. Coleman, 1800-1882, Robert H. Coleman Collection, Lebanon County Historical Society, Lebanon, PA.

⁸⁰ Noble, "Touch of Time," 48-49.

⁸¹ *Ibid.*, 57.

tumultuous construction of the Cornwall and Lebanon and show how redundant the two lines were between their parallel main lines, two resort towns created specifically for each railroad, and reliance on the same customers.

Chapter two will explore the health of each railroad over time and how they prospered, showing how their fighting was unnecessary to make a profit. It will begin with a comparison of the Cornwall's profits and growth before and after the creation of the Cornwall and Lebanon. It will also show the Cornwall and Lebanon's profits from its inception to 1900. It will also explore the railroads' health through their yearly traffic, number of locomotives and rolling stock, and the number of workers they employed. Chapter three will explore how the creation of a second line benefited the public either through offering rail service to previously unreachable towns or by lowering rates. This is not as straightforward as it appears. During rate wars, shippers often complained of the unpredictable fluctuations and departures from established rates.⁸² Thus, while it may be tempting to simply assume that lower rates benefited the public, this is not necessarily the case. Thankfully, there is no evidence of a rate war between the Cornwall and the Cornwall and Lebanon. This, in turn, shows that the Cornwall Railroad was not a natural monopoly.

With the creation of the Cornwall and Lebanon, the stage was set for an intense rivalry with the Cornwall. Many thought that the iron deposit in Cornwall was practically limitless.⁸³ On either end of the line were major railroads that offered connections to the rest of the country. However, it was not clear whether there would be enough business to support both railroads. While the Cornwall initially only shipped ore and went no further south than Cornwall, it responded to the Cornwall and Lebanon by finally completing its plans to connect with the

⁸² John F. Stover, *American Railroads*, 2nd Ed. (Chicago, Ill: University of Chicago Press, 1997), 108.

⁸³ Miller, "Rise of an Iron Community," 86.

Reading and Columbia Railroad in Mt. Hope, Pennsylvania and offer passenger service.⁸⁴ As a result, both lines served nearly the same exact purpose save for a few small towns along the southern portion of their routes.

Chapter One: Rivalry: The Lebanon County Railroad War

The leaders of the Cornwall and Lebanon Railroad and the Cornwall Railroad went to extreme lengths to ensure their control over the area. In keeping with the culture of the day, these businessmen were not content to compete. They believed they had to eliminate the competition. The rivalry between the Cornwall and Lebanon and the Cornwall exemplifies the cutthroat competition of the 1880s rail industry as shown by incidents during the Cornwall and Lebanon's construction, ensuing legal battles, and the redundancy of the railroads' customer bases and the services they provided. However, the available freight traffic shows that this intense rivalry was not due to insufficient business and indicates that the Cornwall was not a natural monopoly. This excessive rivalry was driven by Robert H. Coleman's ambitions, connections to battles between larger railroads, and the false assumption that railroads were a zero-sum game.

The Cornwall and Lebanon was built in a tumultuous time of overbuilding and excessive competition, leading to federal regulation and consolidation. As discussed in the introduction, railroads rapidly built new lines in the 1880s, many of which were impractical and unprofitable ventures exclusively designed to hurt a railroad's competitor. These led to rate wars, hurting both railroads or destroying one and creating a monopoly. To combat this behavior, railroads created pools where multiple companies agreed to a set rate. While the Interstate Commerce Act of 1887 and the Sherman Antitrust Act of 1890 prohibited pooling, the Interstate Commerce Commission

⁸⁴ John D. Denney Jr, "The Reading and Columbia Railroad," *Journal of the Lancaster County Historical Society* 67, no. 4 (1963): 170.

(ICC) unfortunately lacked the authority to control rates, leading to more rate wars and overbuilding.¹ The alternative was J.P. Morgan's community of interest model, which encouraged large railroads to buy stock in weaker competitors to promote cooperation.² While the Pennsylvania Railroad did not participate in overbuilding as Albert J. Churella has demonstrated, the Pennsylvania did participate in rate wars and other excessively competitive behavior.³ The Pennsylvania became a central pillar of the community of interest model, causing the public to view it as a monopoly and contributing to the push for ICC rate control. However, by then, legislators, railroad executives, and the public agreed that excessive competition and monopolies were both problematic and gave the ICC more power as a last resort.⁴

As smaller railroads supported by the Pennsylvania, the Colebrook Valley and the Cornwall and Lebanon fit well into Churella's assessment. The Pennsylvania helped create the Colebrook Valley and supported the new lines. While the new railroads exhibited some of the cutthroat culture of the time, they are not an example of overbuilding since they were financially viable. All of this occurred at the same time as significant conflicts between the Pennsylvania and its competitors, as discussed in the introduction. In 1913, the Pennsylvania began buying up shares of the Cornwall and Lebanon and eventually purchased the line outright during its push for consolidation.⁵ Thus, the Cornwall and Lebanon exhibits part of the Pennsylvania's strategy

¹ Churella, *Pennsylvania Railroad*, 547; Leanord, "The Decline of Railroad Consolidation," 1–2.

² Churella, *Pennsylvania Railroad*, 649.

³ *Ibid.*, 548.

⁴ *Ibid.*, 664.

⁵ Cornwall and Lebanon Railroad Co., Stock Transfer Book 1882-1917, Series MG286-KPRR-COCL-690, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

as well as the larger theme of unregulated competition and monopoly that eventually led to federal regulation and consolidation.

The desire for one continuous route under one company's control fueled the conflict between the Cornwall and Lebanon and the Cornwall. The Colebrook Valley completed its surveys and began construction in April 1881 but did not directly compete with the Cornwall.⁶ The Cornwall's willingness to ship freight to the Colebrook Valley during its construction reflects this.⁷ Further, Coleman and his mentor Artemus Wilhelm were on the Cornwall's Board of Directors through 1882 and Wilhelm was president.⁸ Many still associated the Cornwall with Wilhelm and called it "Wilhelm's road" rather than William C. Freeman's even when Freeman was president and the Cornwall and Lebanon and the Cornwall fought each other in court.⁹ Freeman and Wilhelm bought stock in the Colebrook Valley, which they retained until the company merged with the Cornwall and Lebanon.¹⁰ They clearly had no issues with the Colebrook Valley. As to the cause of the conflict, the *Philadelphia Times* claimed that Coleman owned three-fifths of the Cornwall but had a disagreement with Freeman, after which Freeman bought control of the Cornwall. Coleman built the Cornwall and Lebanon in response.¹¹ The article does not specify what the disagreement was.

⁶ "The Colebrook Valley Railroad," *Lebanon Daily News*, April 14, 1881.

⁷ North Lebanon Railroad Co., North Lebanon Railroad Ledger: 1852-1881, Lebanon County Historical Society, Lebanon, PA.

⁸ Poor, *Manual of the Railroads 1882*, 231.

⁹ "The Lebanon R.R. War," *The Reading Times*, October 31, 1883.

¹⁰ Colebrook Valley Railroad, Stock Ledger 1881-1886, 6, 16, Series MG-286-KPRR-COCL-676, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

¹¹ "The Lebanon Railroad War," *The Philadelphia Times*, October 31, 1883.

Coleman's letters show his stubbornness and desire for total control, which reflects the highly competitive culture of the day. The Colebrook Valley Board of Directors meeting minutes from March 10, 1882, discuss Coleman's attempts to lease the Cornwall and include copies of letters between Coleman and Cornwall President Artemus Wilhelm. In a letter dated February 11, 1882, Wilhelm stated that the majority of stockholders voted not to lease the railroad but were willing to allow Colebrook Valley trains to pass over the Cornwall's tracks for a fee.¹² Coleman refused without asking what the terms were, arguing that "the two roads should be under one management; one management should have control of the entire business, and of the running of trains over the total length of the roads."¹³ Anything else would lead to "constant trouble in the future."¹⁴ He threatened to build a new railroad if he could not lease the Cornwall. On February 20, Wilhelm responded that larger railroads routinely used each other's tracks without trouble. He also retorted, "If the Colebrook VRR continues to insist that both roads should be controlled by one and the same management, let me here ask, is the Colebrook VRR willing to lease its road to the Cornwall RR?"¹⁵ Arrangements allowing railroads' trains to pass over each other's lines had indeed been commonplace for years.¹⁶ However, the meeting minutes abruptly ended after Wilhelm's letter without further discussion.¹⁷ Thus, Coleman's letters make it clear that Coleman himself was the one who was unwilling to compromise.

¹² Colebrook Valley Railroad, Minute Book 1881-1886, March 10, 1882, 36, Series MG-286-KPRR-CKCV-675, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

¹³ Colebrook Minute Book, March 10, 1882, 36-37.

¹⁴ *Ibid.*, March 10, 1882, 38.

¹⁵ *Ibid.*, 39.

¹⁶ Stover, *American Railroads*, 144.

¹⁷ Colebrook Minute Book, March 10, 1882, 39.

Coleman's stubbornness reflects his ambitious and impatient character. This is the same man who later poured money into providing the highest luxuries and finest equipment on his Jacksonville, Tampa, and Key West Railway even though the locals riding the line could not afford such luxuries and the expensive cars went unused.¹⁸ As one of the wealthiest men in the country, he also thought of himself as something of a feudal lord and allowed employees or locals to come to speak to him as if he were holding court.¹⁹ His unwillingness to compromise or simply wait for a better opportunity to lease the Cornwall led to the creation of the Cornwall and Lebanon and the ensuing rivalry. It is worth noting that the Cornwall's minute books do not survive. All of this information comes from sources that, if anything, should be biased toward Coleman.

The letters between Coleman and Wilhelm also make it clear that Freeman was not primarily responsible for the disagreement. An article from the *Lebanon Daily News* claimed that Freeman not only refused Coleman's offer to buy the Cornwall on two occasions, but even refused to let the Colebrook Valley's trains use the Cornwall's tracks, thus forcing the creation of the Cornwall and Lebanon.²⁰ This directly contradicts Coleman's letters, and the paper seems biased toward Coleman. Several other *Lebanon Daily News* articles support this suspicion. One bluntly stated that the public favored Coleman.²¹ Granted, that would not be surprising given the promise of lower shipping rates that come with new rail competition. Further, people living along the Colebrook Valley had reason to support Coleman as they previously had no rail service

¹⁸ Noble, "Touch of Time," 60-61.

¹⁹ *Ibid.*, 51-59.

²⁰ "A Railroad War Waged," *Lebanon Daily News*, October 29, 1883.

²¹ "The Warring Railroaders: Public Feeling with Mr. Coleman," *Lebanon Daily News*, October 31, 1883.

at a time when a town's prosperity depended on rail access. Another article praised Coleman for his "liberal and broad views in business matters."²² However, Coleman's own words make it clear he was responsible for the conflict between the Colebrook Valley and the Cornwall.

Newspapers hinted at the Colebrook Valley's connection to the rivalry between the Pennsylvania Railroad and the Philadelphia and Reading Railroad, further increasing tensions. Shortly before Wilhelm refused Coleman's offers, the *Lebanon Daily News* remarked that the Colebrook Valley would not only connect the Pennsylvania to Lebanon via Conewago but that the Pennsylvania would soon take over the new railroad entirely. The article also asserted that the new railroad would make it easier for the Pennsylvania to extend to Lebanon from Harrisburg, which would directly compete with the Reading's main line.²³ Multiple articles supported the latter claim.²⁴ Having to compete with the Pennsylvania would be a much harder task for the Cornwall than rivaling a new railroad and the Reading certainly did not want the Pennsylvania in Lebanon. Fortunately for the Cornwall, the Pennsylvania did not venture beyond Conewago until 1918.

Coleman, however, was determined to have his way and quickly made good on his threat to Wilhelm to build a new railroad. Coleman formed the Cornwall and Lebanon and immediately became its president.²⁵ He chartered the railroad on February 28, 1882, only a little over a week after Wilhelm's last letter regarding the lease.²⁶ Thus, there was never an opportunity for

²² "Pic-Nic Grounds," *Lebanon Daily News*, March 11, 1884.

²³ "The New Railroad Project," *Lebanon Daily News*, January 22, 1883.

²⁴ "The Railroad Dispute," *Lebanon Daily News*, October 18, 1883.

²⁵ Cornwall & Lebanon Railroad, Minute Book 1882-1900, February 27, 1882, 10, Series MG286-KPRR-COCL-687, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

²⁶ Poor, *Manual of the Railroads of the United States 1885* (New York: H.V. & H.W. Poor, 1885), 234.

Coleman to have his supposed argument with Freeman since Freeman was never president before the creation of the new railroads. If they did argue, it was after the matter was largely decided. Coleman still attempted to lease the Cornwall and thought he had a chance to do so in April 1882, though this attempt also failed.²⁷ Unlike the Colebrook Valley, the Cornwall and Lebanon was a direct competitor and threat to the Cornwall, especially with a hostile president at the helm.

The construction of the Cornwall and Lebanon itself showed even more promise of conflict as the railroads expanded to offer the same services. The Cornwall and Lebanon ran only seven feet away from the parallel Cornwall. As construction on the Colebrook Valley and Cornwall and Lebanon progressed, the Cornwall created the Cornwall and Mt. Hope Railroad to connect with the Reading & Columbia Railroad.²⁸ The Cornwall and Mt. Hope opened in 1884 and merged with the Cornwall on October 31, 1886.²⁹ This gave the Cornwall an additional five miles of main line for a total of 17 miles.³⁰ On September 1, 1883, the Colebrook Valley could accommodate light freight, though it was not sufficiently complete to carry passengers or heavier loads.³¹ On September 15, a load of cattle shipped to Cornwall became the Colebrook Valley's first shipment.³² A load of cattle between Conewago and Cornwall, however, was hardly competition for the Cornwall's ore shipments. The line between Conewago and Lebanon fully

²⁷ Cornwall and Lebanon Minute Book 1882-1900, April 10, 1882, 18.

²⁸ "The Railways to Cornwall," *Lebanon Daily News*, June 18, 1883.

²⁹ Rhoads and Heilman, *Railroads of Lebanon County*, 50.

³⁰ Henry V. Poor, *Manual of the Railroads of the United States 1887* (New York: H.V. & H.W. Poor, 1887), 136.

³¹ "The New Route," *Lebanon Daily News*, August 31, 1883.

³² "Transpirings About Town," *Lebanon Daily News*, September 15, 1883.

opened to traffic on October 1, 1883. Though they were technically two separate companies, the Cornwall and Lebanon and the Colebrook Valley shared the same managers, equipment, and rolling stock.³³ Unsurprisingly, the Colebrook Valley resolved to merge with the Cornwall and Lebanon on April 16, 1886.³⁴ The two officially merged under the Cornwall and Lebanon name on June 1 of the same year, giving the Cornwall and Lebanon a 22-mile main line.³⁵ As a result, both the Cornwall and the Cornwall and Lebanon offered connections south to Lancaster.

The first legal battle between the Cornwall and the Cornwall and Lebanon occurred well before the Cornwall and Lebanon even opened. In December 1882, the Cornwall attempted to stop the Cornwall and Lebanon from reaching a furnace in Lebanon, constructing a yard, and connecting with the Reading's main line. Both parties claimed that they had a legal right to the land and the Cornwall claimed that the Cornwall and Lebanon's construction would destroy the usefulness of their lines. In this case, the court ruled in favor of the Cornwall and Lebanon on May 11, 1883.³⁶ After that point, both the Cornwall and the Reading preemptively built new sidings to block the Cornwall and Lebanon's access to key customers along its route and then took the Cornwall and Lebanon to court for any intrusions. However, at first, it appeared that the Cornwall and Lebanon might be able to court some favor from the Reading.

As the railroads opened, some still hoped that the Colebrook Valley and the Cornwall and Lebanon could offer a peaceable connection between the Reading and the Pennsylvania. When Coleman threatened Wilhelm with a new railroad, he specifically stated that he wanted a

³³ "Opening of the New Railroads," *Lebanon Daily News*, September 21, 1883.

³⁴ Colebrook Minute Book, April 16, 1886, 129-32.

³⁵ Poor, *Manual of the Railroads 1887*, 137.

³⁶ "Decision by Judge Simonton in Favor of the Cornwall & Lebanon Railroad," *Lebanon Daily News*, May 11, 1883.

connection with the Reading.³⁷ During the railroads' construction, the *Lebanon Daily News* reported that the Cornwall and Lebanon and the Colebrook Valley would be important links between the Pennsylvania and the Reading, noting that the new lines were independent of both railroads. John C. Jennings, the superintendent of the Cornwall and Lebanon, formerly worked for the Reading.³⁸ As mentioned previously, the Pennsylvania supplied engineers to build the Colebrook Valley. Thus, Coleman had a relationship with both lines.

The breakdown of the relationship between the Cornwall and Lebanon and the Reading further illustrates the self-destructive competitive spirit of the era. The Reading allowed the Cornwall and Lebanon to use its station in Lebanon to board passengers until 1885.³⁹ At first, the Cornwall and Lebanon advertised that it could give its passengers access to all points on not only the Pennsylvania but also the Reading.⁴⁰ The Cornwall, meanwhile, could only boast of its connection with one major railroad through the Reading.⁴¹ This gave the Cornwall and Lebanon yet another advantage over its rival. However, the Reading eventually stopped accepting the Cornwall and Lebanon's passengers at its station and Coleman's line could only advertise a connection to the Pennsylvania.⁴² This further illustrates the lengths these railroads were willing to take to ensure they kept their competitors in check. The Reading turned down business simply because it came from a railroad that had ties to another railroad that they considered a threat. The

³⁷ Colebrook Minute Book, March 10, 1882, 36.

³⁸ "Opening of the New Railroads," *Lebanon Daily News*, September 21, 1883.

³⁹ Rhoads and Heilman, *Railroads of Lebanon County*, 31.

⁴⁰ "Cornwall & Lebanon and Colebrook Valley Railroads," *Lebanon Daily News*, October 2, 1883.

⁴¹ "Penryn Park on the Cornwall & Mt. Hope Railroad," *Lebanon Daily News*, May 8, 1885; "Cornwall Railroad," *Lebanon Daily News*, July 2, 1889.

⁴² "Cornwall & Lebanon Railroad: Direct Route for All Points on the Pennsylvania," *Lebanon Daily News*, January 1, 1892.

competition between the Cornwall and Lebanon and the Cornwall quickly became a new front of the war between the Pennsylvania and the Reading.

Even before the new railroads were finished, the public began associating them with the larger railroad wars of the day. As mentioned, rumors abounded that the Pennsylvania had ambitions to use the Cornwall and Lebanon to hurt the Reading as early as July 1883.⁴³ In addition, the Cornwall and Lebanon came to a disagreement with the Reading over the former's right to cross the latter's tracks and add to the existing railroad crossing on Eighth St. in Lebanon. Some claimed that local businessman P.L. Weimer opposed the Cornwall and Lebanon and the potential Pennsylvania Railroad link to Lebanon. He denied his opposition to the latter but opposed the Cornwall and Lebanon crossing at Eighth St. since it would be too busy for road traffic. He noted that "we must not [lose] sight of the fact that in less than two years, we will have the full traffic of the new Vanderbilt-Gowen road..." which would add more traffic to the busy crossing.⁴⁴ Wiemer was referencing the ongoing South Penn debacle that pitted the Pennsylvania against the Reading, the New York Central Railroad, and Andrew Carnegie. Attitudes about this larger conflict were thus shaping attitudes about the Cornwall and Lebanon and the Cornwall.

More conflict between the Cornwall and the Cornwall and Lebanon occurred almost immediately after the new railroad opened on October 1, 1883. The Cornwall and Lebanon surveyed land between the existing Cornwall Railroad track and a road in Cornwall to reach the mines. The Cornwall responded by adding a new siding, which blocked the Cornwall and Lebanon's progress. Coleman then had the Cornwall and Lebanon run tracks on the opposite side

⁴³ "Cornwall & Lebanon Railroad," *Lebanon Daily News*, July 3, 1883.

⁴⁴ "The Railroad Dispute," *Lebanon Daily News*, October 18, 1883.

of the Cornwall, which forced the Cornwall and Lebanon to cross the Cornwall track to reach the ore mines. A Cornwall Railroad crew then tore up the new tracks while the Cornwall and Lebanon Railroad crew was off duty. In the ensuing confrontation, one worker raised a pickaxe to strike a man from the opposing company but was stopped before violence broke out.⁴⁵ One paper claimed that a brawl broke out between the workers.⁴⁶ However, other articles make no mention of this.

Several local papers specifically stated that the Reading backed the Cornwall and the Pennsylvania supported the Cornwall and Lebanon. According to some reports, Reading Railroad leadership sought to block the Cornwall and Lebanon as soon as they learned that the Cornwall and Lebanon's construction was in the Pennsylvania's interests.⁴⁷ When Reading leadership learned of the Cornwall and Lebanon's desire to reach the Pennsylvania Nut and Bolt Company in Lebanon, they attempted to block them again by adding two new sidings. They made each siding a different height so that it would be impossible for the Cornwall and Lebanon to make a level crossing through the sidings. They also stored derelict cars on the tracks as extra insurance.⁴⁸ On October 31, 1883, Coleman met with Reading Railroad president Franklin B. Gowen to attempt to negotiate but to no avail.⁴⁹ Gowen was probably the most aggressive figure among the leaders of the involved railroads. Herbert H. Harwood believes that Gowen may have

⁴⁵ "A Railroad War Waged," *Lebanon Daily News*, October 29, 1883.

⁴⁶ "Struggles of Railroaders for the Mastery Along the Colebrook Valley," *Harrisburg Daily Independent*, October 29, 1883.

⁴⁷ "The Lebanon Railroad War," *The Philadelphia Times*, October 31, 1883.

⁴⁸ "War in the Valley," *Harrisburg Daily Independent*, October 31, 1883; "The Lebanon R.R. War," *The Reading Times*, October 31, 1883.

⁴⁹ Cornwall and Lebanon Minute Book 1882-1900, November 1, 1883, 79.

started the South Penn project exclusively to undercut the Pennsylvania.⁵⁰ The Pennsylvania, meanwhile, seemed content to prop up Coleman and get access to the iron mines. While most of this information comes through newspapers, all accounts agree on the basic facts of the case regardless of bias. As previously stated, the *Lebanon Daily News* clearly favored Coleman and the Cornwall and Lebanon, claiming that most of the public did as well. Other papers may have been biased towards the Pennsylvania, the Reading, or the Cornwall. However, each paper agrees that the Cornwall and the Reading, whether they were justified or not, attempted to block the Cornwall and Lebanon's completion.

The siding dispute in Cornwall led the Cornwall Railroad to take legal action against the Cornwall and Lebanon again. On October 30, 1883, the county court granted the Cornwall an injunction restricting the Cornwall and Lebanon's construction in the disputed area until a ruling could be made.⁵¹ The Cornwall Railroad argued that it needed its Cornwall yard to make up trains of iron ore to ship to Lebanon and that the Cornwall and Lebanon's crossing through their yard would destroy its usefulness. The Cornwall and Lebanon countered that they rightfully bought the land from the Cornwall Ore Bank Co. The Cornwall Ore Bank Co. also previously sold some land to the Cornwall but retained the rights to all ore in said land, which by this time was exposed on the surface, negating the Cornwall's ownership. The Cornwall and Lebanon also claimed that their new track would not interfere with the usefulness of the Cornwall Railroad track, especially given that the Cornwall previously made up their trains further north and only made the new sidings at the most convenient time to block the Cornwall and Lebanon.⁵²

⁵⁰ Harwood, *Railroad that Never Was*, 25-26.

⁵¹ "The Railroad War: Application for an Injunction," *Lebanon Daily News*, October 30, 1883.

⁵² Robert H. Coleman Legal Papers, 1883. Robert H. Coleman Collection. Lebanon County Historical Society, Lebanon, PA.

Unfortunately, the outcome of the case is unclear. Newspaper coverage of the case ceased after it moved to the US District Court and never indicated the outcome.⁵³ The Cornwall and Lebanon minute books make no mention of it. Whatever the outcome was, it resulted in the Cornwall and Lebanon moving their connection to the mines.⁵⁴ The Cornwall and Lebanon finally opened their connection to the mines in August 1884.⁵⁵ The Cornwall and Lebanon's tracks remained on the north side of the Cornwall's tracks.⁵⁶ This was not the last time the Cornwall and Lebanon lost such a battle.

The two railroads had another dispute over another grade crossing in Cornwall, which paralleled incidents involving other railroads at the time. The dispute was over the crossing of the railroads' main lines near their respective railroad stations. The Cornwall and Lebanon Railroad ran south from Lebanon on the east side of the Cornwall Railroad tracks but continued south to Conewago after the Cornwall curved east towards the Cornwall mines, creating a crossing. On December 4, 1886, the Cornwall and Lebanon agreed to yield to all Cornwall trains at the crossing. This meant that a fast passenger train would have to yield to a slow freight train. On May 13, 1887, Cornwall and Lebanon Railroad superintendent Ned Irish ordered all trains to stop before the Cornwall Railroad crossing until the watchman let them through. However, he also clarified that they should only prioritize Cornwall Railroad trains of equal class, meaning that passenger trains should not wait for freight trains. The Cornwall sued, arguing that the

⁵³ "The Railroad Injunction Case," *Lebanon Daily News*, June 19, 1884.

⁵⁴ Cornwall and Lebanon Minute Book 1882-1900, October 30, 1883, 77-79.

⁵⁵ *Ibid.*, August 4, 1884, 110.

⁵⁶ Cornwall Ore Bank Co., Plan Showing Crossing of Cornwall Ore Bank Co.'s R.R. and Cornwall R.R. and New Tracks for Cornwall Ore Bank Co., at East Cornwall, PA., Lebanon County Historical Society, Lebanon, PA.

Cornwall and Lebanon broke their agreement. The Pennsylvania Supreme Court decided in favor of the Cornwall.⁵⁷ In response, the Cornwall and Lebanon built a steel truss bridge to bypass the Cornwall's tracks.⁵⁸ As mentioned previously, this directly mirrors an incident over a crossing between the Pennsylvania and the Beech Creek Railroad.

The Cornwall and Lebanon's continued relationship with the Pennsylvania further strained their connection with the Reading. The Pennsylvania had already helped provide engineers, materials, and the idea to build the Colebrook Valley. The Pennsylvania's interest continued after the new railroads opened. The Pennsylvania helped supply rolling stock for the Cornwall and Lebanon.⁵⁹ On July 28, 1884, Pennsylvania Railroad officials toured both the Colebrook Valley and the Cornwall and Lebanon, stopping in Cornwall to meet with Coleman. The party included Pennsylvania Railroad second vice-president Frank Thomson and other high-level company officials riding in the private cars of the Pennsylvania's president and general manager.⁶⁰ According to the Cornwall and Lebanon board minutes, the Pennsylvania officials were very impressed with the new railroads and encouraged Coleman in his endeavors.⁶¹

While Pennsylvania Railroad officials also visited the Cornwall, this was not until much later when the Pennsylvania's management encouraged cooperation. On November 24, 1888, officials from the Pennsylvania, the Reading, and Cornwall Ore Bank Co. toured the Cornwall as guests of Cornwall Railroad superintendent S.S. Neff. None were as high ranking as those who

⁵⁷ *Cornwall R. Co. v. Cornwall & Lebanon R. Co.*, 297 125 Pa. 232 (Pa. 1889), Lexis Uni.

⁵⁸ "An Overhead Bridge," *Lebanon Daily News*, September 5, 1889.

⁵⁹ Cornwall and Lebanon Minute Book 1882-1900, November 5, 1883, 80.

⁶⁰ "Pennsylvania Officials," *Lebanon Daily News*, July 28, 1884.

⁶¹ Cornwall and Lebanon Minute Book 1882-1900, August 4, 1882, 110.

visited the Cornwall and Lebanon, but it nonetheless shows some attempt on the Cornwall's part to court the Pennsylvania.⁶² However, this visit occurred after the South Penn debacle, and at this point, the Pennsylvania was actively trying to be less combative and foster cooperation.⁶³ That increased cooperation came later. When Pennsylvania Railroad officials visited Coleman, it was in the heat of the battle between the Pennsylvania and the Reading and effectively meant Coleman was taking sides.

The redundancy of these two lines' service combined with the larger battle between the Pennsylvania and the Reading made them fierce competitors. While the Pennsylvania and the Reading directly competed for traffic between Philadelphia and Harrisburg, they both offered connections to other towns and cities along that route and beyond. The Colebrook Valley offered a southern rail connection and passenger service that the Cornwall lacked. Had Coleman and the Colebrook Valley been willing to work with the Cornwall, the two could have complemented each other. Instead, Coleman built the Cornwall and Lebanon. Further, the Cornwall created the Cornwall & Mt. Hope Railroad. As a result, both the Cornwall and the Cornwall and Lebanon offered passenger service between Lebanon and Cornwall as well as on to Lancaster. Both railroads also offered freight service between these towns. The Colebrook Valley and the Cornwall and Mt. Hope did offer rail service to new communities in southern Lebanon and northern Lancaster counties, but these were mostly rural villages that could not provide much business.

The Cornwall and the Cornwall and Lebanon, however, were completely parallel lines that served the same communities and industries. Given that the Pennsylvania Railroad

⁶² "Inspecting the Cornwall," *Lancaster New Era*, November 24, 1888.

⁶³ Harwood, *Railroad That Never Was*, 11-13.

connection helped inspire the creation of the Colebrook Valley, one might expect that traffic was heaviest between Cornwall and Conewago. According to available Cornwall and Lebanon Railroad freight movement records, this is not true. These records show the number of freight cars moved between Lebanon and Cornwall and between Cornwall and Conewago daily. On most days, the traffic was split fairly evenly between the two or heavily favored the Lebanon and Cornwall section of the line. On some occasions, the northern section carried more than double the number of cars the southern section did.⁶⁴ Granted, available records only cover the years 1889 to 1891. It is possible that this does not represent the whole of the Cornwall and Lebanon's history. However, it would make little sense for Coleman to be so determined to lease the Cornwall if he thought most of the traffic would flow between Cornwall and the Pennsylvania mainline in Conewago. Anything on the northern portion of the line was traffic that theoretically could have traveled over the Cornwall just as easily as on the Cornwall and Lebanon aside from any through traffic to and from the southern portion.

Train races between the two railroads illustrated a less intense expression of their rivalry. The two railroads' passenger stations in Cornwall were easily visible simultaneously and the tracks ran parallel most of the way to Lebanon, making a perfect opportunity for a contest between the two railroads' crews and locomotives. Such a race occurred at least once. The *Lebanon Daily News* reported that the Cornwall's passenger train won a race from Cornwall to Lebanon on August 9, 1895.⁶⁵ James Kercher claimed that these races were a fairly regular occurrence and that the trains sometimes delayed their schedule to set up a race. Supposedly, the

⁶⁴ Cornwall & Lebanon Railroad, Daily Report of Movement of Freight Cars, 1889-1891, Lebanon County Historical Society, Lebanon, PA.

⁶⁵ "Passenger Trains Race," *Lebanon Daily News*, August 9, 1895.

Cornwall Railroad train sometimes came into the station from a race so fast that it overshot the platform and had to back up to load and unload passengers. Coleman, being a fan of trains himself, sometimes took over the engineer's seat for such races.⁶⁶ Unfortunately, while Kercher does state that he obtained this information from local witnesses, he does not cite any specific interviews. A resident remembering such events in 1969 when Kercher's article was published would need to have been at least in their 80s to remember Coleman driving the train, since Coleman left the railroad in 1892.⁶⁷ However, passenger service did continue until 1929 on the Cornwall, giving ample opportunity to witness more races.⁶⁸ An 1888 Fowler and Moyer panoramic map of Lebanon City also shows two trains appearing to race each other on the two railroads.⁶⁹ This may support claims that there were frequent races, or Fowler and Moyer may have simply intended to emphasize that there were two railroads.

Another friendlier aspect of this rivalry manifested in the appearance of each railroads' locomotives and rolling stock. According to Kercher, both railroads tried to exceed each other in the paint schemes and cleanliness of their locomotives. If one railroad's locomotive received pinstripes on its wheels, the next day the other railroad did the same and found a new feature to exceed it. Kercher also noted how clean the locomotives looked in photos.⁷⁰ While it would not be surprising for Coleman to initiate such a cleanliness war given his aforementioned desire to

⁶⁶ Kercher, "Cornwall Railroad," 96-128.

⁶⁷ Noble, "Touch of Time," 63.

⁶⁸ Rhoads and Heilman, *Railroads of Lebanon County*, 63.

⁶⁹ Thaddeous M. Fowler and James R. Moyer, *Map of Lebanon, Pennsylvania* (Lebanon, PA: T.M. Fowler & James B. Moyer, 1888).

⁷⁰ Kercher, "Cornwall Railroad," 105.

have the best of the best and his personal love of trains, it is just as likely that the locomotives appear clean in photos because they were cleaned in preparation for the photos.

However, this extra effort may have been only surface level. In his assessment of locomotive inspection materials, Mark Aldrich specifically used the Cornwall and Lebanon as an example of how small railroads attempted to skirt safety regulations. The Interstate Commerce Commission's Bureau of Locomotive Inspection found faults with Cornwall and Lebanon Railroad locomotive maintenance. In 1912, the Cornwall and Lebanon failed to give a locomotive its monthly boiler wash in January. Workers argued this was unnecessary because it had been washed on December 31. The ICC, however, wanted rules followed to the letter. In 1916, the ICC found a locomotive with broken parts that railroad workers claimed was out of service even though it was clearly under steam pressure and ready to use.⁷¹ If the extra care the Cornwall and Lebanon gave its locomotives was ever anything beyond outward appearances, the practice declined after Coleman's departure.

The two railroads also competed through their resort towns, indirectly leading to more conflict. In 1884, The Cornwall and Lebanon created the resort town of Mt. Gretna to attract passengers, especially for group excursions like church picnics. Park facilities were free, but the only way to get there was via the Cornwall and Lebanon.⁷² The park offered picnic grounds, a dance hall, sports facilities, and a dining hall. Picnickers could also bring their own food and cook on the provided outdoor stoves or take a scenic hike to Governor Dick Mountain.⁷³ The railroad itself managed leases at Mt. Gretna including cottage rentals, catering, and park

⁷¹ Mark Aldrich, "Locomotive Inspection Materials at the National Archives," *Railroad History* no. 175 (1996): 133.

⁷² Noble, "Touch of Time," 49-51.

⁷³ "A Day at Mt. Gretna," *Lebanon Daily News*, July 2, 1885.

privileges.⁷⁴ The park was a success that warranted further investment. In October 1885, the Cornwall and Lebanon's Board of Directors decided to build Lake Conewago at Mt. Gretna to provide swimming and boating facilities.⁷⁵

Mt. Gretna also led to the creation of yet another railroad and improvements to the main line. The Mt. Gretna Narrow Gauge Railway was a subsidiary of the Cornwall and Lebanon. The two-foot gauge⁷⁶ railroad was mostly a novelty and Coleman's pet project. The narrow gauge opened on June 25, 1889, and carried visitors from the Cornwall and Lebanon's station in Mt. Gretna to the scenic overlook on nearby Governor Dick Mountain. It also helped carry troops to the nearby National Guard camp that Coleman had provided land for. However, lawsuits from several small accidents and a decline in passengers led the line to close completely in 1916.⁷⁷ Unfortunately, no records show whether the railroad was profitable in its own right since it was merely a subsidiary. The fact that the Cornwall and Lebanon chose to close the line rather than fix its problems indicates it was not profitable enough to save. Mt. Gretna as a whole, however, was a success. The increase in traffic from Mt. Gretna and the National Guard camp encouraged the Cornwall and Lebanon Board of Directors to double track the main line.⁷⁸ As a result of this double tracking, trains could travel in both directions without having to wait on a siding for another train to pass.

⁷⁴ Cornwall and Lebanon Minute Book 1882-1900, March 6, 1883, 338.

⁷⁵ *Ibid.*, October 5, 1885, 151-52.

⁷⁶ Gauge refers to the width between the rails. Standard gauge for American railroads is 4' 8 ½"; Stover, *American Railroads*, 143.

⁷⁷ Railway and Locomotive Historical Society, "Mount Gretna Narrow Gauge Railway Owned by Cornwall and Lebanon R.R. Co," *The Railway and Locomotive Historical Society Bulletin* no. 57 (1942): 101.

⁷⁸ Cornwall and Lebanon Minute Book 1882-1900, March 25, 1887, 206.

The Cornwall and the Cornwall and Mt. Hope Railroad competed with Mt. Gretna through their own resort town, Penryn Park. Penryn Park offered similar facilities to Mt. Gretna and advertised to churches and other organizations for picnics. As with Mt. Gretna, most facilities were free, but the only way to get there was by train.⁷⁹ While Penryn Park lacked the National Guard camp and narrow-gauge railroad, it was still a success and accounted for a large portion of the Cornwall's passengers up until the park closed permanently due to a flood in 1925.⁸⁰ Unlike Mt. Gretna, Penryn Park did not lead to another standoff between the railroads.

Part of Coleman's deal with the National Guard conflicted with an agreement between the Cornwall and the Reading, creating another railroad war. Coleman gave the land to the National Guard in exchange for the Cornwall and Lebanon's exclusive right to transport the troops to the camp. However, by this time, the Reading had an agreement with the Cornwall not to transfer any cargo or passengers to the Cornwall and Lebanon in Lebanon. Unaware of these agreements, National Guard officers sent troops from Philadelphia to Cornwall via the Reading on August 5, 1887. Reading Railroad officials, holding to their agreement with the Cornwall, transferred the troops to the Cornwall. They would have to transfer to the Cornwall and Lebanon Railroad in Cornwall to continue to Mt. Gretna. However, since transporting troops on the Cornwall and Lebanon constituted the National Guard's payment for their land, Cornwall and Lebanon Railroad officials refused to take the troops the last three miles of their trip. Some of the frustrated troops began marching to Mt. Gretna on their own. Cornwall Railroad superintendent Neff accused the Cornwall and Lebanon of acting above the law by refusing to fulfill their duties

⁷⁹ "Penryn Park on the Cornwall & Mt. Hope Railroad," *Lebanon Daily News*, May 8, 1885.

⁸⁰ Rhoads and Heilman, *Railroads of Lebanon County*, 63.

as a common carrier.⁸¹ Regardless of which railroad had the right to carry the troops, the troops were stuck in the middle and suffering from the rivalry.

Once again, the connection to larger railroads came into play. Taking advantage of the rivalry between the Reading and the Pennsylvania, the National Guard quartermaster threatened to start sending all troops over the Pennsylvania to the Cornwall and Lebanon in Conewago if the Reading did not cooperate. The threat worked, and Reading Railroad officials convinced Freeman to follow along by agreeing to pay him for future troop movements as if the Cornwall had carried them instead of the Cornwall and Lebanon. The Cornwall took the troops back to Lebanon and then transferred them to the Cornwall and Lebanon so they could head south again to Mt. Gretna.⁸² It appears that the Reading was the only company that made any efforts to solve the situation, even if it was only under the threat of losing business.

The Cornwall and the Cornwall and Lebanon's reliance on the same freight customers also fueled their rivalry. In particular, both lines served the Cornwall Ore Bank Co. and the various furnaces and industries that depended on the ore from the mines. In 1875, all but one of the Cornwall's 159 freight cars were gondola cars designed to carry coal, stone, and ore.⁸³ By 1877, little had changed. The Cornwall had 169 freight cars, 152 of which were gondolas.⁸⁴ In 1879, Henry V. Poor still noted that the Cornwall primarily hauled coal and iron. Unfortunately, the railroad was not consistent in listing what kinds of freight cars it had, and eventually reported a total number with no further description.⁸⁵ While it might appear as if these cars are not

⁸¹ "The Trouble Adjusted," *Lebanon Daily News*, August 5, 1887.

⁸² *Ibid.*

⁸³ Poor, *Manual of the Railroads of the United States 1876* (New York: H.V. & H.W. Poor, 1876), 422.

⁸⁴ Poor, *Manual of the Railroads 1878*, 231.

⁸⁵ Poor, *Manual of the Railroads of the United States 1880* (New York: H.V. & H.W. Poor, 1880), 283.

entirely related to iron given their use for coal and stone, coal was used to fuel the iron furnaces and stone was a byproduct of mining iron.

The Cornwall and Lebanon had clearer ties to iron. Unlike the Cornwall, the Cornwall and Lebanon's reports to the state secretary of the interior survive and list what kinds of freight it carried every year. In its first full year of operation, the Cornwall and Lebanon shipped 116,129.11 tons of iron ore and 36,995.09 tons of pig iron. Iron ore and pig iron combined accounted for 56% of the Cornwall and Lebanon's freight that year.⁸⁶ Iron accounted for 63% of the Cornwall and Lebanon's freight traffic the following year. That does not account for the 35,510.12 tons of anthracite coal and 4,511.18 tons of bituminous coal that the Cornwall and Lebanon shipped.⁸⁷ Some of that coal was necessary for furnaces' fuel. Thus, both railroads were heavily dependent on the ore mines.

Despite all of the fighting over access to the iron mines, the mines shipped enough iron to support both railroads. As construction progressed on the Colebrook Valley and the Cornwall and Lebanon, the Cornwall Ore Bank Co. rapidly expanded its production to compete with the Mesabi range in Minnesota by hiring more miners, using new technology, and improving organization. From 1866 to 1879, the mines' average yearly ore production was 193,342 tons. In 1880, it was 231,173 tons. By 1885, the mines produced 569,928 tons of iron ore. After that, production varied but continued to rise on average.⁸⁸ However, it is important to consider how this ore was divided between both railroads.

⁸⁶ Cornwall and Lebanon Railroad Co., Annual Report to the Department of Internal Affairs of Pennsylvania, 1884, 10, Series MG-286-KPRR-COCL-681, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

⁸⁷ Cornwall and Lebanon Railroad Co., Annual Report to the Department of Internal Affairs of Pennsylvania, 1885, 12, Series MG-286-KPRR-COCL-681, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

⁸⁸ Weber, *Always More Production*, 34-35.

There was enough ore for both lines without detracting from the Cornwall's existing business, thus showing that the two railroads could have had stable, healthy competition for the mine's business rather than a cutthroat rivalry. Unfortunately, no sources exist from the Cornwall Railroad that indicate how much iron ore they shipped from year to year. Thankfully, such information does exist for the Cornwall and Lebanon. Since the situation called for rail transportation in nearly all cases, it is safe to assume that most, if not all, of the ore not carried by the Cornwall and Lebanon was carried by the Cornwall. In the Cornwall and Lebanon's first full year of operation, it carried 116,129.11 tons of ore.⁸⁹ That left about 280,224 tons for the Cornwall, which is less than what was available in 1883 but more than all but one year of the Cornwall's operations previous to that.⁹⁰ In 1885, the Cornwall and Lebanon carried 181,573.13 tons of iron ore out of the 569,928 tons the mines produced that year.⁹¹ That left nearly 75% or 388,354.87 tons to the Cornwall, slightly more ore than was available to the railroad in 1883. Thus, overall, the Cornwall lost potential traffic increases to the Cornwall and Lebanon, but the amount of ore it shipped did not decrease.

The Cornwall would not have been able to handle this dramatic increase in production on its own without significant and rapid expansion. Bethlehem Steel bought the Cornwall in 1920, two years after the Pennsylvania bought the Cornwall and Lebanon. In response to the Bethlehem Steel buyout, the Pennsylvania ceded all Bethlehem Steel iron shipments to the Cornwall so as to avoid competing with its own customer. Cornwall Railroad managers, however, said they would struggle to carry this dramatic increase in traffic and would have to

⁸⁹ Cornwall and Lebanon Annual Report, 1884, 10.

⁹⁰ Weber, *Always More Production*, 34.

⁹¹ Cornwall and Lebanon Annual Report, 1885, 12.

substantially improve their line with new scales, equipment, and heavier locomotives. All of this was in addition to the rolling stock the Pennsylvania had already sold to the Cornwall.⁹² Granted, this is later in the railroad's history. It is entirely possible that the Cornwall could have slowly expanded to meet the demand of the ore mines. Nevertheless, it stands that the Cornwall struggled to do so later on and that there was enough ore to supply both railroads throughout their years of fighting.

This indicates that the Cornwall was not a natural monopoly. Many historians and economists have long assumed that railroads are inherently natural monopolies or oligopolies.⁹³ A natural monopoly is a situation where it is impractical for more than one company to exist due to the economy of scale offered by a single large company. Robert E. Gallamore and John R. Meyer, however, argue that railroads are not natural monopolies since competition from other railroads and other modes of transportation can keep them in check, and sometimes two railroads are more economical than one. Thus, while they can clearly become monopolies, they are not inherently monopolies and there is no need to regulate them as natural monopolies.⁹⁴ The fact that there was sufficient business for two directly parallel railroads fits well with Gallamore and Meyer's argument as a potential example for this larger debate. However, Gallamore and Meyer's argument is largely opposed to previous historiography.

The Cornwall does not fit historians' arguments that railroads are natural monopolies. Unfortunately, out of the historians who address this issue, most simply assume that railroads are

⁹² "To Ship Cornwall Ore Over Cornwall Instead of Pennsy," *Lebanon Daily News*, January 12, 1920.

⁹³ Churella, *Pennsylvania Railroad*, 545; George W. Hilton, "The Consistency of the Interstate Commerce Act," *The Journal of Law & Economics* 9 (1966): 87-88; Harbeson, "Railroads and Regulation," 230-32; Hovenkamp, "Regulatory Conflict in the Gilded Age," 1018.

⁹⁴ Gallamore and Meyer, *American Railroads*, 22-23.

natural monopolies. Albert J. Churella, for example, states in *The Pennsylvania Railroad* that nineteenth century regulators did not fully understand that railroads were natural monopolies without making an argument that they are.⁹⁵ Likewise, he does not discuss the matter in his review of Gallamore and Meyer's book.⁹⁶ Other historians had already made this argument decades earlier. In 1967, Robert W. Harbeson, argued that railroads were natural monopolies as rail competition only led to waste, rate wars, and price discrimination.⁹⁷ In 1988, Herbert Hovenkamp argued that, while parallel railroads could make a profit large enough to cover operating costs, they could not cover fixed costs like debt from building the railroad. If both railroads were to set their rates high enough to cover all costs, they would be higher than the rates charged by the monopoly. Railroads in such a position would either create a pool and raise rates or one would destroy the other and reinstate the monopoly.⁹⁸ Unsurprisingly, Churella's assumption is largely based on Hovenkamp's argument.⁹⁹ As the following chapters will demonstrate, Hovenkamp's argument does not describe what occurred in the case of the Cornwall Railroad and the Cornwall and Lebanon Railroad. That is not to say that one example can topple arguments that railroads are natural monopolies. Rather, it is to say that the Cornwall Railroad and the Cornwall and Lebanon Railroad are at least exceptions to the rule.

While the two railroads, like most others at the time, acted as though they were playing a zero-sum game and sought to undermine each other at every turn, there was enough business to support both railroads without trying to eliminate the competition. Coleman's actions, the

⁹⁵ Churella, *Pennsylvania Railroad*, 545.

⁹⁶ Churella, "Review: *American Railroads*," 170-73.

⁹⁷ Harbeson, "Railroads and Regulation," 232.

⁹⁸ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1035-37.

⁹⁹ Churella, *Pennsylvania Railroad*, 889.

fighting between the two railroads, and the connection to the larger battle between the Pennsylvania and the Reading reflect the trend of excessively competitive behavior in the 1880s rail industry. However, the Cornwall and Lebanon and the Cornwall stand out from similar railroads in a critical respect. Other railroads in this period were built for the sole purpose of undercutting a competitor with little hope of making a profit themselves. In this case, there was a genuine benefit to building a second railroad directly alongside the older line.

Chapter Two: Growing Parallel Lines: Profitability and Stability

As demonstrated in the previous chapter, the Cornwall Ore Bank Co. was the primary customer of both the Cornwall Railroad and the Cornwall and Lebanon Railroad and grew substantially in the late nineteenth century. As a result, there was enough ore to supply both lines and provide the Cornwall Railroad with as much ore as it shipped before the introduction of competition. The intense rivalry between the two railroads, however, gives the impression that they struggled against one another for survival and could not profit without one eliminating the other. This was certainly the case for many other parallel railroads built during the 1880s. Surprisingly, this does not apply to the Cornwall Railroad and the Cornwall and Lebanon Railroad. Company documents and third-party reports show that, despite their fierce rivalry, the Cornwall and Lebanon Railroad and Cornwall Railroad were both able to not only survive but prosper, distinguishing them from other parallel railroads and further demonstrating that railroads are not always natural monopolies. Both companies were able to increase their traffic, add new equipment, hire employees, and profit despite their redundancies and aggressively competitive behavior. Contrary to the attitudes of railroad executives in the 1880s, railroading was not a zero-sum game.

In the 1880s, other railroads built new lines to undermine their competitors when there was not enough traffic to support both lines, leading to rate wars and other anti-competitive behavior to try and eliminate their rivals. Neither railroad could make a profit so long as the other existed. As Herbert H. Harwood stated, there was either too much competition, leading to rate wars and price discrimination, or too little in the form of monopolies. The former often led to the latter when one railroad won the rate war and the other company folded.¹ Not only did rate wars and monopolies draw the public's ire, but investors eventually learned that this kind of railroad building was not financially sound. In response, J.P. Morgan created the community of interest model to help mitigate the excesses of railroad competition and maintain stability for investors.² Railroad executives eventually learned the hard way that their ruthless behavior was not in their best interest and was losing them money, not expanding their power. The creation of so many unprofitable lines in the 1880s eventually contributed to the Panic of 1893, which ruined men like Robert H. Coleman.³ All of this helped convince railroad executives to support federal regulation.⁴ However, the Cornwall and Lebanon Railroad was an exception to this trend of overexpansion.

Both the Cornwall Railroad and the Cornwall and Lebanon Railroad's freight traffic grew even during the years of their fiercest competition, demonstrating that there was enough business to serve both lines. In 1875, the Cornwall hauled 220,662 tons of freight.⁵ In 1879, the Cornwall

¹ Harwood Jr., *Railroad that Never Was*, 4-13.

² *Ibid.*, 91.

³ Churella, *Pennsylvania Railroad*, 547.

⁴ *Ibid.*, 664.

⁵ Henry Varum Poor, *Manual of the Railroads 1876*, 718.

hailed 547,372 tons.⁶ Freight traffic fell to 434,918 tons in 1880 but rebounded.⁷ In 1883, when the Cornwall only had to compete with the Cornwall and Lebanon for the last three months of the year, the Cornwall hauled 720,832 tons.⁸ Under pressure from a second railroad, growth slowed slightly. The Cornwall hauled 738,363 tons in 1884, and traffic fell to 710,148 tons in 1885.⁹ However, this trend did not last long and the Cornwall's freight traffic expanded throughout the rest of the 1880s. Between 1875 and 1900, the Cornwall's peak year of freight traffic was 1889, when it hauled 1,157,276 tons of freight.¹⁰ All of this occurred despite the competition from the Cornwall and Lebanon. Traffic decreased in the 1890s, reaching a low of 107,301 tons in 1897, but this can largely be attributed to the Panic of 1893 as it coincides with the economic downturn and the Cornwall and Lebanon experienced the same decrease in traffic.¹¹ By the turn of the century, the Cornwall recovered and hauled numbers closer to its busiest years in the 1880s.¹² Figure 2.1 shows the Cornwall Railroad's freight traffic between 1875 and 1900, showing an overall upward trend and continued growth after the introduction of competition. These years have been chosen as starting and ending points so as to provide context for the railroad's growth prior to the construction of the Cornwall and Lebanon and to show its recovery after the Panic of 1893.

⁶ Poor, *Manual of the Railroads 1880*, 283.

⁷ Poor, *Manual of the Railroads of the United States 1881* (New York: H.V. & H.W. Poor, 1881), 219-20.

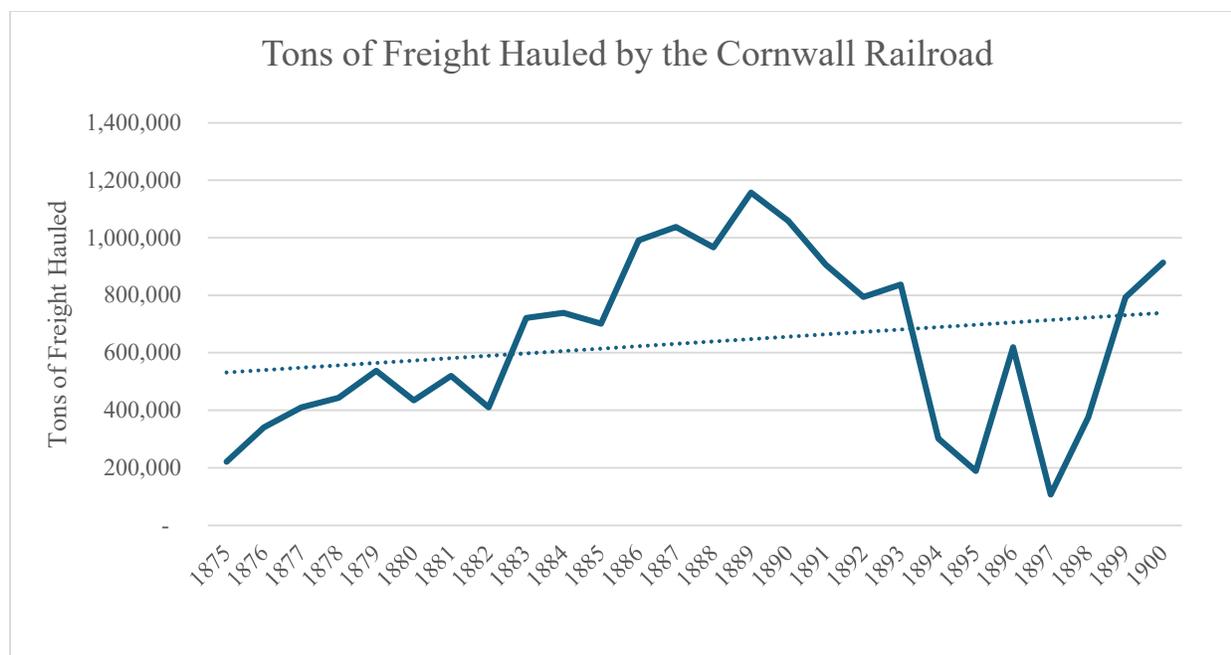
⁸ Poor, *Manual of the Railroads of the United States 1884* (New York: H.V. & H.W. Poor, 1884), 239-40.

⁹ Poor, *Manual of the Railroads of the United States 1885*, 233; Poor, *Manual of the Railroads of the United States 1886* (New York: H.V. & H.W. Poor, 1886), 116.

¹⁰ Poor, *Manual of the Railroads of the United States 1890* (New York: H.V. & H.W. Poor, 1890), 167.

¹¹ Poor, *Manual of the Railroads of the United States 1898* (New York: H.V. & H.W. Poor, 1898), 219.

¹² Poor, *Manual of the Railroads of the United States 1901* (New York: H.V. & H.W. Poor, 1901), 174.

Figure 2.1¹³

It is important to note that the above figures do not include the Cornwall and Mt. Hope Railroad prior to its merger with the Cornwall Railroad, though it was controlled by the Cornwall Railroad. The Cornwall and Mt. Hope hauled an additional 15,487 tons in its first few months of operation in 1884. It carried 48,624 tons of freight in 1885 and 118,610 tons from January to

¹³ Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads of the United States 1877* (New York: H.V. & H.W. Poor, 1877), 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads of the United States 1879* (New York: H.V. & H.W. Poor, 1879), 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads of the United States 1883* (New York: H.V. & H.W. Poor, 1883), 254; Poor, *Manual of the Railroads 1884*, 239-40; Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*, 136; Poor, *Manual of the Railroads of the United States 1888* (New York: H.V. & H.W. Poor, 1888), 137-38; Poor, *Manual of the Railroads of the United States 1889* (New York: H.V. & H.W. Poor, 1889), 129-30; Poor, *Manual of the Railroads 1890*, 167; Poor, *Manual of the Railroads for 1891* (New York: H.V. & H.W. Poor, 1891), 170; Poor, *Manual of the Railroads of the United States 1892* (New York: H.V. & H.W. Poor, 1892), 188; Poor, *Manual of the Railroads of the United States 1893* (New York: H.V. & H.W. Poor, 1893), 218; Poor, *Manual of the Railroads of the United States 1894* (New York: H.V. & H.W. Poor, 1894), 76; Poor, *Manual of the Railroads of the United States 1895* (New York: H.V. & H.W. Poor, 1895), 81; Poor, *Manual of the Railroads of the United States 1896* (New York: H.V. & H.W. Poor, 1896), 75; Poor, *Manual of the Railroads of the United States 1897* (New York: H.V. & H.W. Poor, 1897), 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads of the United States 1899* (New York: H.V. & H.W. Poor, 1899), 219; Poor, *Manual of the Railroads of the United States 1900* (New York: H.V. & H.W. Poor, 1900), 193; Poor, *Manual of the Railroads 1901*, 174.

October of 1886 before it merged with the Cornwall.¹⁴ This paints an even brighter picture of the Cornwall Railroad's overall freight traffic following the construction of the Cornwall and Lebanon. However, these figures cannot simply be combined as some of this freight traffic traveled over both railroads. Thankfully, Henry V. Poor's *Manual of the Railroads of the United States* included both through traffic and short-haul traffic, meaning freight that the railroad carried more than one mile but did not leave the railroad. The Cornwall and Mt. Hope carried 77,435 tons at least one mile in 1884, 272,295 in 1885, and 297,255 tons at least one mile in 1886.¹⁵ While this does not count traffic that originated on the Cornwall and Mt. Hope and transferred to the Columbia and Reading Railroad, it at least shows how much traffic stayed on the Cornwall and Mt. Hope itself as opposed to traffic that went between the Cornwall Railroad and the Columbia and Reading, merely passing through Mt. Hope.

The above graph also further demonstrates the Cornwall Railroad's heavy dependency on iron shipments. While the Cornwall shipped roughly 300,000 more tons of freight than the ore the mines produced in 1889, the Cornwall's freight shipments tended to roughly follow how much ore the mines produced that year, though with some delay.¹⁶ The two worst years for the Cornwall's overall freight shipments were punctuated by a brief resurgence in 1886. The mines show a similar pattern but a year in advance because the two companies began recording their operational years in different months. Poor's 1886 *Manual of the Railroads*, for example, lists information reported by the railroad through November 30, 1885.¹⁷ The Cornwall Ore Bank Co.

¹⁴ Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*; 136.

¹⁵ Ibid.

¹⁶ Weber, *Always More Production*, 35.

¹⁷ Poor, *Manual of the Railroads 1886*, 116.

began their operational year in April. Each year, the Cornwall's freight shipments were roughly half of the amount of ore shipped by the mines but delayed slightly. Otherwise, the railroad's freight shipments closely followed the trend set by the mines.¹⁸ The railroads' prosperity was tied to the output of the mines.

When examining small railroads like the Cornwall or Cornwall and Lebanon, it is also important to account for short-haul traffic. As discussed in relation to the Cornwall and Mt. Hope Railroad, through traffic statistics miss a large portion of a railroad's business. These statistics are especially important for the Cornwall Railroad's smaller movements like taking ore from the mines to the nearby Bird Coleman Furnace. Prior to its expansion to compete with the Cornwall and Lebanon, the Cornwall Railroad's main line was only 7.47 miles long.¹⁹ In the Cornwall Railroad's peak year of 1889, the railroad carried 8,100,932 tons of freight at least one mile.²⁰ Even in slow years like 1894 when the railroad only carried 302,069 tons of freight, it carried 1,812,414 tons of freight at least one mile.²¹ Yet ten years earlier when the railroad carried 738,363 tons of freight, it carried less short-haul freight than it did during the depression of the 1890s.²² Thus, these statistics are both important as they did not always rise and fall together. Though the trends of these statistics vary from one another, they both show that the Cornwall Railroad continued to grow after the construction of the Cornwall and Lebanon Railroad. Figure

¹⁸ Weber, *Always More Production*, 35.

¹⁹ Poor, *Manual of the Railroads 1877*, 272.

²⁰ Poor, *Manual of the Railroads 1890*, 167.

²¹ Poor, *Manual of the Railroads 1895*, 81.

²² Poor, *Manual of the Railroads 1885*, 233.

2.2 shows the tons of freight the Cornwall Railroad hauled at least one mile between 1875 and 1900.

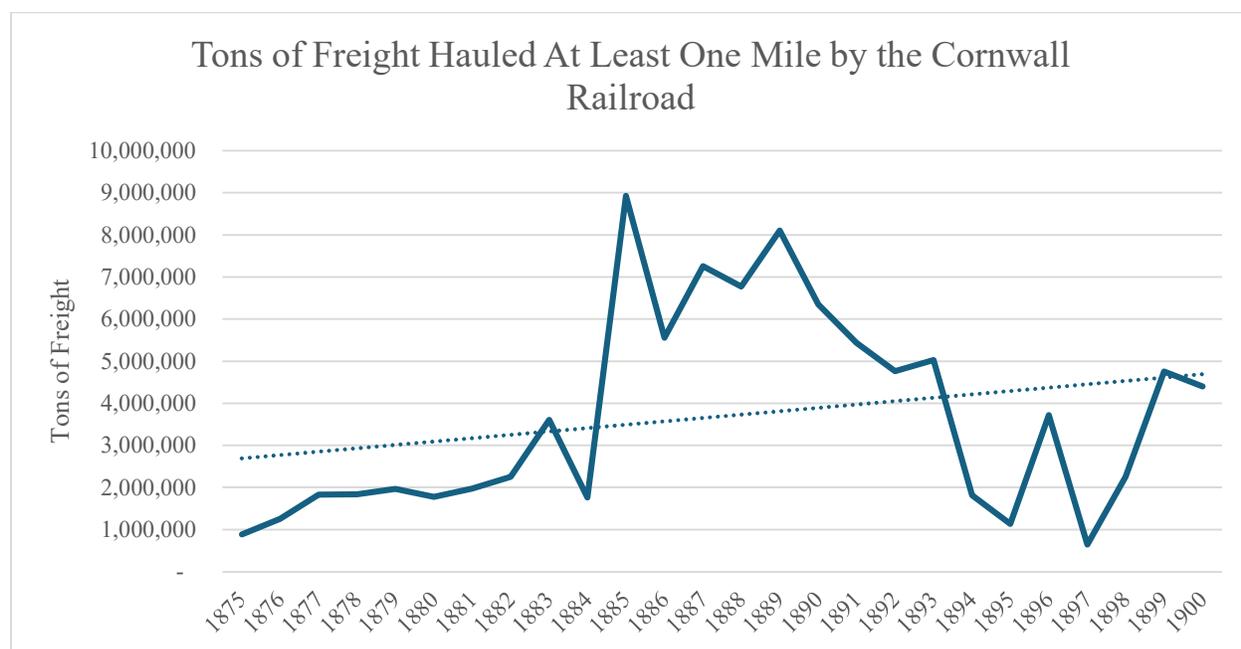


Figure 2.2²³

Despite having to compete with the older, better established Cornwall Railroad, the Cornwall and Lebanon Railroad also grew rapidly and even surpassed the Cornwall Railroad in freight traffic, demonstrating that there was enough traffic to supply both railroads. In its first full year of operation, the Cornwall and Lebanon Railroad moved 271,946 tons of through freight and moved 1,618,191 tons at least one mile.²⁴ This figure included the Colebrook Valley

²³ Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1877*, 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads 1879*, 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239-40; Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*, 136; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 129-30; Poor, *Manual of the Railroads 1890*, 167; Poor, *Manual of the Railroads 1891*, 170; Poor, *Manual of the Railroads 1892*, 188; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

²⁴ Poor, *Manual of the Railroads 1885*, 235.

Railroad, which the Cornwall and Lebanon Railroad had already leased. The Cornwall and Lebanon surpassed the Cornwall's freight traffic in 1893, when it carried 1,229,071 tons of freight.²⁵ By 1900, the Cornwall and Lebanon carried 1,384,422 tons of freight and moved 20,814,304 tons at least one mile.²⁶ Like the Cornwall, the Cornwall and Lebanon was able to grow despite the intense rivalry. As shown in Figure 2.3 and Figure 2.4, the Cornwall and Lebanon's figures for tons hauled one mile more closely resembles their overall tonnage in comparison with the Cornwall. This indicates that the new line offered more through traffic, such as to the interchange with the Pennsylvania Railroad in Conewago or with the Reading in Lebanon.

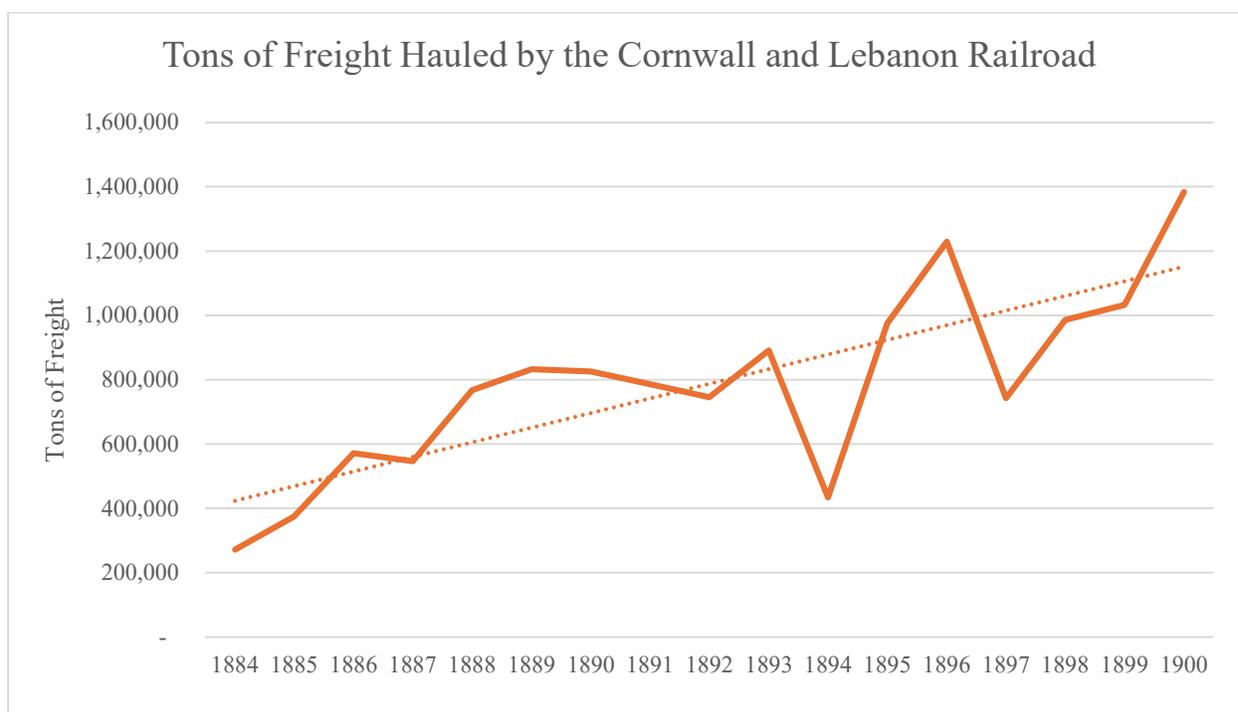


Figure 2.3²⁷

²⁵ Poor, *Manual of the Railroads 1894*, 76.

²⁶ Poor, *Manual of the Railroads 1901*, 174.

²⁷ Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 283; Poor, *Manual of the Railroads 1887*, 137; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1889*, 129; Poor,

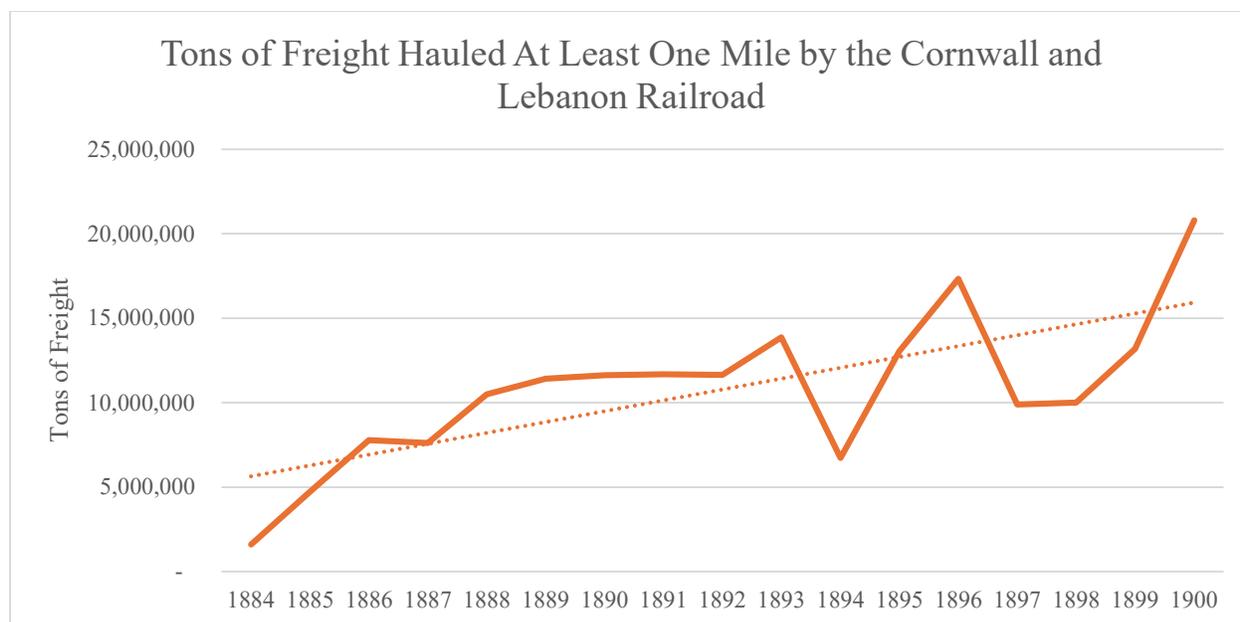


Figure 2.4²⁸

Both railroads also increased their passenger traffic despite their rivalry. However, since the Cornwall Railroad only began offering passenger service in response to the Cornwall and Lebanon, the former did not have the advantage that it did with freight. Both railroads were new to passenger service and had to establish themselves. However, the Cornwall and Lebanon had a heavier focus on passenger service and quickly outpaced the Cornwall in the number of passengers it carried. In 1883, the Cornwall carried 61,212 passengers and carried 478,791

Manual of the Railroads 1890, 166; Poor, *Manual of the Railroads 1891*, 171; Poor, *Manual of the Railroads 1892*, 186; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

²⁸ Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 283; Poor, *Manual of the Railroads 1887*, 137; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1889*, 129; Poor, *Manual of the Railroads 1890*, 166; Poor, *Manual of the Railroads 1891*, 171; Poor, *Manual of the Railroads 1892*, 186; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

passengers at least one mile.²⁹ Passenger traffic grew to a peak of 167,042 passengers and 1,158,756 passengers at least one mile in 1891.³⁰ Unsurprisingly, passenger traffic decreased as the economy slowed in the early 1890s before rebounding at the turn of the century.³¹ The Cornwall and Lebanon carried 60,923 passengers and 654,307 passengers at least one mile in 1884.³² That number rose to 212,199 passengers in 1888 and peaked at 255,918 passengers and 2,524,776 passengers at least one mile in 1891.³³ As with the Cornwall Railroad, Cornwall and Lebanon Railroad passenger traffic slowed in the early 1890s but rebounded after the depression ended.³⁴ While the Cornwall and Lebanon's passenger numbers were stronger, both railroads were able to expand their passenger service.

Reflecting the growth in traffic, both railroads also increased and refined their fleets of locomotives and rolling stock, further demonstrating their growth during this time. The Cornwall expanded its fleet of locomotives from three in 1875 to five in 1880 and nine in 1889. That number decreased to five during the early 1890s.³⁵ However, that reduction was also due to

²⁹ Poor, *Manual of the Railroads 1884*, 239.

³⁰ Poor, *Manual of the Railroads 1892*, 188.

³¹ Poor, *Manual of the Railroads 1892*, 188; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

³² Poor, *Manual of the Railroads 1885*, 234.

³³ Poor, *Manual of the Railroads 1889*, 129; Poor, *Manual of the Railroads 1892*, 186.

³⁴ Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

³⁵ Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1881*, 220; Poor, *Manual of the Railroads 1890*, 167; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

replacing older locomotives, with newer, more powerful engines that could haul more cars at once. While some of the new locomotives were passenger types, the Cornwall later used these for freight service as well.³⁶ In 1896, a tornado destroyed the Cornwall's engine house along with four locomotives, hindering the growth of the locomotive roster.³⁷ The Cornwall also expanded its fleet of passenger cars from five in its first year of passenger service to nine in 1887. With some variation, the Cornwall maintained nine cars for the rest of the century.³⁸

Unfortunately, the Cornwall did not consistently report how many freight cars it owned and altered how they classified certain cars from year to year. Poor's entry for the Cornwall sometimes listed different types of cars like ore cars, box cars, cabooses, and "other" cars separately. Other years, the entry simply listed the total number of freight cars. Poor indicates that the Cornwall maintained 166 cars in 1880, 207 in 1885, then reduced its fleet to 173 in 1887 before dramatically reducing the number to 74 in 1888. The number continued to fall until the Cornwall only owned 27 freight cars in 1900.³⁹ Some of this can be attributed to the development of newer, higher capacity freight cars. Further, the Cornwall Ore Bank Co. and other customers may have owned them outright and many cars were likely interchanged from the Reading, though there is no indication as to how much this occurred. What is certain is that this reduction was not due to a decrease in freight traffic. The Cornwall's freight traffic was increasing at the same time it began reducing its fleet of freight cars. Further, the Cornwall

³⁶ Rhoads and Heilman, *Railroads of Lebanon County*, 64-66.

³⁷ Kercher, "Cornwall Railroad," 110.

³⁸ Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

³⁹ Poor, *Manual of the Railroads 1881*, 220; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1889*, 129; Poor, *Manual of the Railroads 1901*, 174.

continued to purchase new locomotives except following the Panic of 1893. Thus, the Cornwall's shrinking fleet of freight cars cannot be attributed to a lack of business.

The Cornwall and Lebanon also expanded its fleet of locomotives and rolling stock, further demonstrating the ability of both railroads to grow in the midst of competition. The Cornwall and Lebanon opened with six locomotives and worked up to 12 by 1889 before reducing their roster to 10 in 1893.⁴⁰ The Cornwall and Lebanon started with six passenger cars and added 10 more by 1887, which it maintained throughout the rest of the century.⁴¹ Unlike the Cornwall Railroad, the Cornwall and Lebanon consistently reported how many freight cars it owned and steadily expanded its roster. The Cornwall and Lebanon only owned 20 freight cars in 1884.⁴² By 1893, the railroad owned 545.⁴³ The Cornwall and Lebanon's reports to the state auditor also helpfully indicate that some of these freight cars were replaced over time. In particular, the railroad replaced older, smaller, two-axle cars with higher capacity four-axle cars.⁴⁴ Thus, not only did the Cornwall and Lebanon experience enough growth to warrant significantly expanding its fleet of rolling stock, but each of those 545 cars could carry more freight than their predecessors.

⁴⁰ Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1890*, 166; Poor, *Manual of the Railroads 1894*, 76.

⁴¹ Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1901*, 174.

⁴² Poor, *Manual of the Railroads 1885*, 234.

⁴³ Poor, *Manual of the Railroads 1894*, 76.

⁴⁴ Cornwall and Lebanon Railroad Co., Annual Report to the Department of Internal Affairs of Pennsylvania, 1886, 20, Series MG-286-KPRR-COCL-681, Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA; Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania, 1887, 11.

Both railroads also exhibited growth or at least stability in the number of employees they maintained. The Cornwall's surviving records show that the railroad expanded to face the competition from the Cornwall and Lebanon. These records listed all of the railroad's workers by month. The number varied each month but the Cornwall maintained an average of 25 employees in 1880.⁴⁵ In 1883, the Cornwall employed 69 workers, many of whom were specifically listed as laborers to help build new sidings and double track the main line.⁴⁶ These projects are signs of growth in themselves. In 1886, the Cornwall averaged 63 workers every month.⁴⁷ In 1891, the Cornwall only averaged 25 workers each month.⁴⁸ However, record keeping changed over this time. The first record book, *Account of Work Done for the North Lebanon Railroad*, covered 1866 through 1887 and listed many temporary workers such as laborers who were employed building new sidings. The second book, *Account of Work Done for the Cornwall Railroad Co.*, covered 1885 through 1891. The latter only included long term positions like engineers, firemen, conductors, brakemen, and switchmen.⁴⁹ The overlap in the time frame covered in each book further implies a related but somewhat distinct purpose. Only 18 of the workers in 1880 were employed in permanent positions such as engineer or fireman.⁵⁰ In 1883, 32 of the Cornwall's workers held long-term positions.⁵¹ Thus, the drop to 25 workers is not as severe as it first

⁴⁵ North Lebanon Railroad Co. *Account of Work Done for the North Lebanon Railroad Co.*, 1866-1887. Lebanon County Historical Society, Lebanon, PA.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Cornwall Railroad Co. *Account of Work Done for the Cornwall Railroad Co.*, 1885-1891. Lebanon County Historical Society, Lebanon, PA.

⁵⁰ *Account of Work Done for the North Lebanon*.

⁵¹ *Account of Work Done for the Cornwall*.

appears. Most of the workers in 1883 were employed to help expand the railroad's infrastructure. Once that work was done, there was no reason for the railroad to maintain so many workers.

The Cornwall and Lebanon's number of workers likewise demonstrates growth with some reductions due to a decline in new construction. The Cornwall and Lebanon had 120 workers in 1884 but only 90 in 1886, a decline which coincided with a lack of new construction.⁵² Unfortunately, state reports from this time only required the railroad to list the full number of employees, not what positions they held. While the form did specify "regularly employed," it is unclear if that included someone who was only hired for a short time to build or expand the railroad.⁵³ The number of employees on the Cornwall and Lebanon rebounded to 160 employees in 1886 and climbed to 173 just before the Panic of 1893.⁵⁴ Even in the midst of the panic, the railroad maintained 118 employees, fourteen of which were potentially temporary positions such as laborers.⁵⁵ By 1893, the state required railroads to report what positions employees held. It is clear that, while both railroads grew, the Cornwall and Lebanon was able to increase and maintain the number of workers in its employ far more than the Cornwall.

Both railroads also maintained healthy profits throughout the fiercest years of their rivalry, only broken temporarily by the Panic of 1893. Unsurprisingly, the Cornwall's net income declined significantly once it had to compete with another railroad. However, it continued to prosper in the more competitive environment. The Cornwall saw its most profitable years in the late 1870s and early 1880s before the Cornwall and Lebanon's construction. The Cornwall's

⁵² Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania, 1884, 9.

⁵³ Ibid.

⁵⁴ Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania, 1887, 11; Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania, 1892, 29.

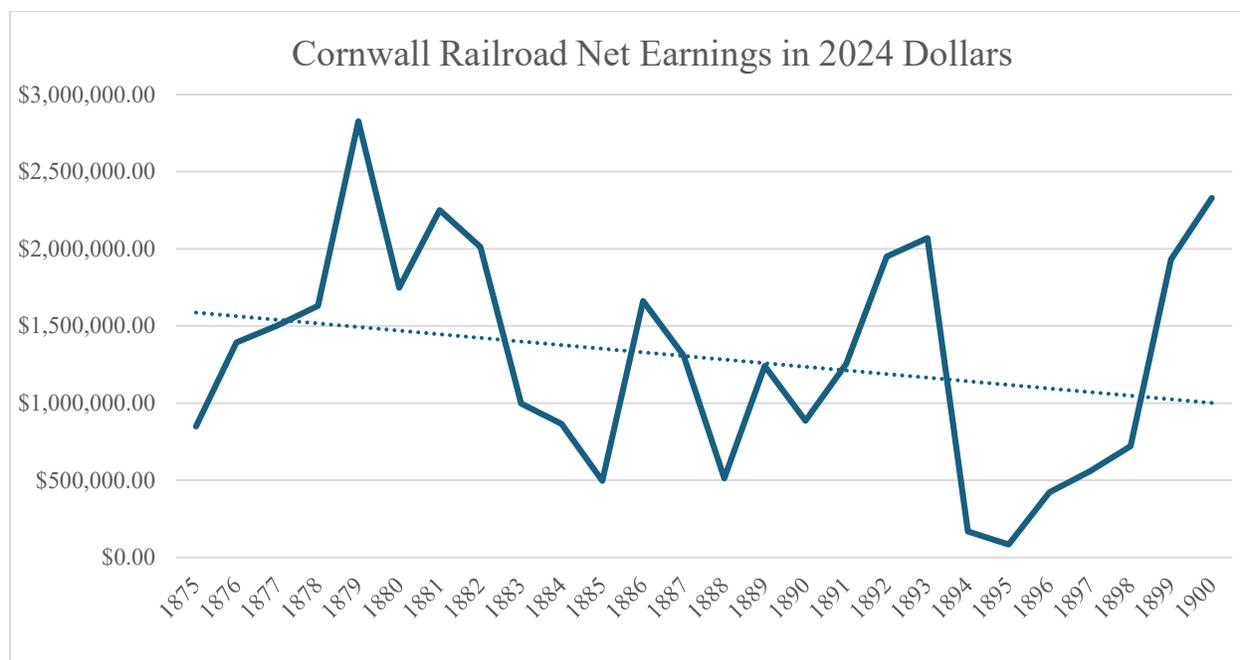
⁵⁵ Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania, 1894, 29.

most profitable year of the late nineteenth century was 1879 with \$90,016.31 in net earnings or \$2,828,087.42 in 2024 dollars. After taxes and dividends, this amounted to a surplus of \$18,016.31 or \$566,685.01 in 2024 dollars.⁵⁶ Net earnings decreased slightly over the next few years. Furthermore, the Cornwall stopped paying dividends to investors in 1882 and did not resume until 1899.⁵⁷ However, the suspension of dividends also meant that the railroads' surplus after taxes and dividends increased, peaking at \$53,768 in 1893 up from \$14,296.92 in 1882 or \$1,879,131.86 and \$440,877.77 in 2024 dollars respectively.⁵⁸ The Cornwall Railroad rebounded and continued to profit throughout the rest of the nineteenth century except for two years in the 1890s following the Panic of 1893. Figure 2.5 shows the Cornwall's net earnings from 1875 to 1900. As shown in Figure 2.5, net earnings dropped significantly upon the completion of the Cornwall and Lebanon.

⁵⁶ Poor, *Manual of the Railroads 1880*, 283.

⁵⁷ Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 240; Poor, *Manual of the Railroads 1900*, 193.

⁵⁸ Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1894*, 76.

Figure 2.5⁵⁹

As the above graph illustrates, the Cornwall experienced an overall downward trend in net earnings after the creation of the Cornwall and Lebanon but still continued to profit. However, adjusting for deflation shows that the railroad actually made more money in the early and late 1890s than many of its best years before the construction of its competitor. For example, the Cornwall made slightly more money in 1893 than it did in 1882. The Cornwall also owes much of this downward trend to the Panic of 1893. Thankfully for the Cornwall, the company had been accumulating a large sum of money from its surplus every year. By 1893, the Cornwall

⁵⁹ Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1877*, 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads 1879*, 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239-40; Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*, 136; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 129-30; Poor, *Manual of the Railroads 1890*, 167; Poor, *Manual of the Railroads 1891*, 170; Poor, *Manual of the Railroads 1892*, 188; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

added a surplus of \$53,758 for a total accumulated surplus of \$576,185.00.⁶⁰ As a result, they were able to weather a meager \$4,632 in net earnings and the loss of \$52,517 from taxes and “miscellaneous” expenses in 1894.⁶¹ The Cornwall’s decrease in net earnings cannot be attributed to losing business to the Cornwall and Lebanon since freight traffic also clearly increased at this time.

While the growth of the Cornwall’s net earnings may have slowed in the face of competition, its revenue did not. In 1879, the year of the Cornwall’s highest net earnings, the railroad’s total revenue was \$117,376.61 or \$3,691,963.89 in 2024 dollars.⁶² The Cornwall’s revenue fell to \$77,592.27 in 1884 or \$2,490,395.16 in 2024 dollars. However, it rebounded to \$125,634.60 in 1887 or \$4,159,695.48 in 2024 dollars and continued to roughly match or exceed the railroad’s revenue in 1879 up until the Panic of 1893.⁶³ However, expenses also increased dramatically due to the addition of new equipment, track, and workers. In 1879, the railroad’s operating expenses were \$27,360.30 or \$860,590.88 in 2024 dollars.⁶⁴ In 1889, the Cornwall paid \$104,705.89 in operating expenses or \$3,579,803.33 in 2024 dollars.⁶⁵ As a result, while revenue in 1889 was significantly higher than it was in 1879, net earnings were dramatically lower. By 1900, the Cornwall managed to reduce expenses and brought in \$125,618 in revenue with \$63,337.00 in operating expenses or \$4,703,795.92 and \$2,371,669.05 in 2024 dollars

⁶⁰ Poor, *Manual of the Railroads 1894*, 76.

⁶¹ Poor, *Manual of the Railroads 1895*, 81.

⁶² Poor, *Manual of the Railroads 1880*, 283.

⁶³ Poor, *Manual of the Railroads 1885*, 233.

⁶⁴ Poor, *Manual of the Railroads 1880*, 283.

⁶⁵ Poor, *Manual of the Railroads 1890*, 167.

respectively.⁶⁶ This decrease in expenses at the same time as an increase in freight traffic and revenue gives credence to the possibility that the Cornwall's fleet of freight cars decreased because its customers owned the cars directly. However, this is not certain and is merely one possible explanation. Regardless, even with generally higher operating expenses, the railroad still continued to profit. At times the Cornwall made as much as, or more than, it did prior to the construction of the Cornwall and Lebanon, although it never exceeded its record from 1879.

The Cornwall and Lebanon also increased its net earnings despite competing with the older, better-established Cornwall. In 1884, the Cornwall and Lebanon made \$31,049.56 in net earnings or \$995,407.71 in 2024 dollars and had thus already outpaced the Cornwall.⁶⁷ The Cornwall actually had more total revenue at \$77,592.27 compared with the Cornwall and Lebanon's \$63,527.46. However, the Cornwall and Lebanon's total expenses were only \$13,008.60 compared with the Cornwall's \$50,620.68.⁶⁸ By 1893, the Cornwall and Lebanon had \$129,955 in net earnings or \$4,536,512.46 in 2024 dollars.⁶⁹ When adjusted for inflation and deflation, the Cornwall and Lebanon's best year for net income between its inception and the turn of the century was 1900 with \$131,160.00 or \$4,905,618.21 in 2024 dollars.⁷⁰ Figure 2.6 shows the Cornwall and Lebanon's net earnings from 1884 to 1900 adjusted to 2024 dollars.

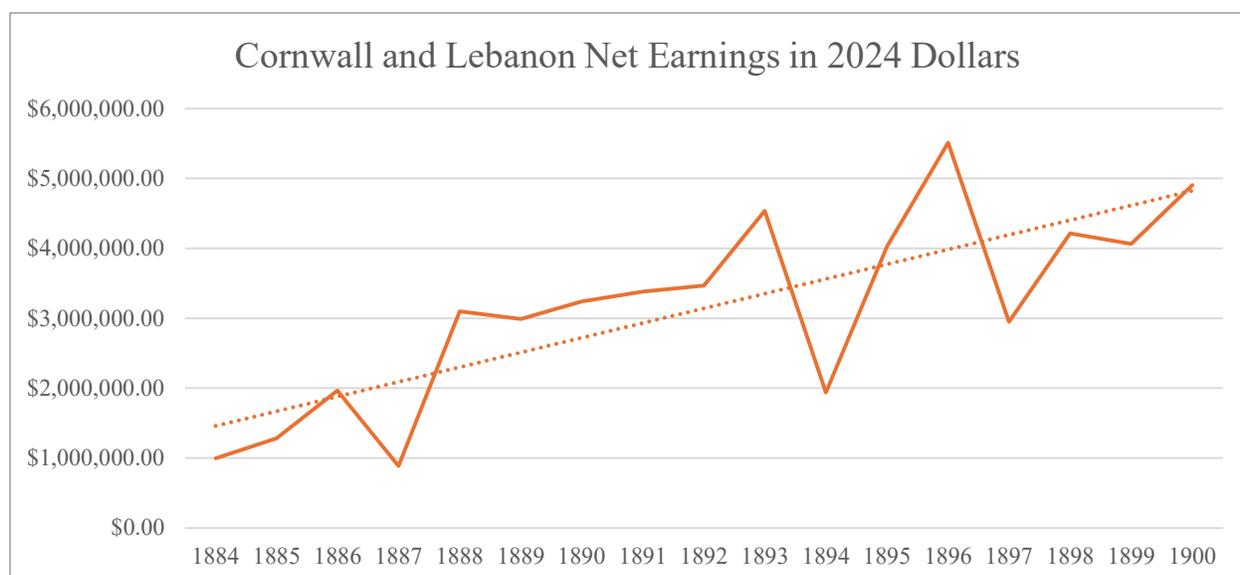
⁶⁶ Poor, *Manual of the Railroads 1901*, 174.

⁶⁷ Poor, *Manual of the Railroads 1885*, 234.

⁶⁸ Poor, *Manual of the Railroads 1885*, 233-34.

⁶⁹ Poor, *Manual of the Railroads 1894*, 76.

⁷⁰ Poor, *Manual of the Railroads 1900*, 174.

Figure 2.6⁷¹

The Pennsylvania Railroad understood the profitability of the Cornwall and Lebanon. The Pennsylvania began buying large amounts of stock in the Cornwall and Lebanon in 1913 and gained full control in 1918.⁷² At that point, the Cornwall and Lebanon completely merged with the Pennsylvania Railroad. The Pennsylvania Railroad included statistics regarding its new acquisition in its 1917 annual report to stockholders. The Cornwall and Lebanon had a slower year in 1917 with only \$1,897,920.62 in net earnings yet the Pennsylvania bought the Cornwall and Lebanon for \$2,500,269.84 or \$61,440,224.65 in 2024 dollars.⁷³ Pennsylvania Railroad management clearly thought this parallel line was worthwhile. As mentioned previously, they

⁷¹ Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1886*, 483; Poor, *Manual of the Railroads 1887*, 137; Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1889*, 128-29; Poor, *Manual of the Railroads 1890*, 166; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67-68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

⁷² Cornwall and Lebanon Railroad Co., *Stock Transfer Book 1882-1917*, Series MG286-KPRR-COCL-690. Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

⁷³ Pennsylvania Railroad Company, *Seventy-First Annual Report of the Board of Directors to the Stockholders for the Year 1917* (Philadelphia: Pennsylvania Railroad Company, 1918), 7, 28.

had also encouraged Coleman to build the Colebrook Valley Railroad and supplied rolling stock to the Cornwall and Lebanon. Albert J. Churella argued that the Pennsylvania Railroad's management was somewhat more conservative than its competitors like the Reading. The Pennsylvania Railroad management typically let smaller, overbuilt lines it previously supported fall into bankruptcy rather than risk damaging themselves.⁷⁴ The Pennsylvania buyout also occurred after the push for consolidation and cooperation began.⁷⁵ This, combined with the Cornwall and Lebanon's earnings over its lifetime, shows that the Pennsylvania Railroad bought out the Cornwall and Lebanon as a profitable asset, not as a way to stubbornly prop up an overbuilt line.

The Cornwall and Lebanon's surplus was less meteoric than its net earnings largely due to its greater commitment to paying dividends to its investors, which only further illustrates the railroad's success. The railroad began paying dividends in 1888. The Cornwall and Lebanon distributed \$12,000 in dividends resulting in a surplus of \$30,033.99 or \$993,255.66 in 2024 dollars after paying dividends and taxes.⁷⁶ The Cornwall and Lebanon may have had an overcommitment to paying investors as it still paid substantial dividends following the Panic of 1893 including \$16,000 in 1894 and \$24,000 in 1897 or \$585,190.70 and \$909,513.25 in 2024 dollars respectively. As a result, the railroad had a deficit rather than a surplus after paying dividends in 1894 and 1897.⁷⁷ Nevertheless, the Cornwall and Lebanon recovered and weathered the storm of the 1890s.

⁷⁴ Churella, *Pennsylvania Railroad*, 555.

⁷⁵ *Ibid.*, 548.

⁷⁶ Poor, *Manual of the Railroads 1889*, 129.

⁷⁷ Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1898*, 219.

The fact that the Cornwall and Lebanon was able to keep paying dividends to its investors further sets it apart from the usual trend established by other railroads built in the 1880s. As discussed previously, investors created many railroads for the sole purpose of hurting a competitor, even if they knew the railroad was not practical. This eventually encouraged railroad executives and investors to support either federal regulation or consolidation in order to achieve better financial stability. Weak, overbuilt railroads frequently went bankrupt. Unfortunately, rather than balancing the market with the elimination of an inefficient railroad, bankrupt railroads often went to receivers who revived them and made them more ruthless than ever.⁷⁸ Bankrupt railroads were also temporarily free of making interest payments and could therefore better afford to start rate wars, hoping to be able to negotiate better conditions when forming pools as a result.⁷⁹ The beginning of the Panic of 1893 was marked by the bankruptcy of the Philadelphia and Reading and many other railroads.⁸⁰ However, Edward Gross Campbell argued that the panic's damage was largely confined to railroads that were poorly managed and overextended, helping the remaining railroads like the Pennsylvania Railroad to grow stronger and consolidate.⁸¹ If Campbell's assessment is correct, it is telling that the Cornwall and Lebanon and the Cornwall both survived the Panic of 1893 while so many other railroads failed.

The fact that both railroads were able to profit, often with each company matching or even exceeding the profits of a single railroad, demonstrates that railroads are not always natural monopolies. The Cornwall Railroad's average yearly net income between 1875 and 1883, before

⁷⁸ Schlegel, "America's First Cartel," 1.

⁷⁹ Stover, *American Railroads*, 108.

⁸⁰ Carlson, "Causes of Bank Suspensions in the Panic of 1893," 60.

⁸¹ Dougall, "Review: *The Reorganization of the American Railroad System*," 421-22.

the creation of the Cornwall and Lebanon, was \$1,776,988.49 in 2024 dollars.⁸² The Cornwall not only continued to profit but exceeded the pre-Cornwall and Lebanon average in 1892, 1893, 1899, and 1900.⁸³ The Cornwall and Lebanon exceeded the pre-competition Cornwall Railroad's net earnings nearly every year starting in 1888, including during the Panic of 1893.⁸⁴ As a result, there were several years when both railroads individually made more money than the Cornwall did as a monopoly. For example, the above statistics show that both railroads individually made more money in 1892 than the Cornwall Railroad made on its own previous to the construction of the Cornwall and Lebanon. The only exceptions are the Cornwall's record years of 1879 and 1881. If railroads are natural monopolies, then it makes little sense that both railroads could not only profit but often match the profits of the single monopolistic railroad.

The ability of each railroad to cover more than its operating expenses further demonstrates that the Cornwall Railroad was not a natural monopoly. Herbert Hovenkamp argued that railroads were natural monopolies because, while parallel lines might be able to profit enough to cover operating costs, they could never make enough to cover fixed costs like debt from construction.⁸⁵ The Cornwall had no remaining debt to pay off from its initial

⁸² Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1877*, 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads 1879*, 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239-40.

⁸³ Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

⁸⁴ Poor, *Manual of the Railroads 1889*, 128-29; Poor, *Manual of the Railroads 1890*, 166; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67-68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

⁸⁵ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1035-36.

construction.⁸⁶ It is also important to note that available records do not specify why the Cornwall stopped paying dividends. While it is probable that it stopped because of the Cornwall and Lebanon given the timing, it also coincided with the transition in management from Artemus Wilhelm to William C. Freeman. There is no definitive answer and it is not clear that the Cornwall stopped paying dividends specifically because of the Cornwall and Lebanon, though one local paper claimed this was the case.⁸⁷ Regardless, while the Cornwall suspended dividends temporarily, its yearly surplus shows that it could have continued to pay dividends and it eventually did reinstate them.

The Cornwall and Lebanon was also able to cover its long-term expenses, defying Hovenkamp's expectations. The Cornwall and Lebanon had debt, much of which was due to building the Colebrook Valley Railroad, which was the longer portion of the line and was not a direct competitor to the Cornwall. The Colebrook Valley's debt would have been a factor even if Coleman reached a deal with the Cornwall and never built a competing line. In 1884, the Cornwall and Lebanon had \$459,488.27 in total debt or \$14,747,6998.00 in 2024 dollars.⁸⁸ That number increased to \$1,196,427.59 in 1886 or \$40,034,503.63 in 2024 dollars following the full acquisition of the Colebrook Valley but decreased to \$697,638.46 or \$23,098,442.23 in 2024 dollars the following year.⁸⁹ In 1894, the railroad had \$1,194,900 in debt or \$43,702,772.79 in 2024 dollars.⁹⁰ By 1908, the Cornwall and Lebanon had reduced their debt to \$764,900 or

⁸⁶ Poor, *Manual of the Railroads 1884*, 239.

⁸⁷ "The Lebanon Railroad War," *The Philadelphia Times*, October 31, 1883.

⁸⁸ Poor, *Manual of the Railroads 1885*, 234.

⁸⁹ Poor, *Manual of the Railroads 1889*, 128-29.

⁹⁰ Poor, *Manual of the Railroads 1895*, 82.

\$26,151,265.87 in 2024 dollars.⁹¹ While the railroad certainly did not pay off its debt entirely, it also dramatically reduced its debt from its peak in 1894.

The Cornwall and Lebanon also had a good credit rating and, as mentioned, was profitable enough for the Pennsylvania Railroad to purchase outright. The Cornwall and Lebanon did not pay off this debt entirely before the Pennsylvania Railroad purchased the line as the debt was only due to be paid in 1921. However, *Moody's Analyses of Investments* noted in 1916 that the railroad was keeping up with payments and gave the Cornwall and Lebanon a credit rating of Baa with a "factor of safety" of 76% with high security and good stability.⁹² As mentioned previously, the Cornwall and Lebanon also paid dividends nearly every year. One could make the argument that the Cornwall and Lebanon should have been able to pay off its debt faster and could have if it were not a parallel line. However, the Cornwall and Lebanon consistently made more money than the Cornwall did previously as a monopoly. Thus, if the Cornwall and Lebanon did not make enough money to pay off its debt fast enough to count as meeting its fixed expenses, neither did the monopolistic Cornwall. The Cornwall and Lebanon Railroad and the Cornwall Railroad do not align with Hovenkamp's argument that railroads are natural monopolies. That is not to say that Hovenkamp's assessment is necessarily incorrect as a whole, but rather that these railroads are at least an anomaly compared to his argument.

While railroads could feasibly defy their supposed position as natural monopolies by forming a cartel, that is not why the Cornwall Railroad and the Cornwall and Lebanon Railroad avoid this classification. The events discussed in chapter one clearly demonstrate that the managers of each railroad were not willing to work together even to form basic interchange

⁹¹ Cornwall and Lebanon, Annual Report to the Department of Internal Affairs of Pennsylvania, 1908, 23.

⁹² John Moody, *Moody's Analysis of Investments: Eighth Annual Number 1917* (New York: Moody's Investors Service, 1917), 558.

agreements that would have negated the need for the Cornwall and Lebanon's creation in the first place. Hovenkamp notes that railroads could survive as parallel lines despite being natural monopolies by establishing a cartel and controlling rates. As a result, the introduction of a second railroad would raise shipping rates even higher than they were under the monopoly.⁹³ Given that the Cornwall's freight traffic continued to increase after the introduction of competition but net earnings decreased, losing business to the Cornwall and Lebanon cannot explain the Cornwall's lower profits. As the following chapter will show, the Cornwall took advantage of its monopoly on transportation in the area prior to the Cornwall and Lebanon's construction and charged high rates. Once the Cornwall and Lebanon introduced competition, rates lowered, eliminating the possibility of a cartel between the two companies that clearly wanted to eliminate each other.

Despite each railroad's attempts to undercut each other and Coleman's determination to have all traffic managed by one railroad, there was clearly enough business to support both lines. Both railroads profited, grew their roster of locomotives and rolling stock, grew and maintained a workforce, and increased their freight and passenger traffic. Regardless of whether railroads are natural monopolies in general, these two railroads were able to prosper as parallel lines and provide a return to investors, showing that the Cornwall Railroad was not a natural monopoly. At a minimum, they are an exception to the rule of railroads' status as natural monopolies. As the next chapter will demonstrate, the introduction of competition from a second railroad was also an overall benefit to the public and local industries.

⁹³ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1037.

Chapter Three: The Effects of Competition: A Railroad War Without a Rate War

As established previously, the Cornwall Railroad and the Cornwall and Lebanon Railroad both went to extreme lengths to eliminate each other in a fierce rivalry that reflected the aggressive business culture of the time. However, both railroads prospered and grew despite this rivalry. The Cornwall Railroad did see a decrease in profits overall but still survived and at times matched the profits it enjoyed prior to the introduction of competition. This is partly due to the fact that the railroads' primary customer was also rapidly expanding and thus able to provide both railroads with enough ore to survive and grow. In addition, while these railroads did exemplify many traits of the excessively competitive attitude of 1880s railroads, they refrained from participating in one of the most destructive trends of the day: rate wars. Instead, rates decreased dramatically but remained at a level where both railroads could still profit. Previous to the construction of the Cornwall and Lebanon Railroad, the Cornwall Railroad took advantage of its monopolistic status over local transportation and charged higher-than-average rates. Unlike many new 1880s railroads, the Cornwall and Lebanon broke this monopoly without causing a rate war and was an overall benefit to the local population, further demonstrating that railroads are not necessarily natural monopolies.

While the Cornwall and Lebanon may have behaved like other new railroads in the 1880s in other ways, it was unusual in that it did not participate in a rate war. Many historians agree that the rapid expansion of railroads in the 1880s led to redundant, unprofitable lines that hurt shippers and ultimately the railroads themselves.¹ Since there was usually insufficient traffic to support two lines, railroads used rate wars to attempt to eliminate their competition, which forced

¹ Carlson, "Causes of Bank Suspensions in the Panic of 1893," 60-61; Churella, *Pennsylvania Railroad*, 547; Harwood, 4-13; Kolko, *Railroads and Regulation*, 7-8.

both railroads to ship at a loss or lose business. If the rate war eliminated one railroad, the other became a monopoly and the market reset to its position previous to the introduction of competition.² Not only did this create chaos for railroad investors and executives, but rate wars often actually hurt shippers as well.

Shippers did not appreciate the inconsistency that rate wars brought. Often, people in one area where the rate war occurred experienced fantastically low rates while those in other locations suffered under a monopoly. Further, even if one benefited from lower rates, those rates could change constantly, making shipping costs unpredictable.³ All of those issues led to calls for either consolidation or regulation as potential remedies.⁴ Some historians assume this was inevitable because they believe that railroads are natural monopolies and therefore argue that railroads must be regulated as such either from within or by the government.⁵ However, Robert Gallamore and John R. Meyer have countered that railroads are not natural monopolies because other railroads or other forms of transportation can keep them in check.⁶ The Cornwall Railroad and the Cornwall and Lebanon Railroad are an example of a second railroad successfully introducing competition into a monopolistic market.

The Cornwall and Lebanon Railroad and the Cornwall Railroad show that, at least in some cases, railroads could compete and profit without resorting to destructive rate wars. This is partly due to their size and relative independence. The Pennsylvania Railroad, the New York

² Hovenkamp, "Regulatory Conflict in the Gilded Age," 1037.

³ Churella, *Pennsylvania Railroad*, 461; Stover, *American Railroads*, 108.

⁴ Stover, *American Railroads*, 122.

⁵ Hovenkamp, "Regulatory Conflict," 1018; Harbeson, "Railroads and Regulation," 232.

⁶ Gallamore and Meyer, *American Railroads*, 22-23.

Central Railroad, and the Philadelphia and Reading Railroad could all afford to temporarily take a loss shipping Rockefeller's oil in northern Pennsylvania while they charged higher rates in other parts of their systems to compensate. This resulted in the aforementioned inconsistency that the public complained of as people in other parts of Pennsylvania criticized the Pennsylvania Railroad's higher rates.⁷ Other small railroads that did participate in rate wars were often controlled by larger railroads like the Pennsylvania Railroad, which viewed these smaller lines as expendable.⁸ While the Pennsylvania backed the Cornwall and Lebanon and the Reading backed the Cornwall, the larger railroads did not have full control over either line until the Cornwall and Lebanon merged with the Pennsylvania in 1918.

The Cornwall and the Cornwall and Lebanon could block each other's track, vandalize each other, sue each other, and refuse to transfer passengers, but they did not start a rate war and could not afford to do so. They were far too small to depend on another part of their line while shipping at a loss between Lebanon and Cornwall. This further demonstrates that most of their business came from the northern portion of their lines, not the routes to Conewago or Mt. Hope. As shown in chapter one, the Cornwall and Lebanon's freight traffic favored the northern section and both lines were heavily dependent on the iron mines. These southern portions of the lines did not create enough business to compensate for losses from a rate war in the northern portions of the lines. Further, Pennsylvania law forbade railroads from buying parallel lines in order to prevent monopolies.⁹ This meant that, even if one railroad could eliminate the other, they could not buy the vanquished competitor. Instead, someone else could easily buy up the abandoned

⁷ Churella, *Pennsylvania Railroad*, 461.

⁸ *Ibid.*, 555.

⁹ Bezilla and Gette, *Branch Line Empires*, 136.

right-of-way and revive the fallen railroad. While large, interstate railroads frequently circumvented the rule against buying parallel lines, that was more challenging for small railroads.¹⁰ All of these factors contributed to the lack of a rate war and any more extreme behavior than what was discussed in chapter one.

The Cornwall consistently charged more than double the average freight rate until the construction of the Cornwall and Lebanon, demonstrating its previous monopolistic status. In 1878, the average rate for freight in Pennsylvania was 1.41 cents per ton per mile.¹¹ Meanwhile, the Cornwall charged 4.76 cents per ton per mile.¹² While the average state-wide rate dropped to 0.79 cents the next year, the Cornwall raised rates to a staggering 5.98 cents per ton per mile.¹³ The average rate in the United States was 1.77 cents per ton per mile.¹⁴ In 1882, the Cornwall dropped its rates to 4.87 cents per ton per mile while the national average was only 1.23 cents per ton per mile.¹⁵ As the only practical way to transport ore from the mines to the furnaces and on to the Reading to ship elsewhere, the Cornwall could charge whatever it pleased. Thankfully for local shippers, the introduction of competition helped reduce this discrepancy.

As construction progressed on the Cornwall and Lebanon, the Cornwall began reducing rates. The *Lebanon Courier* noted in September 1882 that the Cornwall reduced its rates by 30% in anticipation of competition from the new railroad and planned to reduce rates even further in

¹⁰ Leonard, "The Decline of Railroad Consolidation," 1.

¹¹ Poor, *Manual of the Railroads 1880*, ii.

¹² Poor, *Manual of the Railroads 1879*, 294-96.

¹³ Poor, *Manual of the Railroads 1880*, ii, 283.

¹⁴ Poor, *Manual of the Railroads 1890*, xiii.

¹⁵ Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1890*, xiii.

the future.¹⁶ The *Lebanon Daily News* argued that the public supported building a new railroad specifically because they believed it would lower excessive rates on the part of not only the Cornwall but also the Reading. They noted how rail competition had made rates much lower for businesses in nearby Harrisburg, where shippers could choose between the Pennsylvania Railroad or the Reading. They hoped that the Cornwall and Lebanon's connection to the Pennsylvania would bring them the same opportunities.¹⁷ Their hopes were well founded. The introduction of competition reduced rates without the chaos of a rate war.

By the time the rivalry in Cornwall became more serious, with the Cornwall Railroad attempting to block the construction of the Cornwall and Lebanon in October 1883, the *Philadelphia Times* noted that the former had dramatically reduced rates and experienced reduced profits and dividends as a result.¹⁸ From 1882 to 1883, the Cornwall more than halved its rates from 4.87 cents to 2.14 cents.¹⁹ The Cornwall's rates in 1883 were closer to the national average of 1.23 cents but still above it.²⁰ Further, as demonstrated in chapter two, the railroad still profited, albeit less so. Thus, this was not a rate war since the railroad was not shipping at a loss and still charged above average. Figure 3.1 shows the rates charged by the Cornwall railroad between 1875 and 1900. It should be noted that the Cornwall's rates were decreasing somewhat prior to the construction of the Cornwall and Lebanon and railroad rates were decreasing on average as discussed above. However, average rates did not fall by this magnitude and the

¹⁶ "Reduction of Freight," *The Lebanon Courier*, September 27, 1882.

¹⁷ "The Warring Railroaders," *Lebanon Daily News*, October 31, 1883.

¹⁸ "The Lebanon Railroad War," *The Philadelphia Times*, October 31, 1883.

¹⁹ Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239.

²⁰ Poor, *Manual of the Railroads 1890*, xiii.

aforementioned papers directly linked a large portion of the Cornwall's rate reduction to the introduction of competition.

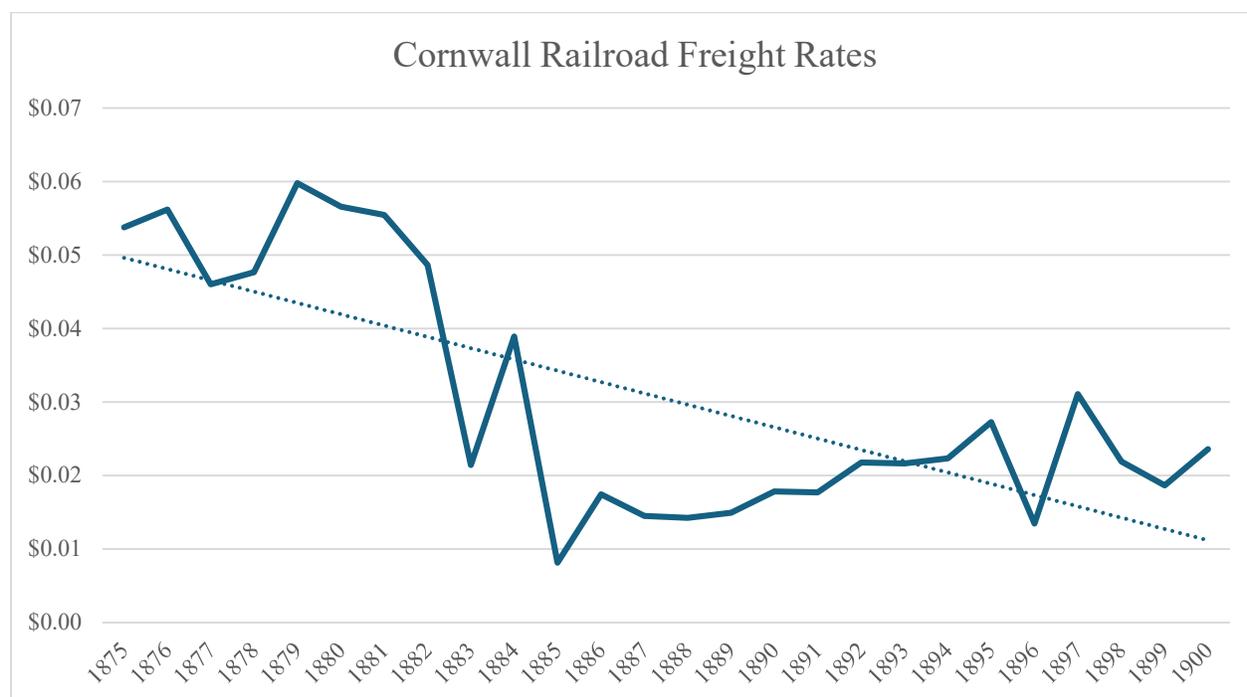


Figure 3.1²¹

It should be noted that Poor's *Manual of the Railroads* did not always directly include rate information and much of the data listed above had to be calculated from other available information. Poor only began including rates for the Cornwall and Lebanon Railroad for the year 1886 and even then, did not include the Cornwall Railroad's rates, indicating that the Cornwall

²¹ Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1877*, 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads 1879*, 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239-40; Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*, 136; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 129-30; Poor, *Manual of the Railroads 1890*, 167; Poor, *Manual of the Railroads 1891*, 170; Poor, *Manual of the Railroads 1892*, 188; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

and Lebanon was providing the information itself.²² However, in years that Poor did include rate information, it consistently matched total freight revenue divided by tons hauled one mile. The same formula applied to passenger rates and was consistent with information available for other railroads.²³ The only exception is the Cornwall and Lebanon's passenger rates in 1887, which Poor reports as 1.59 cents, while the above formula indicates the rate was 4.04 cents based on information reported that year. However, upon closer examination, either the smudging of ink or a typographical error turned \$32,496.85 in passenger earnings into \$82,496.85. The Cornwall and Lebanon's annual report to the state Secretary of Internal Affairs shows total passenger earnings of \$32,496.85. Thus, Poor actually included the correct information, but at least some copies of the text make the first digit appear to be an eight rather than a three.²⁴ Using the above formula, rates can be calculated for other years from freight revenue, passenger revenue, tons hauled one mile, and passengers hauled one mile, all of which are consistently provided in Poor's *Manual* or company documents.

The rates of the southern portions of each railroad further demonstrate that the section between Lebanon and Cornwall was the most competitive. The Cornwall and Mt. Hope Railroad, which was largely unopposed though somewhat in competition with the Cornwall and Lebanon and the Colebrook Valley Railroad, continued to charge higher rates while the Cornwall's lowered. The Cornwall and Mt. Hope charged 4.73 cents per ton per mile in 1884 and only

²² Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1886*, 483-84; Poor, *Manual of the Railroads 1887*, 136-37.

²³ Poor, *Manual of the Railroads 1888*, 137; Poor, *Manual of the Railroads 1889*, 129; Poor, *Manual of the Railroads 1890*, 166; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186; Poor, *Manual of the Railroads 1893*, 218.

²⁴ Poor, *Manual of the Railroads 1888*, 136; Cornwall and Lebanon Annual Report to the State 1887, 15.

lowered rates to 2.71 cents by the time it fully merged with the Cornwall Railroad in 1886.²⁵ The state average at the time was only 0.88 cents.²⁶ The Colebrook Valley Railroad, on the other hand, maintained lower rates. In 1885, the Colebrook Valley charged 1.42 cents per ton per mile compared to the national average of 1.05 cents per ton per mile.²⁷ As the more direct route to Lancaster, the Cornwall and Mt. Hope was predominantly a passenger line.

The Colebrook Valley, however, relied more heavily on freight traffic and was also fighting for freight to travel south to the Pennsylvania Railroad rather than east or west via the Reading. In 1885, for example, the Cornwall and Mt. Hope's passenger trains ran a total of 10,490 miles while their freight trains only ran 5,760 miles.²⁸ Unfortunately, the Colebrook Valley's train mileage was not recorded separately from the Cornwall and Lebanon's. However, their freight revenue was \$71,472.30 compared to passenger revenue of \$9,973.05.²⁹ Passenger revenue made up a much larger portion of the Cornwall and Mt. Hope's revenue. The Cornwall and Mt. Hope had \$8,929.55 in freight revenue and \$6,463.14 in passenger revenue.³⁰ However, the Cornwall and Mt. Hope also charged more for passenger service at 2.04 cents compared to the Colebrook Valley's 0.81 cents at a time when the national average was 2.19 cents.³¹ Thus, the former railroad was both more passenger focused and received less traffic and revenue

²⁵ Poor, *Manual of the Railroads 1885*, 234; Poor, *Manual of the Railroads 1886*, 116; Poor, *Manual of the Railroads 1887*, 136.

²⁶ Poor, *Manual of the Railroads 1888*, xviii.

²⁷ Poor, *Manual of the Railroads 1886*, 484.

²⁸ *Ibid.*, 116.

²⁹ *Ibid.*, 484.

³⁰ *Ibid.*, 116.

³¹ *Ibid.*, 116, 484; Poor, *Manual of the Railroads 1890*, xiii.

overall, further contributing to the need for higher rates. Regardless, both railroads' freight rates were substantially lower than the Cornwall Railroad's rates previous to the construction of the Cornwall and Lebanon Railroad.

The fact that rates decreased while the Cornwall maintained profits demonstrates that the railroad did not need to charge its previous rates to profit. As shown previously, while the Cornwall's net revenue decreased after the introduction of competition, the railroad still made money. Freight traffic and revenue even continued to increase, balanced by higher operating expenses. Further, the Cornwall made more in net revenue in 1892 than some of its best years previous to the construction of the Cornwall and Lebanon as previously demonstrated. Yet the Cornwall only charged 2.18 cents per ton per mile that year, as opposed to charging anywhere from 4 cents to nearly 6 cents in the late 1870s and early 1880s.³² In addition, freight traffic continued to expand largely uninhibited by the strain of competition. The Cornwall's profits decreased because it had to compete and could no longer overcharge shippers for transporting freight.

Local industries such as furnaces bore the brunt of the Cornwall's high shipping rates, which the Cornwall and Lebanon eventually relieved by lowering rates. Despite primarily shipping Cornwall ore, the Cornwall Railroad's ledgers show comparatively little income from the Cornwall Ore Bank Co. In the late 1870s and early 1880s, the railroad only charged the Ore Bank Co. a few hundred dollars per year.³³ Local furnaces, however, paid thousands for shipping

³² Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1876*, 718; Poor, *Manual of the Railroads 1877*, 272-73; Poor, *Manual of the Railroads 1878*, 268-69; Poor, *Manual of the Railroads 1879*, 294-95; Poor, *Manual of the Railroads 1880*, 283; Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254.

³³ North Lebanon Railroad Co., Ledger 1852-1881, 258, 297, 448, Lebanon County Historical Society, Lebanon, PA.

their freight. The Bird Coleman Furnace, for example, paid the railroad \$6,743.45 in 1880 and \$8,458.09 in 1881.³⁴ The North Cornwall Furnace paid \$7,698.67 in 1880 and \$6,669.70 in 1881.³⁵ The same men owned both the Cornwall Railroad and the Cornwall Ore Bank Co. So long as the Cornwall Ore Bank Co. was not suffering, they had little incentive to keep prices down for their customers, who were at the mercy of both the Cornwall Ore Bank Co. and the railroad.

The desire for lower rates provided an incentive to support a new railroad and introduce competition. As owner of the Colebrook Furnace and part owner of the Cornwall Ore Bank Co., Robert H. Coleman had an incentive to lower shipping rates that other members of the board of directors of the Cornwall Railroad did not. Previously, the Cornwall iron mines had been the largest producer of iron in the United States and enjoyed a market with little competition. Even if the company did not suffer directly from the Cornwall Railroad's high rates, the railroad passed that cost on to furnaces and then to manufacturers, who had no choice but to accept Cornwall ore at whatever price was demanded and pass that cost on to their customers. Coleman knew that the Mesabi Range in Minnesota was overtaking Cornwall as the largest iron producer and offered better quality iron. According to Richard Noble, that is why he wanted to diversify his investments and involve himself in railroads.³⁶ Coleman proposed that the Ore Bank Co. start shipping lower quality fine ore so long as they charged low enough rates in order to boost the mines' competitiveness, though the rest of the board rejected the idea.³⁷ If rates were not lowered

³⁴ North Lebanon Railroad Co., Ledger 1852-1881, 399, 442.

³⁵ Ibid., 386, 446.

³⁶ Noble, "Touch of Time," 42-45.

³⁷ Weber, *Always More Production*, 57.

and the mines did not become more competitive, both the mines and furnaces would lose more business to the Masabi range as Masabi iron became cheaper and more attractive to manufacturers. While Coleman's exact intentions in building the Cornwall and Lebanon are unknown, lowering rates through the construction of the Cornwall and Lebanon did help make the mines more competitive, whether he specifically intended to do so or not.

As soon as the Cornwall and Lebanon Railroad opened, it offered better shipping rates than its competitor. While the Cornwall charged 3.89 cents per ton per mile in 1884, the Cornwall and Lebanon only charged 1.72 cents.³⁸ The Cornwall and Lebanon lowered rates to 0.86 cents in 1885 and the Cornwall lowered rates to 0.82 cents, marking the only time that either railroad's rates fell below the national average, which was 1.05 cents at the time.³⁹ On the surface, these may appear to be extremely low rates and therefore constitute evidence of a rate war, especially given that 1885 was shortly after the construction of the new line and thus one of the more ruthlessly competitive years in the history of the two railroads. However, these rates are generally in line with the state average. While Poor did not consistently include figures for the average freight rate in Pennsylvania prior to 1886, the figures he listed from 1886 onward were well under 1 cent. In 1886, the average freight rate in Pennsylvania was 0.88 cents and the average decreased over the next few years.⁴⁰ Regardless, both the Cornwall Railroad and the Cornwall and Lebanon Railroad returned to charging above not only the state average, but the national average in 1886. The Cornwall and Lebanon charged 2.01 cents and the Cornwall

³⁸ Poor, *Manual of the Railroads 1885*, 233-34.

³⁹ Poor, *Manual of the Railroads 1886*, 116, 483-84; Poor, *Manual of the Railroads 1890*, xiii.

⁴⁰ Poor, *Manual of the Railroads 1888*, xviii; Poor, *Manual of the Railroads 1890*, xiii; Poor, *Manual of the Railroads 1901*, xi-xii.

charged 1.74 cents compared to a national average of 1.04 cents.⁴¹ From 1887 to 1900, the Cornwall and Lebanon kept their rates below 2 cents and generally below the Cornwall Railroad's.⁴² Figure 3.2 shows a comparison between the Cornwall's rates and the Cornwall and Lebanon's rates between 1884 and 1900. Figure 3.3 shows a combined average rate between the two railroads compared to the national average, illustrating how a local shipper's options compared with the rest of the country.

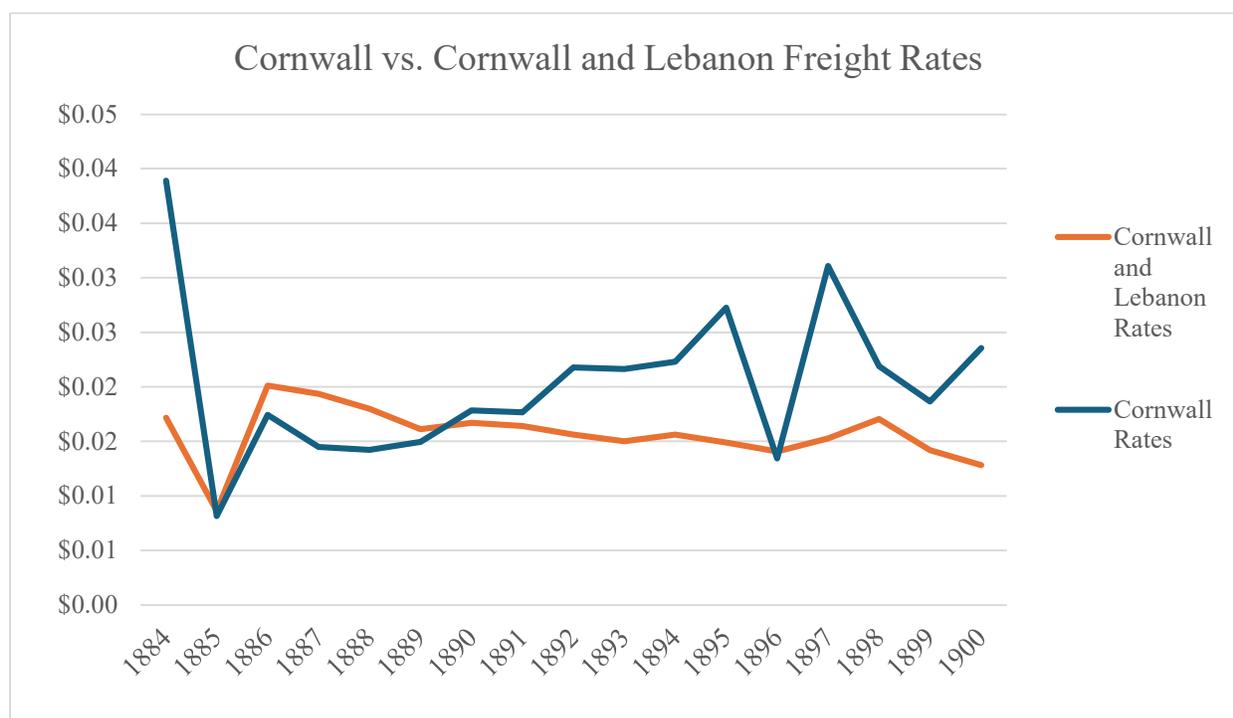
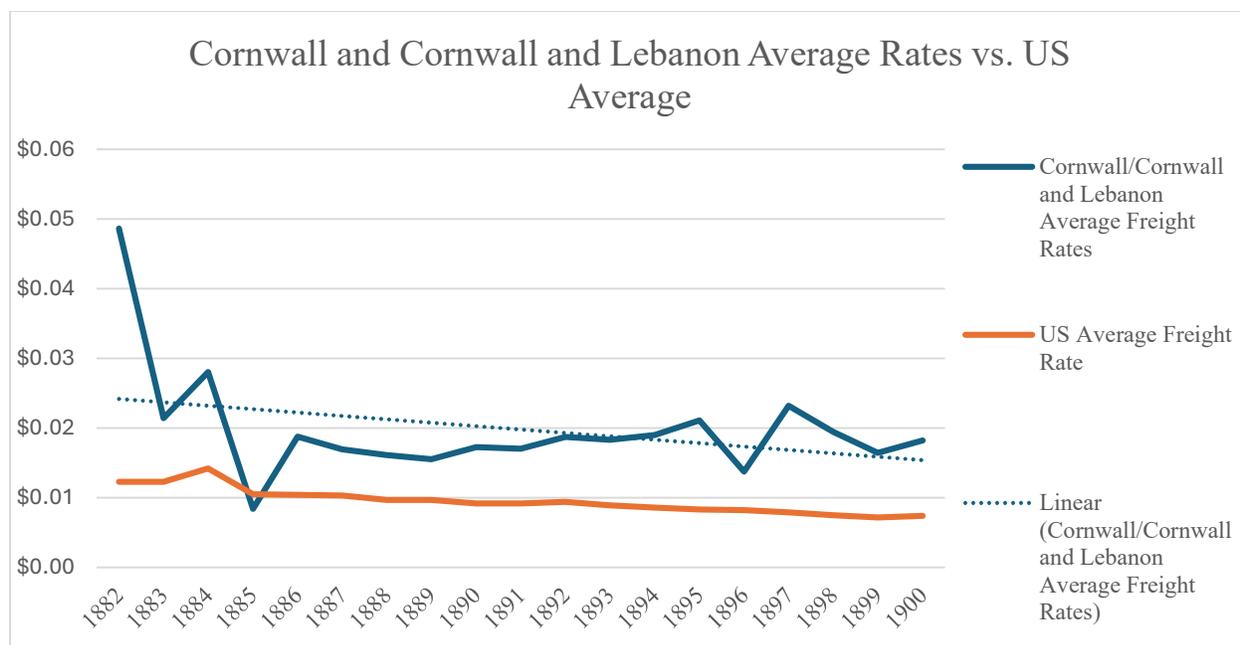


Figure 3.2⁴³

⁴¹ Poor, *Manual of the Railroads 1887*, 136, 483; Poor, *Manual of the Railroads 1888*, xviii.

⁴² Ibid., 137-38; Poor, *Manual of the Railroads 1889*, 128-30; Poor, *Manual of the Railroads 1890*, 166-67; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186-88; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81-82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67-68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

⁴³ Poor, *Manual of the Railroads 1885*, 233-34; Poor, *Manual of the Railroads 1886*, 116, 483-484; Poor, *Manual of the Railroads 1887*, 136, 483; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 128-30; Poor, *Manual of the Railroads 1890*, 166-67; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186-88; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the*

Figure 3.3⁴⁴

As the above graphs illustrate, the introduction of competition through a second railroad dramatically reduced shipping costs for local industries. Prior to the construction of the Cornwall and Lebanon, the Cornwall consistently charged over 4 cents per ton per mile. Once the Cornwall and Lebanon introduced competition, the average freight rate between the two railroads generally stayed under 2 cents, cutting rates by half or more. Adjusting for deflation does reduce this difference but still shows a dramatic decrease in rates. The Cornwall's 1882 rate of 4.87 cents is roughly \$1.50 in 2024 dollars. The average rate between the two railroads in 1884 was 2.80 cents or 89.87 cents in 2024 dollars. By 1900, the two railroads charged an

Railroads 1894, 76; Poor, Manual of the Railroads 1895, 81-82; Poor, Manual of the Railroads 1896, 75; Poor, Manual of the Railroads 1897, 61; Poor, Manual of the Railroads 1898, 67-68; Poor, Manual of the Railroads 1899, 219; Poor, Manual of the Railroads 1900, 193; Poor, Manual of the Railroads 1901, 174.

⁴⁴ Poor, *Manual of the Railroads 1885, 233-34; Poor, Manual of the Railroads 1886, 116, 483-484; Poor, Manual of the Railroads 1887, 136, 483; Poor, Manual of the Railroads 1888, xviii, 137-38; Poor, Manual of the Railroads 1889, 128-30; Poor, Manual of the Railroads 1890, xiii, 166-67; Poor, Manual of the Railroads 1891, 170-71; Poor, Manual of the Railroads 1892, 186-88; Poor, Manual of the Railroads 1893, 218; Poor, Manual of the Railroads 1894, 76; Poor, Manual of the Railroads 1895, 81-82; Poor, Manual of the Railroads 1896, 75; Poor, Manual of the Railroads 1897, 61; Poor, Manual of the Railroads 1898, 67-68; Poor, Manual of the Railroads 1899, 219; Poor, Manual of the Railroads 1900, 193; Poor, Manual of the Railroads 1901, xi-xii, 174.*

average of 1.89 cents or 70.77 cents in 2024, still substantially less than the 1882 rate despite the deflation of the 1890s.

All of this meant reduced costs for the local industries that the railroads served. As established, local industries like iron furnaces bore the bulk of the shipping costs imposed by the Cornwall Railroad. Coleman also owned the newly established Colebrook Furnace in Lebanon, which quickly became a regular customer of the Cornwall and Lebanon Railroad.⁴⁵

Unfortunately, the Cornwall Railroad's ledgers covering 1882 through the end of the nineteenth century are unavailable or have not survived. However, their ledger ending in 1881 can show which customers switched to the Cornwall and Lebanon Railroad by comparing it to the Cornwall and Lebanon's ledger. The Cornwall Anthracite Furnace as well as other major industries like the Pennsylvania Nut and Bolt Company switched from the Cornwall Railroad to the Cornwall and Lebanon or at least used both railroads. The Cornwall continued to serve other furnaces like the Donaghmore Furnace, Bird Coleman Furnace, North Cornwall Furnace, and the original Cornwall Furnace.⁴⁶ However, all of these businesses benefited from lowered rates due to the threat of competition, whether they switched railroads or not. Coleman was certainly hasty and impatient, but, wittingly or not, he helped local industries remain competitive by lowering rates and overall provided a net benefit to the public through the creation of the Cornwall and Lebanon.

The only harm done to the public was through cumbersome agreements and rate discrimination. The Mt. Gretna National Guard incident discussed in the first chapter certainly showcases problematic agreements between the railroads that no doubt hurt other shippers and

⁴⁵ Cornwall and Lebanon Railroad Co. Ledgers 1882-1905, 10, 11, 52, 494, Series MG-286-KPRR-COCL-686. Pennsylvania Railroad Subsidiary Lines, Pennsylvania State Archives, Harrisburg, PA.

⁴⁶ *Ibid.*, 159, 27, 74.

passengers as well, though not in such a dramatic and public way. If the Reading was consistent about refusing to transfer passengers to the Cornwall and Lebanon, one can easily imagine the frustration of passengers attempting to reach Mt. Gretna who were forced to transfer in Cornwall instead for a measly four mile journey the rest of the way to Mt. Gretna. Newspapers indicate that the Reading was not always so strict, but did try and limit passengers' transfers in other ways. The public complained that the Reading Railroad charged higher rates for passengers traveling from Reading to Lebanon if they transferred to the Cornwall and Lebanon Railroad instead of the Cornwall Railroad.⁴⁷

Some also claimed that the Cornwall Railroad charged more than advertised for excursion tickets from Lebanon to Lancaster. The Lebanon Valley Castle No. 6, Knights of the Mystic Chain planned an excursion to Lancaster and complained that the Cornwall advertised to take people to Lancaster for 85 cents but asked the Knights to pay \$1.14 for excursion tickets. They announced that they would be taking the Cornwall and Lebanon train instead as the expectation was that excursion tickets should be cheaper than individual tickets.⁴⁸ While these issues are certainly problematic, they are not as severe as a rate war and had little capacity to eliminate one railroad and reinstate a monopoly. The last complaint shows another benefit to the introduction of a parallel line as the group was evidently able to find better rates with the Cornwall and Lebanon, though they did not indicate what the rate was.

While rates lowered, there is no evidence of a rate war between the Cornwall Railroad and the Cornwall and Lebanon Railroad. Rates did not fluctuate wildly in available records. Granted, these records only show the average rate charged over the course of the year, not how

⁴⁷ "Talk of Suing the Reading," *Lebanon Daily News*, August 4, 1887.

⁴⁸ "Knights of the Mystic Chain," *Lebanon Daily News*, September 7, 1887.

rates changed from day to day. Advertisements for each railroad directed potential passengers to inquire about rate details at the train station for current information that could change regularly. The advertisement itself generally said nothing about a specific rate.⁴⁹ However, local newspapers, which otherwise followed every incident and rumor involving these two railroads as shown in chapter one, made no mention of a rate war. As a newspaper in a relatively small town surrounded by rural areas, the *Lebanon Daily News* frequently included rather mundane events such as noting private parties, going so far as to include an article about how to grow cabbages on the front page next to an article about the railroad war and national headlines.⁵⁰ A rate war would certainly have been more newsworthy than many of their other stories. The *Lebanon Daily News* did indicate when the Reading Railroad and the Pennsylvania Railroad were having a rate war nearby in Reading.⁵¹ Thus, it would make little sense that, after covering so many aspects of the Lebanon County Railroad War, the *Lebanon Daily News* and the *Lebanon Courier* would refrain from noting a rate war so close to home.

While the railroads did reduce rates to compete with each other, this does not constitute a rate war. As discussed previously, rate war by definition means charging at a loss, not just charging less than competitors. A railroad in a rate war merely hoped they could survive the losses longer than the competition. As demonstrated, both the Cornwall Railroad and the Cornwall and Lebanon Railroad continued to profit yet charged far less than the pre-competition Cornwall. The Cornwall and Lebanon's reports to the state auditor make this even clearer,

⁴⁹ "Cornwall & Lebanon and Colebrook Valley Railroads," *Lebanon Daily News*, October 2, 1883; "Cornwall Railroad," *Lebanon Daily News*, July 2, 1883; "Penryn Park on the Cornwall Railroad," *Lebanon Daily News*, May 8, 1885.

⁵⁰ "A Railroad War Waged," *Lebanon Daily News*, October 29, 1883; "Cabbages," *Lebanon Daily News*, October 29, 1883.

⁵¹ "State News Condensed," *Lebanon Daily News*, July 28, 1887.

showing that the railroad charged an average of 1.501 cents per ton per mile but shipping each ton of freight cost less than 0.616 cents in 1893.⁵² Meanwhile, the Cornwall was charging even more. Further, the statistics shown in chapter two demonstrate that the railroad made enough to cover its operating costs and long-term expenses. Neither railroad was willing to ship at a loss just to undercut its rival.

Passenger rates also demonstrated the influence of competition without the destruction of a rate war. Unlike freight service, where the Cornwall Railroad was already an established carrier, both railroads were new to passenger service and competed more closely. While both railroads generally charged slightly above average rates for freight, they charged under the average rates for passenger service. In 1886, for example, the average passenger rate in Pennsylvania was 2.17 cents per mile. The Cornwall and Lebanon charged 1.65 cents per mile and the Cornwall charged a mere 1.45 cents per mile. However, that was not enough to convince more passengers to choose the Cornwall over the Cornwall and Lebanon. The Cornwall and Lebanon carried 156,236 passengers that year compared to the Cornwall's 106,232 passengers.⁵³ As discussed in chapter two, this trend continued throughout the nineteenth century. The Cornwall and Lebanon Railroad routinely carried several hundred thousand passengers every year. The Cornwall never reached 200,000 in a single year.⁵⁴ However, the Cornwall still strove to compete in passenger service and still profited. While the Cornwall's freight revenue

⁵² Cornwall and Lebanon Report to the Department of Internal Affairs of Pennsylvania 1893, 30.

⁵³ Poor, *Manual of the Railroads 1887*, 136, 483; Poor, *Manual of the Railroads 1890*, xiii.

⁵⁴ Poor, *Manual of the Railroads 1885*, 233-34; Poor, *Manual of the Railroads 1886*, 116, 483-484; Poor, *Manual of the Railroads 1887*, 136, 483; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 128-30; Poor, *Manual of the Railroads 1890*, 166-67; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186-88; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81-82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67-68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

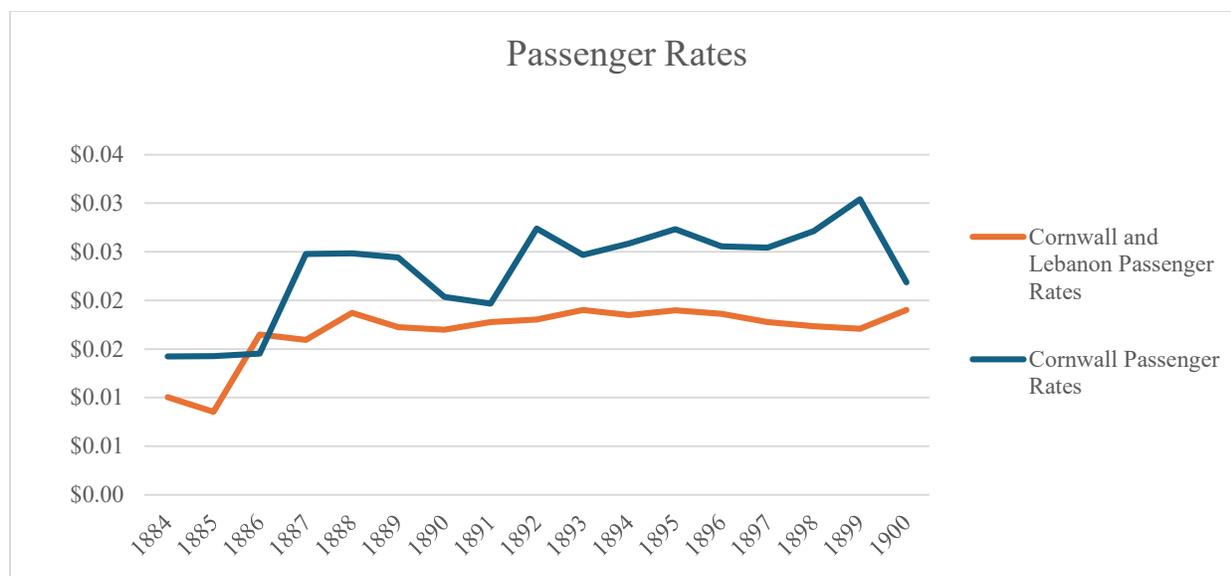
decreased as it lowered rates, its overall revenue increased due to the addition of passenger revenue.⁵⁵ Thus, adding passenger service helped the Cornwall maintain its profitability in the face of competition.

It is worth noting that many of the incidents and controversies surrounding the railroads discussed in chapter one revolved around passenger service. This includes the Mt. Gretna National Guard incident and the Cornwall and Lebanon Railroad's reluctance to follow its agreement with the crossing at Cornwall. Both railroads fought for a relatively small potential customer base between Lebanon and Cornwall. Lebanon and Cornwall are only about six miles apart, which most people can easily walk. Many people do so on a regular basis on the rail trail that has now replaced the railroads. Excursions to the resort towns of Mt. Gretna or Penryn Park and trips between Lebanon and Lancaster where passengers could transfer to larger railroads were the main attractions for passengers. With the introduction of automobiles and the destruction of Penryn Park in a 1925 flood, passenger service on the Cornwall ended in January 1929.⁵⁶ The Cornwall and Lebanon, then under the full ownership of the Pennsylvania Railroad, ended passenger service in September of the same year.⁵⁷ However, during the 1880s and 1890s, both railroads enjoyed plentiful passenger demand, encouraged by their respective parks. Figure 4.4 shows the passenger rates of both railroads from 1884 to 1900.

⁵⁵ Poor, *Manual of the Railroads 1881*, 219-20; Poor, *Manual of the Railroads 1882*, 230-31; Poor, *Manual of the Railroads 1883*, 254; Poor, *Manual of the Railroads 1884*, 239-40; Poor, *Manual of the Railroads 1885*, 233; Poor, *Manual of the Railroads 1886*, 116.

⁵⁶ Rhoads and Heilman, *Railroads of Lebanon County*, 63.

⁵⁷ *Ibid.*, 127.

Figure 3.4⁵⁸

The introduction of passenger service in itself was a consequence of the introduction of competition that benefited the public. Prior to the construction of the Colebrook Valley Railroad and the Cornwall and Lebanon Railroad, the Cornwall Railroad did not offer passenger service. In response to Coleman’s efforts to build a new railroad, Freeman and the managers of the Cornwall built the Cornwall and Mt. Hope Railroad and began offering passenger services on their line between Lebanon and Lancaster via the Lancaster joint line, which it operated in cooperation with the Reading and Columbia.⁵⁹ Previously, there was no rail connection between these cities unless one was willing to take the train to either Harrisburg or Reading and then board a train on the Pennsylvania Railroad or the Reading and Columbia Railroad to Lancaster.

⁵⁸ Poor, *Manual of the Railroads 1885*, 233-34; Poor, *Manual of the Railroads 1886*, 116, 483-484; Poor, *Manual of the Railroads 1887*, 136, 483; Poor, *Manual of the Railroads 1888*, 137-38; Poor, *Manual of the Railroads 1889*, 128-30; Poor, *Manual of the Railroads 1890*, 166-67; Poor, *Manual of the Railroads 1891*, 170-71; Poor, *Manual of the Railroads 1892*, 186-88; Poor, *Manual of the Railroads 1893*, 218; Poor, *Manual of the Railroads 1894*, 76; Poor, *Manual of the Railroads 1895*, 81-82; Poor, *Manual of the Railroads 1896*, 75; Poor, *Manual of the Railroads 1897*, 61; Poor, *Manual of the Railroads 1898*, 67-68; Poor, *Manual of the Railroads 1899*, 219; Poor, *Manual of the Railroads 1900*, 193; Poor, *Manual of the Railroads 1901*, 174.

⁵⁹ Denney, “The Reading and Columbia Railroad,” 170.

Passengers were forced to travel east or west and far greater distances than necessary for a simple trip south to Lancaster.

Even for passengers wanting to go to Philadelphia, which was previously easily accessible along the Reading's main line in Lebanon, the introduction of the Cornwall and Lebanon Railroad offered new options. With a connection south, passengers could take a Cornwall and Lebanon train to Conewago and connect with the Pennsylvania Railroad to complete their journey to Philadelphia. Thus, the Cornwall and Lebanon not only gave the Cornwall competition, but also added to the competition between the Pennsylvania Railroad and the Reading Railroad. Further, towns along each route like Cornwall previously had no passenger service. While a trip between Lebanon and Cornwall was short, residents of Cornwall or other small villages along the line could easily access the Pennsylvania Railroad or Reading Railroad's systems through either the Cornwall Railroad or the Cornwall and Lebanon. These larger railroads offered connections to cities in the rest of the state and beyond.

The fact that the introduction of a second railroad lowered shipping rates without initiating a rate war further suggests that the Cornwall Railroad was not a natural monopoly. The Cornwall had no incentive to lower its rates without the threat of competition. Unless someone wanted to return to shipping iron over the old North & South Lebanon Turnpike's plank road, the Cornwall offered the only viable source of transportation for the ore mines and furnaces. As a result, the Cornwall charged rates far above the state and national average. It is important to note that the state and national averages necessarily include figures from other railroads who were engaged in rate wars at the time and drove the average down. However, it also includes other railroads that enjoyed a monopoly and charged whatever they pleased. Further, the Cornwall often charged more than double these figures.

Regardless, the fact that the Cornwall was able to cut its rates in half and still profit demonstrates that it did not need to set rates that high and thus did not need to be a monopoly to survive. Before 1883, the Cornwall was a monopoly and took advantage of its monopolistic status. The introduction of the Cornwall and Lebanon immediately lowered rates, thus reducing shipping costs for local industries and making them more competitive. According to Herbert Hovenkamp, if the local rail market were a natural monopoly, there should not have been enough business to support both lines, leading them to start a rate war in a desperate attempt to oust their competitor or come to an agreement and form a cartel, leading to even higher rates than the Cornwall charged as a monopoly.⁶⁰ Robert Harbeson likewise argued that railroads were natural monopolies and that rate wars were a sign of monopoly and oligopoly. He argued that competition led to wasteful duplication of investment, prevented cost decreases, and encouraged price discrimination.⁶¹ Yet no rate war occurred in this case and rates decreased. The only symptom of natural monopoly evident in this example was price discrimination, which came from the Reading Railroad, not the Cornwall or the Cornwall and Lebanon. It is important to remember that the Reading viewed the Cornwall and Lebanon as a threat primarily because of its relationship with the Pennsylvania. Thus, even the rate discrimination had more to do with the larger railroad war between the Reading and the Pennsylvania than the local rail market.

Despite the intense rivalry between the two railroads, the introduction of competition through the Cornwall and Lebanon Railroad was an overall benefit to local industries and the public at large. While rates decreased, there was sufficient traffic to prevent either railroad from having to initiate a rate war and ship at a loss, which would have eliminated one railroad and

⁶⁰ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1035-36.

⁶¹ Harbeson, "Railroads and Regulation," 232.

returned the market to a state of monopoly. A rate war also would have led to unpredictable rates for local shippers. The Cornwall Railroad and the Cornwall and Lebanon Railroad may have exhibited other aggressive traits of 1880s railroads like blocking each other's construction, tearing up each other's tracks, or suing each other, but they defied expectations by refraining from engaging in a rate war. Regardless of whether a local furnace or other business chose to keep shipping via the Cornwall Railroad or switch to the new Cornwall and Lebanon, they could enjoy the lower rates that competition brought to the local market. Further, the railroads were not forced to ship at a loss and slowly destroy themselves in the process. Instead, both railroads profited while simultaneously offering lower rates to their customers.

Conclusion

The competition between the Cornwall and Lebanon Railroad and the Cornwall Railroad simultaneously exhibits the broader theme of excess competition in the 1880s rail industry while differing from that theme in several key areas. The two railroads did have an intense and ruthless rivalry starting with Robert H. Coleman's refusal to make an agreement with the Cornwall Railroad on behalf of the Colebrook Valley Railroad. Both railroads, especially Coleman and the Cornwall and Lebanon, behaved as if their existence depended on the other railroad's destruction. Coleman, like other railroad executives at the time, thought railroads were a zero-sum game. In reality, competition helped the local economy and both railroads were able to profit and even grow, despite their bickering. The ability of these two parallel lines to maintain profits and grow despite their redundancies shows that the Cornwall Railroad was a monopoly before the construction of the Cornwall and Lebanon, but not a natural monopoly. Instead, the construction of a second line introduced competition that lowered rates and balanced the local market.

Coleman's all or nothing attitude and refusal to consider commonplace rail agreements to work with the Cornwall Railroad exemplify and even exceed the cut-throat attitude of his day. If he could not have full control of both the Cornwall and the Colebrook Valley together, he would rather go to the trouble of building a new parallel line to compete with the Cornwall. His own father had helped start the Cornwall Railroad and his long-time mentor was president of the railroad at the time. His behavior is reminiscent of Andrew Carnegie's actions during the South Pennsylvania Railroad conflict. Even after Carnegie's partners William Vanderbilt and Franklin B. Gowen abandoned the South Penn project, Carnegie persisted for some time and threatened to build his own railroad to fight the Pennsylvania Railroad, despite spending much of his earlier career working for the Pennsylvania.¹ As Carnegie stubbornly insisted on having control of the rail infrastructure serving his steel mill, so too did Coleman stubbornly insist on controlling the railroads to his iron furnace. While Coleman may or may not have had a personal feud with his cousin, William C. Freeman, this did not cause the railroad war as some have claimed. Freeman was a major stockholder of the Cornwall but did not become president of the railroad for another seven months after Wilhelm and the Cornwall Railroad board of directors rejected Coleman's offer.² Regardless, Coleman turned down a commonplace agreement that could have avoided the creation of the Cornwall and Lebanon because he wanted full control and was unwilling to compromise.

Both railroads made bold moves to hurt their competitor as if their survival depended on the other's elimination. Both were also backed by the larger Pennsylvania Railroad and the Philadelphia and Reading Railroad. Their attempts to block each other's track construction,

¹ Harwood, *Railroad That Never Was*, 91.

² "William Coleman Freeman," *Lebanon Courier*, September 27, 1882.

ensuing lawsuits, agreements to withhold shipments, and conflict over crossings reflected other railroad wars of the day such as the Pennsylvania Railroad and the Beech Creek Railroad.³ As a result, the Cornwall and Lebanon at times had to waste money finding longer routes to customers or building a bridge just to cross the Cornwall's tracks rather than follow their original agreement to wait for Cornwall trains. While the Pennsylvania Railroad merely helped build and supply Coleman's new railroads, the Philadelphia and Reading actively participated in the Lebanon County railroad war and made attempts to block the Cornwall and Lebanon just as the Cornwall did. Local newspapers at the time noted this connection to the larger battle between the Pennsylvania and the Reading. The Reading also made agreements with the Cornwall not to transfer passengers to the Cornwall and Lebanon Railroad in Lebanon, contributing to the Mt. Gretna National Guard incident. Thus, the conflict between the Cornwall Railroad and the Cornwall and Lebanon Railroad not only reflected other railroad rivalries of the day but was part of them.

However, that is where the similarities between these two railroads and the larger themes of the 1880s rail industry end. Other railroads, including the Pennsylvania Railroad and the Reading Railroad, not only behaved as described above, but also participated in destructive rate wars that hurt the railroads, investors, and the general public. Further, other new railroads were often built solely to hurt a competitor and create the opportunity for a rate war with no hope of ever returning a profit. This overbuilding led to instability and eventually led to calls for regulation and consolidation. Overbuilding also contributed to the Panic of 1893.⁴ The ensuing bankruptcies themselves led to more consolidation as railroads went into receivership.⁵ The

³ Bezilla and Gette, *Branch Line Empires*, 127.

⁴ Churella, *Pennsylvania Railroad*, 547.

overly competitive culture of the day led to railroad wars that, in many cases, everyone lost. However, none of this applied to the Cornwall and Lebanon Railroad and the Cornwall Railroad despite their being parallel lines and serving the same purposes.

While their other behavior gave the impression that the two railroads would stop at nothing to eliminate each other, they stopped short of engaging in rate wars. Rather, the introduction of competition via the Cornwall and Lebanon Railroad forced the formerly monopolistic Cornwall Railroad to lower its rates. There was no rate war, nor did the railroads come to an agreement to maintain higher rates so both could survive. Previously, the Cornwall took advantage of its monopolistic status and charged far above the state and national average, passing those costs on to its customers, who became less competitive as a result. The introduction of a parallel line reduced shipping costs for these businesses and introduced passenger service where there previously was none. Thus, the construction of the Cornwall and Lebanon was an overall benefit to the public.

Despite their intense rivalry, both railroads were able to prosper. While the Cornwall Railroad's profits declined after the introduction of competition, it was still able to survive and somewhat expand under the threat from the Cornwall and Lebanon. The Cornwall and Lebanon itself was an immediate success and quickly outpaced the older railroad. However, on several occasions both railroads individually made more money in a year than the Cornwall Railroad had made some years as a monopoly. Both were able to cover all of their expenses, construct new tracks, improve their lines, add new equipment, and grow their workforce. This was due in large part to the expansion of the Cornwall Ore Bank Co. during this period, which contributed more than half of both railroads' freight traffic. The mines expanded so rapidly that, despite ore

⁵ Stover, *American Railroads*, 125-26.

shipments being split between two railroads, the Cornwall Railroad could ship approximately the same amount of ore it had before the introduction of its competitor.

The ability of these parallel, redundant lines to profit and avoid a rate war has significant implications for both these railroads and railroads as a whole. Firstly, it is clear that, unlike other new railroads built in the 1880s, the Cornwall and Lebanon Railroad was not a case of overbuilding. While historians typically have not strictly defined overbuilding, many discuss it in terms of building a line that serves no other purpose but to harm a competitor and could not be practical or profitable in its own right.⁶ Coleman may have been impatient in his desire for full control over both the Colebrook Valley Railroad and the Cornwall Railroad, but there is little evidence that he built the Cornwall and Lebanon Railroad specifically to destroy the Cornwall Railroad. Not only did he originally wish to buy it rather than compete with it, but the primary concern in his letter to Artemus Wilhelm was over the efficiency of having two railroads work together rather than everything running under one management.⁷ Of course, that is merely his stated purpose in a letter to a company that he became rivals with. However, Coleman largely avoided behavior such as rate wars that would harm his own railroad simply to spite the Cornwall Railroad. Overbuilding, such as the never-finished South Penn, was designed to hurt a competitor even if the new line itself was impractical. Coleman almost certainly would have liked to see the Cornwall Railroad falter, but did not go to the extremes of overbuilding or rate wars to see that happen.

Because the Cornwall and Lebanon Railroad was not a case of overbuilding, it also did not directly contribute to the Panic of 1893 like other railroads. While many railroads went

⁶ Churella, *Pennsylvania Railroad*, 547; Harwood, *Railroad that Never Was*, 4-13; Lauck, *Causes of the Panic of 1893*, 1-6; Carlson, "Causes of Bank Suspensions in the Panic of 1893," 60-61.

⁷ Colebrook Valley Minutes, March 10, 1882, 37-38.

bankrupt leading up to and during the Panic of 1893, these were primarily overbuilt lines that had engaged in intense, unsustainable rate wars. Many of them were also poorly managed overall.⁸ The yearly profits, freight traffic, and passenger traffic of the Cornwall Railroad and the Cornwall and Lebanon Railroad certainly reflect the general economic conditions of the 1890s. Both railroads suffered in the years following the Panic of 1893. However, both railroads survived and even rebounded to have some of their best years at the end of the decade.

The ability of both railroads to prosper under such direct competition also demonstrates that the Cornwall Railroad was not a natural monopoly. If it were, it should have been impractical to build a parallel railroad as the economy of scale would prevent both from profiting.⁹ If the Cornwall was a natural monopoly, both railroads may have profited enough to cover regular operating expenses but not long-term expenses like loans. Railroads in such a situation often resorted to rate wars, eliminating one line and returning the local market to a state of monopoly. Worse, the two railroads could form a cartel and raise rates even higher than they were under the monopoly to survive.¹⁰ None of that, however, applies to the Cornwall Railroad and the Cornwall and Lebanon Railroad. They were both able to profit enough not only to cover operating costs but also to pay off debt. They resorted neither to rate wars nor to a cartel. Further, their primary customer expanded so rapidly that there was enough freight to supply both railroads without the existing Cornwall Railroad losing significant traffic. Despite their cut-throat attitudes, these railroads defied the definition of natural monopolies and support Robert

⁸ Dougall, "Review: *The Reorganization of the American Railroad System*," 420-22.

⁹ Gallamore and Meyer, *American Railroads*, 22-23.

¹⁰ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1035-37.

Gallamore and John Meyer's argument that railroads in general are not natural monopolies since other railroads or other forms of transportation can often provide healthy competition.

However, it is important to note that the Cornwall Railroad is just one example and cannot be used to answer this larger debate alone. It is entirely possible that the Cornwall Railroad is an anomaly and otherwise railroads generally met historians' definitions of a natural monopoly. Furthermore, it is important to note that the concept of natural monopolies itself was not fully developed in the late nineteenth century. Hovenkamp, even while arguing that railroads are and were natural monopolies, rightly noted that historians should not judge the past by these modern concepts – say, by using the concept of natural monopolies to judge the intentions of those who supported early railroad regulation. That is not to say that railroads' status as natural monopolies does not have implications for regulation. Rather, Hovenkamp was criticizing historians for judging the intentions of policymakers outside of the context of the economic theories that they believed at the time. Historians following new left capture theory, like Kolko, ignored this and came to incorrect conclusions as a result.¹¹ However, Gallamore argues that this concept, even to the extent that it did exist in the late nineteenth and early twentieth centuries, did influence policy makers and the ICC's efforts suffered due to the misleading view that railroads are natural monopolies.¹² Judging the intentions of policymakers is an entirely different question than asking whether their understanding of railroads was accurate and how that affected the success of their regulations. Regardless, this is only one small piece of evidence.

If railroads as a whole were not natural monopolies, this has significant implications for the way the public, policymakers, and railroad executives attempted to resolve the issues created

¹¹ Hovenkamp, "Regulatory Conflict in the Gilded Age," 1017.

¹² Gallamore, "Policy Dilemma of Competition and Consolidation," 11.

by excess competition and overbuilding in the 1880s. Firstly, this would mean that, in many cases, consolidating smaller rail lines merely returned the market to a monopolistic status. Consolidation did prevent rate wars and other destructive behavior, but the public decried the resulting monopolies.¹³ However, this also means that some of the strategies employed by federal regulation were flawed as well because they assumed that nothing could compete with railroads. Regardless of whether railroads could effectively compete with each other as parallel lines, other forms of transportation eventually did. Historians like Gallamore argue that regulating railroads as natural monopolies eventually put them at a disadvantage because the ICC continued to place a minimum on their rates as if they were only competing with each other, not with trucking companies and airlines. As a result, railroads were not allowed to lower their rates to a level where they could compete with these new forms of transportation.¹⁴ Of course, railroads' status as a natural monopoly in an age with competition from other forms of transportation is significantly easier to discount. However, if the Cornwall Railroad and the Cornwall and Lebanon Railroad were not an anomaly and railroads were not natural monopolies in the late nineteenth century when trucks and planes did not exist and canals were largely extinct, then it is difficult to imagine a time when they would ever qualify as natural monopolies.

This demonstrates the need for further research on other small parallel railroads in the late nineteenth century. The story of the Cornwall and Lebanon Railroad and the Cornwall Railroad cannot be used to come to conclusions about the status of railroads as natural monopolies overall. However, as noted previously, historians have largely limited themselves to larger railroads like the Pennsylvania Railroad or the Philadelphia and Reading Railroad. When

¹³ Churella, *Pennsylvania Railroad*, 663.

¹⁴ Gallamore, "Policy Dilemma of Competition and Consolidation," 11.

historians do cover small railroads, they are generally connected in some way to the story of larger railroads such as the aforementioned Beech Creek Railroad's connections to the New York Central's battle with the Pennsylvania Railroad. To be fair, many smaller railroads eventually merged with these larger companies, especially once the push for consolidation began. As discussed in the introduction, this even applies to some degree to the Cornwall and Lebanon Railroad and the Cornwall Railroad. However, historians have only discussed them briefly in connection to larger railroads. While the Pennsylvania Railroad may have been instrumental in the history of the Cornwall and Lebanon, the Cornwall and Lebanon did not play as significant a role in the Pennsylvania's history when compared with other short lines the Pennsylvania eventually bought. Thus, there is a need for more scholarship on smaller railroads in general, as well as to determine whether they fit the description of natural monopolies.

The history of the Cornwall and Lebanon Railroad and the Cornwall Railroad after 1900 also exemplified larger trends in railroading. However, in this case, the trend was consolidation. While both railroads survived the Panic of 1893 and had recovered by the end of the century, Coleman did not fare so well. Due to overextending himself, he lost his fortune. Even before the financial crisis, Coleman's finances forced him to cede control of the Cornwall and Lebanon, which transferred to his brother-in-law Archibald Rogers.¹⁵ The Pennsylvania Railroad began buying shares in the Cornwall and Lebanon in 1913 and fully merged the smaller railroad into the Pennsylvania in 1918. Once the Pennsylvania took control, it demolished the Cornwall and Lebanon's roundhouse and engine facilities and made an arrangement to share the Reading's

¹⁵ Cornwall and Lebanon Minute Book 1882-1900, July 20, 1892.

engine house in Lebanon.¹⁶ This showcases the stark contrast between the intense competition of the 1880s and the cooperation of larger railroads in the early twentieth century.

When Bethlehem Steel bought the Cornwall Railroad in 1923 and the Pennsylvania responded by ceasing ore shipments to Bethlehem Steel's Lebanon plant, much of the competition between the Cornwall and the former Cornwall and Lebanon ended. However, both lines continued to prosper under their new ownership until the 1950s when the concentrator plant moved from Lebanon to Cornwall, eliminating much of the need for ore transportation.

Competition from foreign ore further strained the iron mines, by then owned by Bethlehem Steel, and the railroads that served them. In 1964, the Reading Railroad bought the Cornwall Railroad from Bethlehem Steel, bringing both railroads under the control of the larger systems that backed them during the railroad wars of the 1880s. In 1972, Hurricane Agnes flooded the iron mines, which reopened briefly before closing the following year, causing Penn Central and the Reading to abandon the lines. Conrail owned both routes briefly before tearing up the tracks in 1978.¹⁷

The Cornwall and Lebanon right-of-way became the Lebanon Valley Rail Trail. The Cornwall and Lebanon Railroad station in Lebanon still stands not far from the Philadelphia and Reading station. Hikers and bicyclists can also ride over the railroad bridge in Cornwall, still standing as a reminder of the competition between these two small railroads that served the same towns and industries. Despite their redundancies and ruthlessness, the lines of both railroads continued to serve the iron mines up until they closed, eliminating the need for any railroad to Cornwall, let alone two.

¹⁶ Rhoads and Heilman, *Railroads of Lebanon County*, 127.

¹⁷ *Ibid.*, 124.

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