Small Steel in a Big War

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Small Steel in a Big War

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Abstract

“Small Steel in a Big War,” was written to compare the Second World War experience of Pueblo and Colorado Fuel and Iron with that of the rest of the nation. The purpose in doing so was to find what was unique about Southern Colorado's history during the conflict, and to see how national trends impacted its residents. Most of the information for this paper was drawn from the primary sources in the C.F. and I. archives of the Bessemer Historical Society, and from the Pueblo Chieftain collections of the Pueblo Library's Rawlings Branch. Several secondary sources have been used as well, particularly steel industry and gender studies. Evaluation of these sources makes it clear that C.F. and I. was a fairly small company that had high hopes, but lacked the money or influence to achieve its major postwar goals. The Second World War economically revived the company from its near-collapse during the Great Depression, but did not revolutionize it or Pueblo. The cultural effects of the conflict were similarly limited, with one of the few major changes being that the company was able to keep its employees working instead of striking for better conditions. Gender concepts also underwent very little change at C.F. and I. and Pueblo. The national battle over gender roles, discussed by authors like Matthew L. Basso, did not have a measurable impact on either city or company. “Small Steel in a Big War,” shows that cultural and economic change are not only limited by local circumstances, but it also discusses what limited them. Local men and C.F. and I.'s management constricted women's wartime roles and power, whereas steel corporations across the nation blocked the company's growth. Ultimately, C.F. and I. as well as Pueblo illustrate that national narratives of change inspired by the Second World War do not apply evenly across the United States.
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Introduction

Colorado Fuel and Iron's work during the Second World War is a useful case study of a company that followed contemporary economic and cultural trends, but fell short of achieving the ideal results discussed by scholars of the war. Gerald D. Nash, one of the key historians of the modern American West, described World War II as a progressive and revolutionary force in the West. For Pueblo and C.F. and I., the war helped them recover from the Great Depression but did not change them to the extent of Nash's claims. In many ways, Pueblo and C.F. and I. were in roughly the same cultural and economic positions they had occupied before the war. Women entered the workforce at the company, but no major restructuring of gender norms took place in Pueblo. The issues of race and ethnicity received even less direct attention. Racial and gender discrimination remained a constant at C.F. and I., with community actions reinforcing gender roles overtly and racial ideas covertly. Even wartime cooperation between management and employees did not survive the war, because the impetus behind it evaporated once the Allies won in 1945. The company and Pueblo economically benefited from the outcome of the Second World War, but not in a way that earns the epithet “revolutionary.” C.F. And I.'s management and employees wanted to contribute to the war effort for varying reasons, but their efforts ultimately had only a modest impact. The story of C.F. and I. and Pueblo during World War II is that of a small company that wanted to expand to be nationally influential through its steel production and industry studies, but instead only managed to bring modest benefits to its host community.

Small Steel in a Big War examines C.F. and I. as a case study of a small company during World War II, and compares it to other corporations from around the United States in order to showcase the intriguing differences between them. It delves into the reasons behind the similarities and contrasts between C.F. and I. and Pueblo and the rest of the United States. This work draws mainly upon original research done in the C.F. and I. Archives of the Bessemer Historical Society and the Pueblo Chieftain
Archive at the Rawlings Library in Pueblo, Colorado. Small Steel draws upon ideas from both cultural and economic history, in an effort to give a picture of how this affected both company management and employees. In economic terms, the war increased C.F. and I.’s profits, but could not help it confront the pressure of other steelmakers. Its expansion opportunities and influence were limited by the rest of the industry. They blocked its expansion into new plants and markets. C.F. and I. made some useful contributions to the larger steel industry and national war effort, but was unsuccessful in leveraging them to increase its share of the economy. C.F. and I. and Colorado are examples that do not follow prosperity/change narratives tied into U.S. national history, but do not necessarily contradict them either. Instead, they complicate the story of the Second World War U.S. home front by showing that the success of some companies and regions was limited by others.

C.F. and I. and Pueblo also provide a unique perspective on the cultural changes brought by the wartime needs of the United States. Specifically, company and community reactions toward the recruitment of female and non-white labor often differed from national ones. C.F. and I. is an unusual example of a company with white male workers who did not feel as though their ideas of masculinity were being threatened by replacement employees. Rather than oppose women or ethnic workers, the company and white male employees fit them into pre-existing discrimination hierarchies. While the exact nature of racial discrimination at the company is rarely discussed by management or employees, women were officially subordinated to men on the basis of physical strength. Interviews and documents show that the male workers considered women coworkers to be weaker and in need of protection. There was no revolution or conflict in gender norms at C.F. and I., because male workers accepted female employees as a stopgap measure for staving off the loss of workers. Social messages in the local newspapers reinforced this. At C.F. and I., women and ethnic workers were allowed to work in production jobs without protest from the white male workers, but only because management convinced them that this was temporary and would not change societal norms.
The cultural and economic changes the war brought to Pueblo and C.F. and I. were not all unique, though. The company and its employees saw an overall increase in profits and wages during the war. Like other steel companies, profits were fluctuating but exceeded Depression levels. In addition, anti-Japanese sentiment swept across Pueblo and the company at the same time as the rest of the country. Furthermore, C.F. and I. steelworkers rallied with most of the rest of their union in support of the No-Strike Pledge of 1941. Cooperation between employees, management, and the U.S. government was at the heart of C.F. and I.'s wartime success, though this does not distinguish it from most other steel companies. Even the company's noteworthy studies of the U.S. steel industry did not make it unique. Instead, they are a sign of the fact that C.F. and I. wanted to imitate other steelmakers. It took the initiative to study the pay structures used in the industry with the intention of using them as a guide for its own policies. C.F. and I. and Pueblo followed national trends in many ways, but the unique aspects of their cultural and economic history still change our understanding of how the Second World War impacted the United States.

Before proceeding, it is important to note that many historians have examined parts of this issue in the course of their own work. The historians examined in this study agree that the Second World War had a drastic impact on the United States' economy and industry, particularly in the South and West, but not all of them agree on how powerful or beneficial the changes were. For some scholars, such as William T. Hogan, the economic role of the U.S. steel industry is their main focus. Others, like Barbara Driscoll and Gerald Nash, are more interested in how the industrial economy affected broader issues of regional power and social history. Each of these scholars wrote from a unique perspective, but none of them specifically focused on examining gender relations and economic changes at a single steel plant and community during the Second World War.

2 Barbara Driscoll, The Tracks North: The Railroad Bracero Program of World War II (Austin: Center for Mexican American Studies, 1999), ix-xi.
Gerald Nash's works are crucial reading for any scholar of the modern American West, but his broad narratives of post-World War II success in the region must be tempered by the reality of local conditions in locations like Colorado. Nash's ideas are best put forth by his book *World War II and the West*, in which he claims that the economic growth brought by the war allowed the West to escape its role as, “America's third world.”³ Before then, it was effectively a colonial province of the eastern states.⁴ Mark Foster's article, “Giant of the West: Henry J. Kaiser and Regional Industrialization, 1930-1950,” (1985) is a clear branch from one of Nash's earlier books that connects to *World War II and the West*. Foster focused on Henry Kaiser, and shared ideas about the man with Nash. Both say that Kaiser worked hard and created a new industry that fostered economic independence in the American West, but hopes outpaced actual achievements.⁶ Research into Colorado's local systems shows that this theory can be considered partially accurate, but they used too broad of a lens when making their claims by not addressing most Western states in-depth.

Some local histories have helped to flesh out Nash's work and illustrate his theories of wartime economic success, one of them being John Gurda's “*Profits and Patriotism: Milwaukee Industry in World War 2,*” (1994). This article is based on a variation on Nash and Foster's ideas. Gurda argues that the positive experience of two Milwaukee industrial firms, the Falk Corporation and Allen-Bradley, was typical of most companies during the Second World War.⁷ Both of the companies he discusses used social programs to keep their employees amused and fit, while also experiencing large levels of growth thanks to the demands the Second World War placed on the economy. Gurda also establishes the

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³ Gerald D. Nash, *World War II and the West: Reshaping the Economy* (Lincoln: University of Nebraska Press, 1990), 1-2. On pages 215-216, Nash states that literary critic Bernard DeVoto first articulated the concept just after the war ended, and that he adapted it to historical study.


⁶ Foster, 22-23.

extreme extent to which the U.S. federal government began injecting itself into the nation's economic affairs. Gurda's argument differs from Nash and Foster's due to the fact that it discusses a western firm's experiences as being typical of all manufacturers (even eastern ones). While Gurda's article reinforces Nash and Foster's thesis, all of them overstate the extent of post-World War II economic success in the U.S. by claiming their theories are fully applicable to numerous regions and companies. C.F. and I. would become fairly successful and profitable during the war, but not enough to achieve its expansion goals. It was too small to compete nationally, and this was shown during and after the war.

Eastern steel corporations like U.S. Steel and Bethlehem Steel dwarfed Colorado Fuel and Iron. Still, it made important contributions to America's war effort. It was, as Nash mentions in *World War II and the West*, the “only...large integrated steelmaking facility operated west of the Mississippi.” The story of the Colorado Fuel and Iron Company does not begin in the Second World War or the Great Depression, but that of the Colorado Fuel and Iron Corporation does. Bankruptcy between 1933 and 1936 had forced a reformation of C.F. and I., which had been plagued by economic instability. It's fortunes rose and fell with the economy. This is noticeable during both the Great Depression and the Second World War. The individual steel companies, including C.F. and I., were linked together. This tight connection between company fortunes may explain the industry-wide focus on stability that C.F. and I. eventually tried to undermine.

Lee Scamehorn wrote an excellent general history of C.F. and I., which established the company's economic instability and serves as an excellent background source on the company. It is the second half of a two part series, covering C.F. and I.'s history from 1892 to its decline in the 1980s.

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8 Gurda, 29-33.
9 Nash, *World War II and the West*, 130.
11 Scamehorn, 6.
According to Scamehorn, C.F. and I. was a small company which suffered from perennial economic problems, in part because it could not compete with larger Eastern steel corporations. Several of its growth schemes ended up backfiring as well. C.F. and I. reorganized in the 1980s, which marks the end of Scamehorn's monograph on the company. His discussion of the Second World War addresses the general flow of events during the war. However, Scamehorn does leave a few issues unexamined, since he focused on the entire history of the company rather than just World War II. This paper adds on to his work while drawing broader conclusions by using C.F. and I. as a case study in America's steel industry. In particular, it shows how women workers, social issues, and national events changed C.F. and I. and Colorado.

Research shows that Colorado Fuel and Iron held a low relative position in the steel industry before the war. Few people valued it other than the local community and company business partners (railroads being its major consumers). The Great Depression did not significantly alter the company's relative position, in spite of forcing it to reform. Still, all American steel companies (including C.F. and I.) faced significant drops in production during the Great Depression. C.F. and I.'s numbers got to be so low that it appeared to be on the verge of complete collapse. Its prewar growth rate stayed in line with that of the biggest steel companies, in spite of its small size. It tried to make itself less reliant on selling rails, which it accomplished by 1937. It did this because even though 1933 had seen all production at C.F. and I. collapse, its loss in rail orders was particularly staggering. Steel rails made up a disproportionately large part of C.F. and I.'s production portfolio, but it tried to shift its focus to be more modern in the late 1930s and early 1940s. The Second World War reversed this trend, possibly

12 Scamehorn, 1-4, 8.
13 Scamehorn, 5.
14 Scamehorn, 6.
15 Scamehorn, 159.
because demand for rails rose again.\textsuperscript{18} The Second World War drastically changed C.F. and I., but both its industry position and its main product from the Depression days remained the same.

When comparing C.F. and I., the largest western steel producer before World War II, to the largest steel corporations in the East, it is clear its tonnage output was almost insignificant. The war did not change this. However, Colorado Fuel and Iron made itself important to specific markets (such as the rail industry and ballistics manufacturing) through the extraordinary efforts made by its employees to support the war effort. The U.S. government saw C.F. and I. as reliable enough to be awarded a contract to produce 155mm shell forgings in 1940. In addition, it manufactured almost 1/5 of all the rails created in the U.S. during the last two years of the war.\textsuperscript{19} C.F. and I. and its workers also won the “E” Award of the Army-Navy Munitions Board four times for achieving an output greater than the Corporation's rated production capacity.\textsuperscript{20} Despite its relatively small size, Colorado Fuel and Iron's operations during World War II are important for a few different reasons.

The Second World War brought numerous changes to Pueblo through Colorado Fuel and Iron, as the nation's war machine required steel from it, as well as every other American steel producer. The company sent out steel products necessary for the war effort, like rails and artillery shells. In return, it received money it could use to modernize and expand its facilities. Hogan notes that this allowed C.F. and I. to finally start catching up to standard steelmaking technology of the day.\textsuperscript{21} Even so, the

\begin{itemize}
  \item \textsuperscript{18} C.F. and I. 1941 Annual Report, (CFI/BHS), ADM-274, 3-4, C.F. and I. 1945 Annual Report, (CFI/BHS), ADM-275, 5. The other wartime reports fail to mention diversification programs, though the 1945 report does show rails and rail accessories were still made in large quantities.
  \item \textsuperscript{19} C.F. and I. 1941 Annual Report, 4, C.F. and I. 1945 Annual Report, 5, Scamehorn, 152-153. The price of an individual shell, roughly calculated, appears to have been $6.43. This was discovered by dividing the number of shells in one order by the total price the government agreed to pay for them. Information retrieved from the Scamehorn reference.
  \item \textsuperscript{20} “Army-Navy “E” Award Termination Sees Award Granted to 5% of Eligible Plants,” http://www.history.navy.mil/library/online/e_award.htm#press. Operating capacity for a steel company is defined as a percentage calculated by comparing the quantity of steel it produced during a specific period of time with the maximum amount of steel that it could potentially have produced during the same time period. The maximum production level is determined by estimating how much steel could be produced if all employees worked full time and all possible production facilities were being consistently utilized.
  \item \textsuperscript{21} C.F. and I. 1943 Annual Report, 4, Hogan, 1464-1465. Annual Reports take note of huge sums of money being spent for this modernization program each year. 1943 is an example year, in which C.F. and I. spent over six million dollars for improving facilities.
\end{itemize}
company entered and left the Second World War in roughly the same relative position in the national steel industry. Wartime production did not provide it with enough prosperity to start surpassing major competitors in the East. Still, C.F. and I. supplied jobs and steel to Colorado, as well as neighboring states. It also had unique responses to national trends like replacement labor and anti-Japanese sentiment. However, it will take more research into domestic life to understand the precise impact the company had on the opinions of its local community. The Second World War did not change C.F. and I. or Colorado completely, but the company would become larger and more profitable.

The process of change began before the Second World War reached America, since Colorado Fuel and Iron's economic outlook began to improve in 1940. America's demand for the steel required to achieve victory drove this growth, which can be seen by looking at Table 1.1. Thanks to the support of its workers, C.F. and I. produced more steel each year to meet demand until after the war, when the return of major strikes caused manufacturing delays.  

Steel rails were C.F. and I.'s main product before, during and after the war. During the Great Depression, railroads barely operated and only purchased enough rails to maintain existing lines. Once the Second World War began, demand for rails jumped, with production exceeding 2 million tons a year from 1942-1945. The 155mm shells C.F. and I. produced during the war were profitable and militarily valuable, but their level of production did not match that of other products. C.F. and I. started manufacturing these shells in 1940 after a trial period in 1938. The U.S. government decided to see if it could count on C.F. and I. to help support the military in the event that conflict broke out. After C.F. and I. earned the government's business in the trials, shell casings became a staple wartime product of the company. Production doubled when the company started preparing for war, and increased even further as the war went on.

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24 Hogan, 1299, 1305.
Table 1.1: C.F. and I., 1929-1947.26

<table>
<thead>
<tr>
<th></th>
<th>1929</th>
<th>1939</th>
<th>1940</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/n/Sales in Tons</td>
<td>601,615</td>
<td>362,211</td>
<td>600,207</td>
<td>692,452</td>
<td>845,360</td>
<td>925,201</td>
<td>870,000</td>
<td>650,000</td>
<td>760,500</td>
<td></td>
</tr>
<tr>
<td>Operating Capacity</td>
<td>N/A</td>
<td>42.5</td>
<td>72.1</td>
<td>79.7</td>
<td>97.6</td>
<td>101</td>
<td>111.04</td>
<td>104.8</td>
<td>76.7</td>
<td>93.82</td>
</tr>
<tr>
<td>Net Income</td>
<td>N/A</td>
<td>N/A</td>
<td>$1,744,869</td>
<td>$2,288,317</td>
<td>$2,580,134</td>
<td>$1,351,528</td>
<td>$1,672,060</td>
<td>$1,954,979</td>
<td>-$334,751</td>
<td>$4,329,991</td>
</tr>
<tr>
<td>Gross Income</td>
<td>N/A</td>
<td>N/A</td>
<td>$31,864,811</td>
<td>$39,241,034</td>
<td>$52,130,922</td>
<td>$50,273,423</td>
<td>$56,192,152</td>
<td>$57,171,800</td>
<td>$58,118,237</td>
<td>$94,740,442</td>
</tr>
</tbody>
</table>

C.F. and I. Annual Reports 1940-1947, (CFI/BHS), ADM-274-5.27

C.F. and I. broke several of its own financial and manufacturing records during the war, marking a new level of prosperity and productivity for it. High demand for its two major products, rails and 155mm shells, spurred growth at the company.28 1939 had seen the Corporation operating at only 40% capacity due to the Great Depression, but production jumped upward by 30 percentage points the next year due to mobilization for war. As shown in Table 1.1 on the previous page, 1942 saw the company near the 100% production threshold, which it crossed the next year. In 1944, the peak production year for C.F. and I., the Corporation noted that it had established “...110 daily, monthly, and yearly, production records.”29 That same year, its production of steel jumped about 54% over its 1940 levels. However, the C.F. and I.’s net income did not rise at anywhere near the same rate as gross income, mostly because miscellaneous operating expenses (excepting maintenance, taxes, and

26 The Annual reports for 1945, 1946, and 1947 did not provide definitive production/sales numbers, instead using somewhat imprecise graphs. Therefore, the statistics for these years are slightly less precise. Also, both the 1946 and 1947 reports separate wire products from steel products, so their production is not counted for these two years.
administrative costs) in 1944 had increased by about $5,000,000 above their 1942 levels. The broken records illustrate that the war demanded that C.F. and I. produce more than anything ever had before, and the company funneled the payment money into Colorado.

Colorado Fuel and Iron reaped enormous financial rewards for its contributions to World War II during the postwar years. Unfortunately for the company, this did not happen until after 1946, which saw another severe drop in their net income. In fact, the Corporation operated at a loss that year due to a crippling labor strike making it unable to meet the enormous postwar demand for its products. C.F. and I. worried about the net loss of about $300,000 more than anything else. Not even war taxes or wartime wage increases had caused it to have a yearly deficit instead of profit. In fact, C.F. and I. ended up producing less steel in 1946 than it had in 1941. To make matters worse for management, the success of the strike meant that higher wages had to be paid to workers with price controls still in place, further devouring C.F. and I.'s profits. Once the strikers won, the average wage at the company increased by about twenty cents an hour, which amounted to an additional $13,000,000 a year. Much like the losses of 1943, though, the 1946 problems gave way to an improved financial situation the next year. In fact, C.F. and I. experienced an even larger gain in 1947 than it did in 1944 and 1945, even if one also subtracts the losses of 1946 from its net profits. All of this money pouring into the company changed it by allowing it to expand its facilities and improve them, but even this was not enough to make the company any larger than its Eastern competitors. C.F. and I.'s achievements resulted from the rare cooperation between management and employees. However, their alliance lasted no longer than the end of the Second World War, when their shared goal (American victory) had been accomplished.

31 Hogan, 1443-1444.  
Chapter 1: The Company Battles for Prosperity

C. F. and I. on the National Stage 1940-1947

For Colorado Fuel and Iron, the Second World War offered a means of escaping the Great Depression, and the ticket to a potential improvement of its position in the steel industry. The company did not exist in a vacuum; it was a small part of a nationwide push for additional wartime production. It had an important local impact, but became desperate to make its mark on the national level because the war offered a chance to expand the company and earn more money. However, C.F. and I. had to engage with national demands, needs, and competition in order to do so. In spite of its small size and output, the company left its imprint on the nation during the Second World War through its steel industry studies and manufacturing of specific products with extreme efficiency. Unfortunately for C.F. and I., it was limited by other companies in the United States. Even war profits could not allow it to financially compete with larger firms, probably because all of its rivals were experiencing the same wartime burst in sales. It found itself unable to compete, regardless of the accomplishments it made by cooperating with both the government and its employees.

C.F. and I.'s contributions cannot be adequately assessed without context of the U.S. steel industry. William T. Hogan, one of the most influential historians of steel manufacturing, provides this in the Economic History of the Steel Industry in America. It is the most detailed and expansive of all works examining the American steel economy. It is cited in several other books that focus on the U.S. steel industry. Furthermore, it uses methods and styles that are either influential to those who came after him, or are good examples of the methodology/ ideology indicative of the field of economic history. In particular, it makes use of careful quantitative analysis and monitors the changes in technique and technology in the field. Hogan wrote his
book to provide a complete account of the history of the U.S. steel industry, a task at which he is widely acknowledged to have succeeded in.\(^{33}\) His central claim is that steel is the cornerstone of a nation's economy, and he spends most of his work discussing how the steel industry evolved in the United States.\(^{34}\) Hogan states that the Second World War revived the U.S. industrial economy because the nation needed as much steel as could be produced in order to win.\(^{35}\) The postwar environment also ensured that industrial growth continued and was sustained.\(^{36}\) He further states that some of the most notable progress took place in the South and West.\(^{37}\) Out of all the books that discuss the history of steel in the U.S., Hogan's is the fullest.

However, Hogan's contemporary Kenneth Warren provides a regional economic perspective on the issue in *The American Steel Industry 1850-1970*, which gives a clearer picture of where industrial development progressed in the U.S. during World War II. The book discusses the factors that dictated the location of the American steel industry, such as local competition, regional markets, access to transportation, and availability of required resources.\(^{38}\) The Second World War figures prominently in his book's argument, because it expanded the size of steelmaking capacity in all areas of the country.\(^{39}\) Warren mentions the industrial progress made by the South, West, and Southwest in much the same way that Hogan did. Still, older established works like those in the Northeast actually experienced the largest increases.\(^{40}\) Warren discusses how national trends affect regional growth, but does not provide a strong examination of how social factors like the employment of women changed the industry. As such, his work is a good

\(^{33}\) Hogan, 13. Hogan's book is the backbone of my national level research into the American steel economy, which I combined with my local level primary research.

\(^{34}\) Hogan, 1:1.

\(^{35}\) Hogan, 1193.

\(^{36}\) Hogan, 1443-1444.

\(^{37}\) Hogan, 1455-1456.


\(^{39}\) Warren, 240.

\(^{40}\) Warren, 240, 330, Hogan 1455-1456, 1472-1473.
source on the changing regional distribution of steel capacity, but leaves holes this paper will fill.

Finally, it is also worth using Robert Rogers' *An Economic History of the American Steel Industry*, since he wrote it in 2009 as a revision/continuation of Hogan's monograph. He makes the same claim as Warren and Hogan: that government financing increased the steel capacity of the west.\(^{41}\) On the other hand, he differs from Hogan by claiming the economic effects of the war may have caused the economic troubles of the 1970s and 1980s. This was partially because the government invested in steel plants in inland areas rather than expanding and modernizing existing plants. U.S. leaders had been worried about plant security, especially in coastal areas that could be bombed or sabotaged.\(^{42}\) Rogers states that the Second World War may have been responsible for later economic issues.\(^{43}\) The primary reason for including this book is that it retraces Hogan's steps, validating most of them but questioning others (Hogan’s positive predictions about the 1970s and 1980s offer one example). As such, it provides a second, more recent perspective on the national history of America's steel industry.

Interfacing with the companies and national economic issues discussed by Warren, Hogan, and Rogers is what led C.F. and I. to undertake its most influential wartime projects: steel industry studies. The first of these began in 1940, when J. Rodney Irwin (C.F. and I.'s head of industrial engineering) traveled around the U.S. to examine the job titles and wages of various steel producers.\(^{44}\) None of this seems to be all that important until one realizes that the industry had no standardized job descriptions or wages at the time.\(^{45}\) Wage inequalities existed within C.F.


\(^{42}\) Rogers, 85, 97-100, Warren, 240-244, Hogan, 1121.

\(^{43}\) Rogers, 105.

\(^{44}\) Message from John McAllister to J.R. Irwin about W.A. Maxwell sending letters to start study, July 3, 1940, (CFI/BHS), PLA-0009, Folder 17, Confidential Minutes of a Meeting on Irwin's Job Description and Pay Study, January 28, 1941, (CFI/BHS), PLA-0009, Folder 17.

and I.'s own facilities, where individuals doing less-skilled jobs sometimes received higher pay than vital employees. The company decided to withhold raises for overpaid employees (even when they got promoted) instead of reducing their inflated salaries to the normal rate. The nationwide negotiation of wage equality required this, and the War Labor Board imposed it on all companies in 1944.46 Before then, management of the company either did not know of the wage problem or it did not care. However, it seems that once C.F. and I. got this study started, even some of the larger steel companies wanted to get involved with it.

C.F. and I.'s research project influenced other companies because they wanted to know how to handle the selection of employees for the draft. As such, U.S. government regulations during the Second World War indirectly required the industry to finally standardize job descriptions. Unequal wages were characteristic of the pre-war steel industry, according to William Hogan. Indeed, before 1947, steel companies usually allowed individual superintendents and foremen to determine who to hire for jobs and what to pay them. The company held absolute control over the wages, but the delegation of hiring authority meant that management did not have a unified system for determining job responsibilities or pay. Hogan's work shows that U.S. Steel made the first (unsuccessful) attempt at standardization in 1900. For over forty years, no other company tried to standardize jobs, and U.S. Steel made no new attempts.47 The exact impetus behind the formalizing of steel industry wages and job descriptions is never stated in C.F. and I. records, but most companies standardized as a result of government demands for employee evaluation that started in 1940. As America's entry into the Second World War looked increasingly probable, the U.S. government ordered steel companies to say which of their employees were replaceable. While this is not the same as outright asking for standardization, it

46 Confidential Minutes of a Meeting on Irwin's Job Description and Pay Study, January 28, 1941, (CFI/BHS), PLA-0009, Folder 17, Hogan, 1188.
47 Hogan, 1186-1187.
implicitly requires it. In order to know who could be safely lost, companies like C.F. and I. had to know (among other things like personal details) what responsibilities and pay rates its workers had been assigned. The industry-wide job reformation officially began in 1942. The war compelled the steel industry to establish set job categories and wage scales. As a result, other companies participated in, and requested copies of, C.F. and I.'s study so they could develop their own standardization plans.

Private companies undertook equalization first, but the government eventually forced standardization on the steel industry as a whole. The government did not officially request job standardization until 1942. The official reasoning behind it was that it aided in drafting since companies needed to know exactly what workers were doing before they could allow them to be conscripted. 1942 marked the birth of the American Iron and Steel Institute's standardization efforts, but before that, it is likely that Colorado Fuel and Iron took the role instead.

Representatives from other companies expressed a lot of interest in the topic and requested copies of Irwin's study, which meant individual companies were probably hoping to use it to help them plan job reforms on their own. The example of U.S. Steel shows that at least one steel company wanted to standardize its wages. The industry in general resolved to standardize in 1942. While industry management and the union battled over the issue until the war's end, C.F. and I. made the first wartime equalization efforts.

While C.F. and I. may have impacted the national steel industry in some ways, it

52 Hogan, 1186-1188.
remained subject to the same trends as other companies. It could not economically compete with
the top steel companies in America, in spite of its importance to the West and Colorado. Some of
the major players at the time of the Second World War were U.S. Steel, Republic Steel,
Bethlehem Steel, Youngstown Sheet and Tube, and Jones and Laughlin. U.S. Steel was the
largest, but the rest represent a cross-section of the steel industry. Some of them had been badly
hit by the Great Depression, which had wiped out several companies through reorganization.
Carnegie-Illinois, a company C.F. and I. dealt with often, had been created through a merger
during the Depression. Numerous companies reorganized just before the war. Bethlehem and
Youngstown even got close to merging as means of staving off disaster. The giants of America's
steel industry seemed vulnerable during the Depression, as did their hegemony over the industry.
Each of these companies based themselves to the East of C.F. and I., and several exerted a
controlling influence over the industry through their production as well as their responses to
national events (like defense order cancellation). C.F. and I. interacted with most of these
companies through its studies, except U.S. Steel, which ignored C.F. and I. until the postwar grab
for steel plants being sold by the government. C.F. and I. influenced the steel industry, helping to
shape its ideas and handling of national trends in small ways by offering beneficial services or
threatening a company's ambitions.

Knowledge of steel industry culture is vital to understanding C.F. and I.'s position in the
steel industry and contextualizing this case study of it. Two authors that discuss this subject are
Richard Lauderbaugh and Harlan Prechtel. Lauderbaugh's book, American Steel Makers and the
Coming of the Second World War (1976), examines whether steel company owners altered U.S.
government policy. He concludes that they had little direct influence, and almost no interest in

53 Hogan, 1193, 1202-1204, 1214-1215.
54 Hogan, 1193, Confidential Message on cancellation clause from N.H. Orr to W.A. Maxwell, Jr., May 16. 1944,
(CFI/BHS), ADM-23, Folder 8, J.D. Sullivan's Cancellation Clause Memo for the Files, June 22. 1944,
(CFI/BHS), ADM-23, Folder 8.
expanding their production capacity. Prechtel takes the position in “Steel and the State,” (1990) that steelmakers were a capitalist group that worked together to exert political power over the U.S. government to protect their profit margins. Prechtel and Lauderbaugh both agree on the basic interpretation of some facts. They both state that capacity did not drastically increase during the Second World War. Prechtel claims that wartime taxes had made increasing capacity economically unfeasible, but Lauderbaugh felt the industry had a preference for stability. C.F. and I. was a part of this group that acted similarly, but it wanted to partially overthrow this stable steel system to expand itself.

Regardless of the influence C.F. and I. exerted on its larger peers through its studies, it did not change the balance of power or influence in the steel industry. Both Warren and Lauderbaugh argue that U.S. steel companies made a conscious effort to not upset this balance of power. Particularly after the Great Depression, most American companies worked to prevent another serious economic tragedy. In pursuit of this goal, they limited growth and tried to keep it stable. This would ensure companies did not collapse from overspending and severely damage the industry. This may explain why other companies paid attention to C.F. and I.'s industry wide study: it informed them of other companies' operations. Despite being an outlier in the steel industry, C.F. and I. dealt with many of the same problems as other manufacturers. Both C.F. and I. and its peers watched each other to find the best method for handling a new trend or problem. However, C.F. and I.'s manufacturing of an antiquated product like rails, combined with its small size and location in the West, meant that it had less investment in the industry's present power

structure. It participated in the national dialogues of the steel industry and in production for war, but the impact it had shows that regardless of its several important contributions to its peers, it was still not among the major players in the system.

The actual impact of C.F. and I.'s study cannot be fully understood without examining the records of the companies it interfaced with, but it is clear that companies had an interest in the results. The numerous steel manufacturers (including the likes of Republic Steel) who agreed to take part in the study may have, like C.F. and I., been interested in taking cues from other companies. It is possible that the management at all of these companies needed this study to help them to know who they could afford to lose to the draft (though it could also appease underpaid workers). The ordeal Irwin went through to get the information demonstrates why other companies were probably content to give data, rather than collecting it themselves. Irwin traveled all over the U.S., and gathered data that could sometimes be confidential. Getting that info required connections, and some of Irwin's letters show how close those could be. In the end, though, several of the companies he contacted wanted a copy of his study's results. Jones and Laughlin became worried when Irwin had not sent study results to them, and asked what C.F. and I. decided to do about jobs and salaries. More companies decided to join the pool for his next study.

Studies were part of C.F. and I.'s tendency to imitate other steel companies with its own unique twist. For instance, in 1944, Youngstown Steel formulated a cancellation clause it would

60 Message from J.R. Irwin to D. A. Barret of the Carnegie-Illinois Steel Corporation with copies of his industry survey, October 8, 1940, (CFI/BHS), PLA-0009, Folder 17. Irwin notified a few of the companies he gave his study to that he had to keep some info confidential. This was probably important considering that some large companies were involved.
61 Message from J.R. Irwin to Ray H. Seivers of Herbison-Walker Refractories Company about Granite City Steel Visit arrangements, August 28, 1940, (CFI/BHS), PLA-0009, Folder 17, Message from J.R. Irwin to A. P. Miller of Inland Steel Company about visiting plant, August 28, 1940, (CFI/BHS), PLA-0009, Folder 17.
62 Message from J.R. Irwin to D. A. Barret of the Carnegie-Illinois Steel Corporation with copies of his industry survey, October 8, 1940, (CFI/BHS), PLA-0009, Folder 17, Message from J.R. Irwin to Ben Warren of Columbia Steel, October 8, 1940, (CFI/BHS), PLA-0009, Folder 17.
give to the U.S. government in the event that the conflict ended and it canceled wartime contracts. They designed the clause to deal with the fact that incomplete items could still be in the company plants, and it might have unshipped items in inventory. It dictated that the customer had to pay for the cost of these items that could not be recouped through resource recycling. C.F. and I. saw this clause and formulated their own. 64 This is another event that demonstrates the company's link with others on a national scale, since it shows how C.F. and I. copied the innovations of others when confronted with national issues. Indeed, Orr sent a message back to C.F. and I. with the Youngstown clause attached, “As a guide to what we may decide to do.”65 It often took management ideas from another company, changed them slightly, and then used them for itself.

C.F. and I.'s studies allowed it to both contribute to other companies, and to analyze the ways in which other companies responded to national issues. It also had to pay attention when other companies gave pay raises, since it wanted to pay its workers better. Management probably hoped that this would prevent work stoppages and attract employees (including those of other companies).66 C.F. and I. even copied a patented invention of another company in the early part of the war, a clear sign of its tendency to imitate others. Its breach of a barbed wire fence arm copyright, held by W.T. Cox of Cox Steel and Wire, eventually went to court. C.F. and I. settled before the case got too far by paying for a lease on the patent, though not before Cox started

63 Message from W.H. Harvey to J.R. Irwin, October 30, 1941, (CFI/BHS), PLA-0009, Folder 17. This may just indicate that they wanted C.F. and I. to uphold its part of the bargain, but one must also consider why the company gave the information in the first place. It must have actually wanted what it had been promised.

64 Confidential Message on cancellation clause from N.H. Orr to W.A. Maxwell, Jr., May 16. 1944, (CFI/BHS), ADM-23, Folder 8, J.D. Sullivan's Cancellation Clause Memo for the Files, June 22. 1944, (CFI/BHS), ADM-23, Folder 8.

65 Confidential Message on cancellation clause from N.H. Orr to W.A. Maxwell, Jr., May 16. 1944, (CFI/BHS), ADM-23, Folder 8.

66 Message from J.R. Irwin to L.F. Quigg about Salary Increases, May 21, 1941, (CFI/BHS), PLA-0009, Folder 19.
sending messages about the violation to C.F. and I.'s business partners. Ultimately, studies of the steel industry taught C.F. and I. how other companies handled wartime issues, and helped other companies to do the same (like Jones and Laughlin). The effect this trade had on other companies can only be known by examining their records, but the studies did have a tremendous impact on Colorado Fuel and Iron. It changed its policies to resemble those of the companies it studied, both in 1940 and 1942. However one decides to value C.F. and I.'s studies, its steel production was relatively insignificant in terms of raw tonnage.

Colorado Fuel and Iron benefited a great deal from the results of the Second World War, but could not contribute as much to the national war economy as the steel giants of the eastern United States. C.F. and I. did not have as large of facilities or as many employees as competitors like U.S. Steel. In fact, it had roughly 324,341 fewer employees than U.S. Steel in 1942, the year it had its largest workforce. During the war, C.F. and I. produced shells large enough to be fired from a naval vessel, but U.S. Steel manufactured 77 Destroyers, as well as other ships. The additions Bethlehem Steel made to its plants during the war provided more tonnage capacity than all of Colorado Fuel and Iron's facilities could in a year. Despite its small size, C.F. and I. saw its economic condition steadily improve during the Second World War. All of the companies received even greater benefits once the war ended, but C.F. and I. still lagged behind. Tables 2.1 and 2.2 clearly illustrate this point. Colorado and C.F. and I. both grew economically as a result

67 Message from W.T. Cox to C.F. and I. Corporation, January 20, 1940, (CFI/BHS), ADM-23, Folder 8, Secretary DGM to Dean S. Edmonds, September 30, 1940, (CFI/BHS), ADM-23, Folder 8, Message from W.T. Cox to the Legal Department of Continental Oil, February 16, 1940, (CFI/BHS), ADM-23, Folder 8.
68 Message from W.H. Harvey to J.R. Irwin, October 30, 1941, (CFI/BHS), PLA-0009, Folder 17.
71 Hogan, 1209.
72 Hogan, 1221.
of World War II, but in 1945 Colorado still had roughly the same percentage of national manufacturing as it had before the war (.3%).\textsuperscript{73} Nash points out that the West grew in relative industrial power as a result of the Second World War, but Colorado was clearly in roughly the same place it had been.\textsuperscript{74} C.F. and I. had earned a lot of money during the Second World War, but that could not improve its relative size in the industry.

Table 2.1: Steel Production/Sales Statistics for Select Steel Companies 1940-1947

<table>
<thead>
<tr>
<th></th>
<th>1940</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado Fuel and Iron</td>
<td>600,207</td>
<td>692,452</td>
<td>831,208</td>
<td>845,360</td>
<td>925,201</td>
<td>870,000</td>
<td>650,000</td>
<td>760,500</td>
</tr>
<tr>
<td>United States Steel</td>
<td>15,014,000</td>
<td>20,417,000</td>
<td>20,615,000</td>
<td>20,148,000</td>
<td>21,052,000</td>
<td>18,410,000</td>
<td>15,182,000</td>
<td>20,242,000</td>
</tr>
<tr>
<td>Bethlehem Steel</td>
<td>N/A</td>
<td>8,971,869</td>
<td>8,921,775</td>
<td>9,188,028</td>
<td>9,460,640</td>
<td>8,545,957</td>
<td>7,284,952</td>
<td>9,403,067</td>
</tr>
<tr>
<td>Republic Steel</td>
<td>4,199,000</td>
<td>5,938,000</td>
<td>5,765,000</td>
<td>5,873,000</td>
<td>5,921,000</td>
<td>5,415,000</td>
<td>4,651,000</td>
<td>6,073,000</td>
</tr>
<tr>
<td>Jones and Laughlin Steel</td>
<td>2,300,000</td>
<td>3,100,000</td>
<td>3,200,000</td>
<td>3,600,000</td>
<td>3,600,000</td>
<td>3,200,000</td>
<td>2,900,000</td>
<td>3,500,000</td>
</tr>
</tbody>
</table>

C. F. and I. Annual Reports 1940-1947, (CFI/BHS), ADM-274-5, Hogan, 1210, 1224, 1239, 1244, 1259-1266.\textsuperscript{75}

The steel industry had always been stronger in the eastern United States than in the West. Gerald Nash once referred to the pre-Second World War West as “America's 'Third World'.” Whether Colorado escaped this status along with the rest of the West is debatable. It had minimal industrial capacity before the war, with almost no manufacturing companies aside from Colorado


\textsuperscript{74} Nash, \textit{World War II and the West}, 1-2.

\textsuperscript{75} Production statistics for companies other than C.F. and I. were collected from information tables created by Hogan (with a few exceptions where he embedded the data in his narrative). Hogan got his information from the Annual Reports of these companies.
Fuel and Iron. All the companies compared with C.F. and I. here were based to the East, and include some of America's largest steel companies. The biggest of them all was U.S. Steel. It had been created by Andrew Carnegie in 1901, and had once been close to achieving a monopoly of the American steel market. It served as the ideal model of an American steel firm: large and profitable, but still prepared to make (financial) sacrifices for its home country. C.F. and I. may have been prepared to make sacrifices too, but none of its efforts could have as much impact. Table 2.2 demonstrates the difference in net income between C.F. and I. and several major steel companies. Just looking at the difference between U.S. Steel and C.F. and I.'s profits shows that the Colorado company did not have anywhere near as much money to let go for the war effort. Tables 2.2 and 2.3 show that all the major companies increased production/sales each year but their income decreased, except in 1945 when the war ended. Other companies to the east could outproduce C.F. and I., and better supply the nation's war machine with steel.

Table 2.2: Net Income of Select Steel Companies 1940-1945

<table>
<thead>
<tr>
<th></th>
<th>1940</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado Fuel and Iron</td>
<td>$1,744,869</td>
<td>$2,288,317</td>
<td>$2,580,134</td>
<td>$1,351,528</td>
<td>$1,672,060</td>
<td>$1,954,979</td>
</tr>
<tr>
<td>United States Steel</td>
<td>$102,200,000</td>
<td>$116,200,000</td>
<td>$71,200,000</td>
<td>$62,600,000</td>
<td>$60,800,000</td>
<td>$58,000,000</td>
</tr>
<tr>
<td>Bethlehem Steel</td>
<td>N/A</td>
<td>$34,500,000</td>
<td>$25,400,000</td>
<td>$32,100,000</td>
<td>$36,200,000</td>
<td>$34,900,000</td>
</tr>
<tr>
<td>Republic Steel</td>
<td>$21,114,000</td>
<td>$24,038,000</td>
<td>$17,155,000</td>
<td>$12,011,000</td>
<td>$10,130,000</td>
<td>$9,543,000</td>
</tr>
<tr>
<td>Jones and Laughlin Steel</td>
<td>$10,300,000</td>
<td>$15,300,000</td>
<td>$9,900,000</td>
<td>$9,900,000</td>
<td>$7,960,000</td>
<td>$8,500,000</td>
</tr>
</tbody>
</table>


That said, all the companies in these tables made financial sacrifices: their profits spiraled

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77 Fisher, 22.
downward during the war, despite the fact that their production levels rose. Only Bethlehem Steel and Colorado Fuel and Iron actually experienced an increase in net income during the war years. There were a few reasons for this general loss of wealth, the most important being increased wartime taxes and price controls.\(^7\) A retrospect published by U.S. Steel in 1951 expresses how much the company sacrificed for the war effort.\(^7\) C.F. and I.'s president, W.A. Maxwell Jr., similarly emphasized the sacrifices made by his corporation to improve America's wartime steel production.\(^8\) Essentially, America's steel companies allowed their profits to be lowered to support the war effort. The fact that the war increased every steel company's net income above what they had been in the Great Depression is not mentioned, presumably because it makes the narrative of sacrifice seem less dramatic to the reader.\(^9\) In any case, the booming market in the postwar years increased profits drastically for the entire steel industry, which no doubt made the prior sacrifices seem worthwhile.

<table>
<thead>
<tr>
<th></th>
<th>Colorado Fuel and Iron</th>
<th>United States Steel</th>
<th>Bethlehem Steel</th>
<th>Republic Steel</th>
<th>Jones and Laughlin Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>$1,954,979</td>
<td>$58,000,000</td>
<td>$34,900,000</td>
<td>$9,543,000</td>
<td>$8,500,000</td>
</tr>
<tr>
<td>1946</td>
<td>-$334,751</td>
<td>$88,600,000</td>
<td>$41,700,000</td>
<td>$16,033,000</td>
<td>$11,100,000</td>
</tr>
<tr>
<td>1947</td>
<td>$4,329,991</td>
<td>$127,100,000</td>
<td>$51,100,000</td>
<td>$31,018,000</td>
<td>$20,100,000</td>
</tr>
</tbody>
</table>

Table 2.3: Net Income of Select Steel Companies 1945-1947


C.F. and I.'s Wartime Products

Colorado Fuel and Iron's production and profits are surpassed by those of every other


\(^7\) Fisher, 50.


company in the tables, but the products C.F. and I. manufactured made it more important than its produced tonnage suggested. The Corporation became involved in the manufacturing of 155mm shell forgings, a product that proved to be both important to the war effort and profitable to produce. C.F. and I. produced significant numbers of shell forgings. U.S. Steel is the only other company listed in the tables that manufactured the same product in large numbers. C.F. and I. claimed that it produced these shells at world record rates in 1944, further demonstrating its importance to the American war effort. This is not to say that C.F. and I. was more valuable to the war effort than the other companies examined, or the only one of these corporations that could (i.e. had the proper facilities, tools, personnel, security, and production stability) produce these shells. In fact, U.S. Steel invested money in research that successfully improved the design and production of the 155mm shells.

The manufacturing of these shells changed C.F. and I.'s production outlook throughout the war. Sales tonnage decreased, but company profits increased. According to the author of C.F. and I.'s 1945 Annual Report, this resulted from a shift in the type of products being produced by Colorado Fuel and Iron. Specifically, it increased the proportion of 155mm shell forgings being produced and sold by C.F. and I. in 1945. Eight million dollars had been earned from the sale of about 70,000 shell forgings, compared to the roughly $18,000,000 provided by the sale of 450,000 tons of rails. It might seem like the rails were more valuable, until one realizes that C.F. and I. received $114.29 for each ton of shell forgings compared to $40 per ton of rails. In other words, the corporation emphasized the production of a valuable product, rather than focusing on providing a larger amount of steel tonnage. With the government offering top dollar for military products, it is no wonder why C.F. and I. started changing its focus to make them.

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83 Scamehorn, 153.
84 Fisher, 56-57.
C.F. and I. tried to contribute even more war products to the U.S. effort, probably because weaponry was profitable and tools for making it could be adapted to peacetime use. Mortar tubes, gas shells, and assorted ammunition were a few of the products the company offered to manufacture for their country. N.H. Orr, Vice-President of C.F. and I., sent an informal message to the Dallas Chemical Weapon Service to ask if they needed these products, since the company could furnish them. The offer did not include any production estimates or pricing suggestions, Orr simply asked if the military needed these weapons.86 Unfortunately for the company, the U.S. Army rebuffed these offers. According to the army spokesman, “the items you mentioned are not up for procurement at this time... when we are in the market for them again we will see that your Company [sic] is contacted”.87 An army representative rejected the offer before C.F. and I. completed any financial estimates, so it is unknown how much C.F. and I. might have gained.88 In the end, the company only received a contract for 155millimeter shells from the U.S. military.

On the other hand, Colorado Fuel and Iron also made contributions to the technology used to produce 155mm shells. Company workers took great pride in personally making modifications to the design of these shells, as well as the tools used to make them. They had good reason to feel this way: their designs saw use throughout the country by other companies involved in the manufacturing of 155mm shell forgings. This is, perhaps, more a triumph of the workers of C.F. and I. rather than of the company itself. Still, these technological contributions show that C.F. and I., together with its employees, were able to accomplish tasks similar to those of larger corporations like U.S. Steel. In fact, army Captain James Colasanti stated in 1942 that, “CF&I shell forgings are recognized by all machining contractors as superior and the most

87 Message from Julian S. Polak to C.F. and I. rejecting assistance, August 1, 1942, (CFI/BHS), ADM-23, Folder 13.
88 Message from Julian S. Polak to C.F. and I. rejecting assistance, August 1, 1942, (CFI/BHS), ADM-23, Folder 13.
desirable to machine, possessing the most consistently high physical properties.”\textsuperscript{89} Furthermore, since the innovations in shell production made by C.F. and I. workers spread across the country, this small corporation had an impact on national production beyond its own steel manufacturing.\textsuperscript{90}

C.F. and I.’s rail production made it very important to the railroad industry, and therefore to the U.S. home front during World War II. The exact breakdown of who produced rails in America in wartime requires an extensive study of the records of multiple companies which are unavailable at this time, however current research shows precisely how many rails were produced nationwide. According to Hogan's work, companies manufactured a total of 2,500,000 tons of rails throughout the U.S. in 1944, with the number decreasing by about 100,000 tons in 1945.\textsuperscript{91} C.F. and I. sold about 450,000 tons of rails in 1945, and roughly 10,000 tons less in 1944. In other words, Colorado Fuel and Iron produced almost 1/5 of all rails in the U.S. during World War II.\textsuperscript{92} Its helped to support the railroads, and C.F. and I.’s performance in all forms of steel production was significant enough that it received government awards.

Though Colorado Fuel and Iron made several noteworthy contributions to the U.S. war effort, one must admit that other corporations (such as U.S. Steel or even Jones and Laughlin Steel) provided more. C.F. and I. won production efficiency awards and manufactured products valuable to the American war effort and the home front. However, in terms of raw tonnage, it appears all but insignificant. Furthermore, U.S. Steel also won the “E” Award, as did numerous other U.S. companies. C.F. and I. did win more of them than most other companies did. A deeper investigation of the American steel industry reveals that C.F. and I. made significant

\textsuperscript{89} C.F. and I., “Army Captain Praises CF&I Shell Production,” \textit{Blast}, October 9, 1942, (CFI/BHS), 1, 12.
\textsuperscript{90} Scamehorn, 152-153, Fisher, 56-57.
\textsuperscript{91} Hogan, 1305.
\textsuperscript{92} C.F. and I. 1945 Annual Report, (CFI/BHS), ADM-275, 15. The percentages for 1944 and 1945 average at around 18\%. 
contributions as a major rail supplier. In addition, with U.S. Steel and C.F. and I. being the only companies examined in this study which manufactured 155millimeter shells, the Colorado Fuel and Iron Corporation was at least nominally important to the American war effort. Above all else, though, C.F. and I.'s production of 155mm shells and its impressive tally of production awards show that the U.S. government believed C.F. and I. to be a reliable steel manufacturer that could serve as an example to inspire other (perhaps larger) corporations.

**C.F. and I. and the U.S. Government**

Colorado Fuel and Iron both benefited and suffered from the U.S. government's economic/industrial policies during World War II. The federal government instituted the Excess Profits Taxes which, as stated before, precipitated a monetary disaster at C.F. and I. in 1943. It also managed prices during the Second World War, which further limited C.F. and I.'s income.  

In spite of this, C.F. and I. and the government could be friendly to one another, as demonstrated by the Corporation's reception of multiple “E” Awards, and the public commendation it received from the Chief of Army Ordnance.  

On the other hand, the U.S. government during World War II was less a unified body than a loose confederation of conflicting (and often inept) bureaucracies. According to Alan Gropman, Roosevelt created departments to solve problems and silence critics, which often resulted in bureaucracies with conflicting responsibilities that expended much of their effort in turf wars rather than proactive policy-making. Therefore, it is necessary to understand C.F. and I.'s relationship with not only the U.S. government, but its various agencies.

During World War II, the War Production Board was the government agency Colorado

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93 Gropman, 41.
95 Gropman, 33-37.
Fuel and Iron most commonly communicated with. The WPB had been created by President Franklin D. Roosevelt in 1942 as a means of managing the U.S. war effort. It had the responsibility of increasing production while rationing limited industrial resources. In other words, Roosevelt founded the WPB to undertake a balancing act while driving the war effort. Furthermore, it held responsibility for ensuring that companies prioritized customer orders to favor the manufacturing of defense related products. It did not necessarily excel in these tasks, with the priority system eventually losing importance and its management of industry constantly failing to produce enough to satisfy FDR or the U.S. Military.96

WPB management dictated how C.F. and I. should conduct itself during the war, and placed the company under several restrictive systems that it occasionally tried to undermine to improve its place in the steel industry. The WPB forced C.F. and I. to report all orders to it through the priorities system. These reports served another purpose: informing the government of the steel allocation size needed to fulfill the order. C.F. and I. suffered from a shortage of raw materials during the Second World War, but neither the private sector nor the federal government could satisfy its needs. C.F. and I.'s problem was that it had too few workers to mine enough ore and coal for steel production. It could not even create a steady supply of scrap metal to relieve its problems. Contracting with other companies, like the Columbia Steel Corporation (based along the West Coast), did not end the shortages either.97 Though the Corporation managed to coax the WPB into giving it extra steel rations in 1943, the latter half of 1944 presented a problem. C.F. and I. had taken too many orders, and its steel allotment could not sustain its manufacturing. The U.S. government refused to increase this allotment, which left the Corporation in a lurch.98 C.F. and I. had no one to blame but itself for the problems it faced, though it was apparently following

96 Gropman 44-45, 57, 60-61.
97 Scamehorn, 155-157.
98 Message from F.S. Eagle to N. H. Orr about shortage of steel allotment and cuts made (specifically in the 4th quarter), September 15, 1944, (CFI/BHS), ADM-23, Folder 2.
a common practice in the industry at the time.\textsuperscript{99} The WPB tried to keep companies organized, but manufacturers like C.F. and I. chafed at this interference when it kept them from making the progress they wanted.

For the most part, elements of the U.S. government and C.F. and I. cooperated when it meant they could both benefit. The government would give funding and training to the company in return for increased steel production. For instance, in 1941, the Corporation decided to accept federal assistance in training workers to manufacture 155mm shells.\textsuperscript{100} Additionally, the Defense Plant Corporation (yet another organ of the federal government) provided $11,000,000 of financial support to help C.F. and I. expand its operations.\textsuperscript{101} The U.S. government desperately wanted/needed high levels of steel production, which is why it worked with firms like Colorado Fuel and Iron. In 1942, the War Production Board urged C.F. and I. to establish a committee designed to increase production levels, with the Corporation doing so in April of that year. That same month, the WPB pleaded for “better, faster,” production.\textsuperscript{102} The logistical demands of the Second World War meant that government was willing to provide steel companies with assistance in return for increased output.

The events that caused the drop in profits for Colorado Fuel and Iron in 1943 provide a good lens by which to show how government decisions and national events affected the company. The increase in rail prices instituted by the U.S. government that year should have increased C.F. and I.’s profits. Unfortunately, the Corporation found itself having to pay Excess Profits Taxes for the years 1940 and 1941 during 1943, which is part of why it saw a sharp decrease in net income in spite of increased production.\textsuperscript{103} However, that was not the entire story.

\textsuperscript{99} Lauderbaugh, 51-52, 109.
\textsuperscript{100} Federal Office of Production Management, Contract with C.F. and I., 1941, (CFI/BHS) ADM-23.
\textsuperscript{101} Scamehorn, 154.
\textsuperscript{102} C.F. and I., “Increased War Production is Committee Aim,” \textit{Blast}, April 3, 1942, (CFI/BHS), 1,3, C.F. and I., “Do it Better, Faster, is Plea of War Board,” \textit{Blast}, April 17, 1942, (CFI/BHS), 1,5.
\textsuperscript{103} Scamehorn, 159.
Additional worker pay required by the new 48 hour work week instituted that year increased the cost of steel production by about one million dollars.\textsuperscript{104} It also had the money it set aside for the Excess Profits Tax reintegrated into its cash surplus in 1944 because the government hearings on the issue decided C.F. and I. had not actually made too much money. Unfortunately for the company, other potential liabilities, such as new taxes (or interpretations of the tax laws) and the possibility of a large retroactive wage increase forced it to set aside even more money from its gross earnings.\textsuperscript{105} The U.S. government's taxes and wage policy consistently restricted C.F. and I., but the company did what it could to support the war effort anyway. The 48 hour week had not been mandated by the government, but rather created by the company. At the time, it exceeded the standard in America's steel industry.\textsuperscript{106} The company tried to do its best to prosper in spite of regulations.

Colorado Fuel and Iron did resent some interfering decisions of the federal government, the most important of these being price controls. While C.F. and I. tolerated its profits being sapped during the war, it became an outspoken critic of price controls once the war had ended. After all, steel and coal workers went on strike for higher wages in 1946, but price controls were still in place. All employers, C.F. and I. included, stated that these controls had to be removed if they had to increase wages. The government made a compromise by increasing steel prices, but the controls remained active when it granted the wage increase employees desired. C.F. and I. expressed its disappointment with this decision in a livid message in its C.F. and I. 1946 Annual Report, which predicted a depression of the steel industry as the inevitable result of the government's policy. Though its prediction did not come true, as Tables 1.1, 2.1, and 2.2 indicate,

\textsuperscript{105} C.F. and I. 1944 Annual Report, (CFI/BHS), ADM-274, 4-5. The full story here is that there was a question of whether the incorporation of C.F. and I. in 1936 could be taxed or not. Once the Supreme Court decided it could not, C.F. and I. got its money back.
\textsuperscript{106} Scamehorn, 155, Hogan, 1611-1612.
C.F. and I. did not know this at the time, and it suffered a severe drop in net income as a result of the government's arbitration/interference.107

Cooperation in Industry: Government, Employees, and Management

Cooperation was generally the norm until the interests of the U.S. government and Colorado Fuel and Iron conflicted. The Corporation's high level of sales/production brought it favor from the government, as did its employees' en masse purchases of Treasury Bonds. The government rewarded these successes, showing it appreciated them.108 The contract Colorado Fuel and Iron received from the U.S. military indicates that they were seen as reliable.109 The U.S. government also broke up the mining strike that threatened the company in 1943 by seizing control of the company's mining assets, though this resulted from their interests aligning by coincidence.110 The government and C.F. and I. had a few disputes with each other, but these mostly came after the war. The company lost both of its battles over wages in 1945 and 1946.111 In 1944, C.F. and I. could not convince the government that it should be provided with a larger steel allotment.112 In the end, the bottom line is that the partnership of C.F. and I. and the U.S. government achieved their basic individual goals in the long run: increased profits for the former, and victory in the Second World War for the latter.

Colorado Fuel and Iron's earning of the Army-Navy Munitions Board “E” Award indicates the high level of cooperation between the company's management, employees, and the

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107 C.F. and I. 1946 Annual Report, (CFI/BHS), ADM-275, 6. This report's grim assessment of the future offers an ironic contrast to J.D. Sullivan and W.A. Maxwell Jr.'s positive and hopeful messages from 1945.
112 Message from F.S. Eagle to N. H. Orr about shortage of steel allotment and cuts made (specifically in the 4th quarter), September 15, 1944, (CFI/BHS), ADM-23, Folder 2.
U.S. government. The Board usually gave “the E” as a reward for efficiency in war materials manufacturing and for preventing work stoppages. C.F. and I. won the “E” Award four times.\textsuperscript{113} Out of all the companies involved in war work, no more than 5% of them ever received one “E” Award, let alone four. Furthermore, only 820 war production plants out of roughly 4,000 earned four “E” Awards.\textsuperscript{114} C. F. and I.'s awards indicate how much the government valued its work, and also show that its employees supported it. In the pamphlet sent to C. F. and I. to explain its first “E” Award, the writer stated, “I am confident that your outstanding record will bring victory nearer by inspiring others to similar high achievement.”\textsuperscript{115} The government probably appreciated C.F. and I.'s efforts, especially since the company managed to produce more than its rated capacity throughout the labor strife of 1943. It got the “E” Award that year, though that was more an accomplishment of its workers than its management.\textsuperscript{116} Even so, the U.S. government appreciated C.F. and I.'s ability to keep its workers on the job. Colorado Fuel and Iron's customers also recognized the importance of the “E” Award. They sent multiple messages to C. F. and I. to congratulate it on its success when the company received its third “E” award.\textsuperscript{117} This is an important distinction for C.F. and I., which few other companies received.

Labor cooperation was at the root of C.F. and I.'s success, but to understand that issue requires knowledge of the national circumstances of labor. The foremost source on the effects of the Second World War on American labor is Nelson Lichtenstein's \textit{Labor's War at Home}. This text argues that the conflict removed control of the unions from the hands of the individual

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\textsuperscript{113} C.F. and I. 1945 Annual Report, (CFI/BHS), ADM-275, 5. \\
\textsuperscript{114} War Employment Bureau of Public Relations. “Army-Navy “E” Award Termination Sees Award Granted to 5% of Eligible Plants” (1945), \url{http://www.history.navy.mil/library/online/e_award.htm#press} (accessed December 7, 2012). \\
\textsuperscript{115} Army-Navy Munitions Board, Navy “E” Award Booklet, (1942), (CFI/BHS), ADM-24, Folder 38, 1. \\
\textsuperscript{116} C.F. and I. 1944 Annual Report, (CFI/BHS), ADM-274, 4. \\
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members and led to union's essentially losing power. The leadership of labor unions became
closely associated with the U.S. government to protect themselves from the anti-union policies
and forces that wartime government restrictions had created, but at the cost of effectively losing
their power and class consciousness.\textsuperscript{118} Lichtenstein's national level examination of the issue of
labor is excellent, and establishes the changes World War II made to national labor relations. In
particular, he notes that cooperation between management and labor was common in the steel
industry, much like at Colorado Fuel and Iron.\textsuperscript{119} However, investigating the local implications of
his assertions is also important, since it can complicate the current understanding of the issue.

Perhaps the most vital source for anyone exploring local labor relations in conjunction
with C.F. and I. and World War II is Jonathan Rees' \textit{Representation and Rebellion} (2010). Rees
discusses the failure of the Rockefeller Plan, and why it was both a positive and a negative force.
It drained company resources and did not end strikes, though it capped labor violence. This work
gives insight into the prewar state of Colorado's labor and economic frameworks, which the
Second World War altered.\textsuperscript{120} \textit{Reinventing Free Labor} by Gunther Peck, is similarly important. It
addresses how labor relations evolved in the American West and other border spaces, where
capitalist labor systems required corrupt and authoritarian labor recruiters (called padrones) to
sustain production. Peck delves into the struggle between padrones and their clients, and its
context. While the system itself supposedly died in the 1930s, Peck contends that elements of it
(i.e., oppression and resistance) survived until the time of publication.\textsuperscript{121} Both books are an
excellent source of background information on immigrant and settled labor in the West, and each
provide a foundation for my analysis of labor.

\textsuperscript{119} Lichtenstein, 186-188.
\textsuperscript{120} Jonathan Rees, \textit{Representation and Rebellion: The Rockefeller Plan at the Colorado Fuel and Iron Company, 1914-1942}
\hspace{1em} (Boulder: University Press of Colorado, 2010), 2-3.
Colorado Fuel and Iron's productivity and awards both stemmed from the fact that, for the most part, its employees helped it avoid work stoppages. Cooperation between management and employees at C.F. and I. was the root of the company's award winning manufacturing efficiency. Then again, this kind of cooperation was not abnormal in the steel industry at the time, since the United Steelworkers of America decided to abide by the No-Strike Pledge of 1941. The only time this relationship would be strained was in 1943, when nationwide coal strikes rocked the nation. The problem lay with the United Mine Workers and John L. Lewis, if one accepts the viewpoint of the U.S. government and mining industry. Lewis pushed for a better contract for America's mine workers, but refused to negotiate with the War Labor Board until July 23 of 1943. The coal miner strikes hurt C.F. and I. in particular because it was an integrated steel mill, which meant it generally provided its own coal as fuel for its steel-making operations. The problems started brewing throughout March and April. When the strike actually came in May, and the government seized the mines, the issue did not end. Railroads planned to lighten the burden on the coal mining industry soon after the strike began, but labor issues meant that companies were still being forced to weigh their options as late as June. Indeed, negotiations had already broken down again at the end of May. 1943 saw the number of workers going out on strike double from the previous year (amounting to roughly 1.98 million people), mainly due to the mine workers striking, according to Lichtenstein. The length of the strikes had decreased from previous years, but there is no escaping that the size and scope threatened national

122 Lichtenstein, 186-188.
124 Associated Press, “Railroads Will Cut Mileage By One-Fourth As Conservation Aid,” Star Journal, May 2, 1943, 1, Rawlings, Microfilm, Reel 290, Associated Press, “Strike Causes Big Steel Mill to Cut Down Steel Production,” Pueblo Chieftain, June 6, 1943, 4, Rawlings, Microfilm, Reel 291. The company affected was the Carnegie-Illinois Steel corporation, one of the companies J.R. Irwin collaborated with when making his studies.
125 Associated Press, “Miner's Strike Again; Negotiations Fail, Truce Closes ,” Pueblo Chieftain, June 1, 1943, 1, Rawlings, Microfilm, Reel 291.
production.\textsuperscript{126} Seizing the mines did not put an end to the problem, it kept going all throughout the government's occupation. Workers across the nation had to side with either the government or the union, and this split them apart in Colorado Fuel and Iron's mines.

The war gave the government the power to force workers back to the job, but this created two factions of miners in Colorado instead of unifying them in support of the war effort. This, among other federal counters to union activity, made way for the postwar bureaucratization and weakening class consciousness of American labor that Lichtenstein points out.\textsuperscript{127} National polls reported a general dissatisfaction with labor unions at this time, and a specific desire to see harsh anti-strike laws like the Smith-Connally Act implemented.\textsuperscript{128} Lichtenstein notes that the Act failed to thin out strikes. However, miner strikes in Colorado continued after the government had taken over the mining industry. Interestingly, the AP story in the \textit{Star Journal} on the mine seizure painted the issue as one where John Lewis oppressed the miners and forced them to not work. The government freed them of the obligation to strike.\textsuperscript{129} Even with the mines having been seized, and the government as their new “boss,” some miners in Colorado occasionally refused to go to work. A reporter for the \textit{Chieftain} classified one such incident as “dynamite.”\textsuperscript{130} On the other hand, many Colorado miners (and members of the UMW) decided to stay at their posts and even worked without vacations during 1943.\textsuperscript{131} In the end, the government handed the mines back to their owners, starting on August 23. No settlement had been reached between the UMW

\begin{footnotesize}
\bibitem{126} Lichtenstein, 133.
\bibitem{127} Lichtenstein, 233-234.
\bibitem{128} George Gallup, “Even Union Members Favor It, Poll Shows,” \textit{Pueblo Chieftain}, May 28, 1943, 2, Rawlings, Microfilm, Reel 290. The poll was nationwide, and stated that 67\% of union members favored the bill, which forbade strikes in industries like coal mining. Additionally 75\% of Americans wanted strikes to be completely forbidden in all war industries. No definition of war industries was provided.
\bibitem{129} Associated Press, “Railroads Will Cut Mileage By One-Fourth As Conservation Aid,” \textit{Star Journal}, May 2, 1943, 1, Rawlings, Microfilm, Reel 290.
\end{footnotesize}
and the government. Private industry now had to handle the issue, with mine workers continuing to labor without any contracts.\textsuperscript{132} C.F. and I. officially had its mines returned on August 21, and they were not seized again during the national strikes of October. Perhaps there was no seizure or renewed strike at C.F. and I. because the company was already implementing company-wide wage increases in September that were retroactive to July 6. The NWLB had allowed this increase on the condition C.F. and I. maintain its 48 hour work week (with standard overtime rates applied to the increased wages).\textsuperscript{133} Ultimately, the problem fizzled out in Colorado rather than reaching a showdown conclusion. C.F. and I.'s miners had been divided on what to do about the problem, and the government's forceful actions did not reunite them.

Aside from the 1943 UMW coal strike, wartime cooperation between employees and management at C.F. and I. remained consistent and allowed the company to prosper after World War II. However, this alliance ended with the war. For the steel corporations listed in Table 2.4, except Colorado Fuel and Iron, the first year after the war (1946) would be one of booming profits. There is no definite reason for this. Perhaps postwar strikes by steel and coal workers, both of which C.F. and I. employed in 1946, were to blame for the company's dismal performance. Still, every other company managed to increase their net profits in 1946, in spite of the fact that the strikes that year affected them as well. Hogan states U.S. Steel was enjoying the largest amount of sales it had ever had during a peacetime year.\textsuperscript{134} While it is unclear what made Colorado Fuel and Iron more susceptible to suffering economic losses from strikes than the other companies, it is an important issue that must be addressed and eventually resolved through further research. In any case, wartime cooperation is what laid the foundation for postwar gains.


\textsuperscript{133} Lichtenstein 167-170, C.F. and I. 1943 Annual Report, (CFI/BHS), ADM-274, 4, Message from L.F. Quigg to all Superintendents about Salary Increase of July 6, 1943 and J. Rodney Irwin's attached notification about the same, September, 1943, (CFI/BHS), PLA-0009, Folder 17.

\textsuperscript{134} Hogan, 1611-1616, 1655, C.F. and I. 1946 Annual Report, (CFI/BHS), ADM-275, 6.
For all the contributions Colorado Fuel and Iron made to the industry, its work is poorly remembered by history. Perhaps this is because C. F. and I. was more unique than important. At the time, the corporation's higher standard wages, position as the largest integrated steel mill in the West, and efficiency meant it was vital to the local economy. Its research projects also made it a semi-important part of the national scene, because it collated information necessary for most companies to prepare for war. Even so, C.F. and I. had more importance to Colorado than the rest of the nation. Its hopes of expanding to become a rival to U.S. Steel after the war were fanciful, because it could never outbid a company so much larger than itself for a plant as big as the Geneva one (especially since U.S. Steel had been involved in its construction, along with the government). Planning to combine with the steel holdings of the Western industrialist Henry Kaiser, a hated figure in Washington and Eastern companies (according to Foster and Nash), certainly did not help the chances of C.F. and I.'s bid for the plant.\textsuperscript{135} C.F. and I. pushed its employees hard but did not get the results it wanted: national acclaim. What renown and fortune the company did earn it owed to its remarkable workforce. In terms of economic impact, C.F. and I. was a small fish in a big pond. Not even the arrival of the war and the need for a total

commitment to production could change that.

On the other hand, examining C.F. and I.'s workforce shows how local culture impacted production at the plant. The impact the war had on Pueblo and Colorado Fuel and Iron workers is worth noting. It illustrates how a small community responded to the changes brought by the war, and how their personal commitments to victory made them exceptional supporters of the cause. In fact, the remarkable relationship between C.F. and I. and its employees, the company's awards, its attempts to merge with Kaiser's holdings, and the products it manufactured did nothing to change its place in the steel industry. Companies in the East decided to make sure that C.F. and I. and Kaiser did not expand by acquiring large amounts of capacity from government built plants. U.S. Steel in particular wanted to take over the Geneva plant it helped construct.\textsuperscript{136} Western companies still expanded after the war. Not only did C.F. and I. see a genuine increase in profits and production, companies like the Flak Corporation and Allen-Bradley from Wisconsin grew as well.\textsuperscript{137} However, if C.F. and I. is any indication, the East still held overwhelming control of the steel industry. As Warren notes, steel capacity had begun to shift to the Midwest, but not to or beyond Colorado.\textsuperscript{138} C.F. and I. is an important case study of how even a small company can contribute to a national industry, but it also demonstrates that the employees' toleration of management's policies formed the foundation of the company's accomplishments.

\textsuperscript{136} Foster, 20, Nash, \textit{World War II and the West}, 134.

\textsuperscript{137} Gurda, 29-33. U.S. Steel may not have been consciously enacting Lauderbaugh's theory that steel companies actively tried to balance growth to keep companies in their relative place, but it was acting in accordance with it. Nash's theory that the West became independent is therefore questionable, considering that neither C.F. and I. nor Kaiser could protect their "home turf" from invasion by U.S. Steel.

\textsuperscript{138} Warren, 240, 330.
Chapter 2: The Workers go to War

The previous chapter focused mainly on the economic aspects of C.F. and I.'s experience during the Second World War. However, an economy does not exist in a vacuum, which is something that Gerald Nash, Matthew Basso, and Ruth Milkman grappled with. Nash discussed societal change in the West broadly in his book, *The American West Transformed: The Impact of the Second World War*, while Milkman focused on the gender construction of working women and the alliance between company men and management that dictated their role in the U.S. workplace.\(^{139}\) Matthew Basso's *Meet Joe Copper* explores how Americans on the Montana home front of World War II defined the idea of masculinity. Specifically, he claims that this front played host to part of a nationwide interracial and inter-gender struggle over the meaning of masculinity that was spurred on by the war allowing women and ethnic minorities into the workforce.\(^{140}\) All of these books show that despite having a broadly positive socioeconomic impact, the war also had negative social effects. These books provide models for this study, in that they show the connection between war, economics, and cultural ideals. They also helped shape this chapter, and the way in which it addresses the war's cultural impact on C.F. and I. as well as Pueblo.

The Second World War had a profound impact on domestic life in the United States, especially in regard to gender orders. Basso's research of Montana indicates that before the war, men and women had been divided into separate spheres of work and leisure. Women had few opportunities for employment at this time. Working class morals demanded that women eventually get married, care for the household, and take on boarders. Single women could


occupy “non-strenuous” jobs like domestic services. However, jobs that required intense labor, like mining, were labeled masculine and reserved strictly for men.\textsuperscript{141} The war strained the supply of male workers, who began the process of forcing a nationwide change in gender roles. As volunteers and draftees went to war, they left behind production jobs that had to be filled in order to provide logistical support for the military. Women either replaced these men in masculine jobs, or remained at home and supported the war effort in another way.\textsuperscript{142} It is clear from Basso's evidence that his claims about the war altering the definition of masculinity in America (specifically in Montana), are well founded.

The narrative of change caused by the war is not the same in all places, though. In the case of Colorado Fuel and Iron and Pueblo, there is no indication that the war caused any appreciable change in women's social roles or community identity. Gender and racial discrimination were both enforced at C.F. and I. throughout the war, albeit in differing ways. Women were officially subordinated to men by the company, and newspapers seem to show that women were still taking on traditional roles like managing leisure and parties. If women who were going to work thought of themselves as masculine, the company and male workers certainly did not. The company's claim that women were too weak to match male workers may have helped the male workers accept the women as non-threatening. There was no upheaval over women workers at C.F. and I., and no revolution in their community roles. Regardless of women's personal identity during the war, the community considered them to still be weak, feminine, and only a temporary part of the workforce.\textsuperscript{143} Racial discrimination is only ever hinted at in C.F. and I. and Pueblo, with the only exception being discrimination against the Japanese.

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\item \textsuperscript{141} Basso, 81, 222.
\item \textsuperscript{142} Basso, 143-147.
\item \textsuperscript{143} Basso, 148, 206, 264, Interview of Josephine Borzilieri, February 6, 2008, (CFI/BHS), W. Densmore, “Case No 1 File – Elec.,” C.F. and I., Oct. 28, 1942, (CFI/BHS) INR-647, Folder 1. Borzilieri's interviews indicate that she found that several of the women working in her department were particularly strong. She does not use the word masculine to describe them, but implies by talking about their unladylike behaviors.
\end{itemize}
\end{footnotesize}
Finding evidence of how racial discrimination was enforced at C.F. and I. is difficult, as it was apparently unofficial and undocumented except in interviews. Even so, this indicates a surprising lack of local interest in ethnic ideas during a time when most of the U.S. was in a tumult over such issues. The fact that these issues never caused confrontations or major disruptions at C.F. and I. is one of the reasons it could maintain a stable steel output. However, this “cooperation” between management and employees resulted from the worker's tolerance of management actions during the war.

Employees of Colorado Fuel and Iron were convinced that the U.S. needed to win the Second World War, and tolerated exploitation from management in order to achieve this. Indeed, the employees' decision to cooperate is what allowed the company to grow and recover from the Depression. The Second World War had a tremendous impact on American culture, and this, in turn, resulted in changes to how steel was manufactured, even in small companies like C.F. and I. The steel corporations, specifically C.F. and I., became dependent on their communities to support their operations. They needed workers to replace those who had gone to war. In order to fuel their production, the company used local auxiliary services to gather scrap materials. Furthermore, the community was necessary for C.F. and I. to be able to use shame and praise to motivate its employees. Without Puebloans being devoted to the cause of winning the war, C.F. and I. would have suffered in several ways. More so than anything else, it might not have had its remarkable workforce, who drove C.F. and I.'s production. Each of the company's achievements

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144 C.F. and I., Japanese Employees Oath of Allegiance to the U.S.A., (CFI/BHS), ADM-40, Folder X0854; Borzilieri, interview, (CFI/BHS); Interview with Margaret Hernandez Puelen, April 5, 2012, (CFI/BHS).
and victories were the result of its workers efforts.

**Cooperation, The “E” Award, and Victory**

Cooperation between management and employees took several forms, and speeding up production was only part of what they did to support the war effort. Workers spent their income to pay for war bonds up until the end of the conflict. In 1942, the government presented a Treasury “T” Flag to C.F. and I's workers for their zealous bond purchases during the same ceremony it gave the “E” Award to the Corporation and its employees (an award which, admittedly, seems to not be important enough for other companies to report on whether they got it).

C.F. and I. employees avidly purchased bonds throughout the war. For instance, in 1945, they subscribed for bonds at over 100% of their quota. The C.F. and I. workforce remained generous givers, up until the end of the war. Once victory drew near, however, employees became less generous. During the October 1945 United War Chest fund drive, C.F. and I. employees gave far less than before. C.F. and I.'s newspaper, *The Blast*, condemned this deflated response. Perhaps the employees withdrew their support because this was the last United War Chest drive. On the other hand, workers only subscribed to 85% of their bond quota in December 1945. This consistent drop, in conjunction with the employees striking once the war ended, indicates that employees of Colorado Fuel and Iron had cooperated for the sake of their country rather than their company.

Colorado Fuel and Iron's workers were vital to the Corporation's success during the war

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due to their consistent labor output. Aside from a strike and demand for wage increases from its mine workers in 1943, C.F. and I.'s employees did not engage in work stoppages.\(^{152}\) Its steelworkers seem to have followed the United Steel Workers of America's decision to accept a wartime no-strike pledge in 1941. Small wildcat strikes still occasionally broke out in the steel industry during the war, but C.F. and I. was among the companies that did not report having any. The Smith-Connally Act had been passed on June 25, 1943, to curtail strikes by threatening federal seizure of facilities and jail time for strike leaders, but that did not prevent 150,000 steelworkers from walking out on Christmas Eve in 1944.\(^{153}\) While it is possible that the company chose not to record any small scale work stoppages, it usually included information about labor problems in its annual reports. It seems as if C.F. and I.'s steelworkers, like the majority of their peers from other companies, chose to follow national union orders to not strike during the war. More importantly, some C.F. and I. steelworkers volunteered for additional work on top of the 48 hours they were already scheduled for. In fact, from August 1, 1944 until July 31, 1945, 575 workers at the Minnequa Plant volunteered to work a shift every day, for which they each received an award called the Full Timer Pin.\(^{154}\) This level of employee effort was one of the reasons they and their company had been given the “E” Award and why it became valued by the U.S. government.

Though steel companies suffered small strikes in spite of efforts taken against them by the U.S. government and USWA, it still suffered fewer work-stoppages than many other industries. About 3,000 strikes broke out in America's industry during 1942 alone. In 1944 almost 13,500,000 man-days had been lost to the nation, with 1945 seeing about 9,600,000 man-

\(^{152}\) Scamehorn, 159.
\(^{153}\) Lichtenstein, 167-170, 186-188.
days lost. C.F. and I., on the other hand, only suffered from one strike in 1943. Even then, some employees did extra work to cover the losses. This evidence makes it clear why the federal government specifically listed a lack of work stoppages as a criteria for winning the “E” Award, and why C.F. and I. employees managed to get it.

**Labor and Cooperation 1940-1947**

The U.S. needed smaller production companies to help it win the war, but these firms could do nothing without their employees. Corporations needed workers to operate the plants that drove the American war machine. Both the Colorado Fuel and Iron Corporation and its workforce were mobilizing for war in 1940. At the behest of the government, C.F. and I. ordered its employees to register for the draft and filed exemptions for those too valuable to be conscripted. Once World War II had begun, C.F. and I. experienced a continuous drain of employees from all departments. They were being drafted and volunteering, with the company keeping track of the number of employees that left (see Table 3.1). As a result, it suffered from a chronic labor shortage. U.S. companies suffered from personnel problems during the war. The problem was acute throughout American industry, especially since many companies tried to resist the influx of replacement labor. The posts vacated by white men could have been filled by women and non-white males, but some companies and workers viewed doing so as wrong.

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According to Basso, the replacements threatened the racial hierarchy of white male workers. The industry resisted new laborers for the most part, but the American government did whatever it could to encourage companies to accept them. In California, for instance, the U.S. federal government assaulted discriminatory union regulations that made companies anxious about employee reactions if it hired their replacements from minority groups. Companies all throughout the U.S. resisted hiring women workers. C.F. and I. decided to allow both women and non-whites to work in plants as early as 1942. It needed any workers it could get in order to contribute to national productivity.

Manpower shortages were not just a local problem, as companies across the U.S. decided that they had to recruit women. Alan Gropman's Mobilizing U.S. Industry in War shows that these manpower shortages persisted throughout the war, in spite of the overall increase in the size of America's workforce (including manufacturing and agriculture). Women formed a significant part of this increase in workers. They comprised 22.3% of the steel industry's workforce by 1944, which had increased from 6.7% in 1940. Other industries employed a larger level of female workers, particularly electrical manufacturing. Across the United States, women were being used to fill the gaps in the workforce, but this phenomenon played out uniquely from place to place.

The number of women that went to work at C.F. and I. during the war is unknown, but their employment was not enough to help it maintain the size of its workforce. The situation at other companies can only be found by examining their own employment archives, but the overall

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160 Basso, 264-277.
161 Moore, 46-47.
162 Basso, 143-144.
163 Gropman, 107-110.
164 Milkman, 50.
drop in steel workforce numbers illustrates that they probably faced a similar situation.\textsuperscript{165} One thing that can be said for certain is that Pueblo was rapidly running out of available workers by 1943, due to various calls on the population.\textsuperscript{166} C.F. and I. had particularly great problems with keeping the mines staffed, according to Scamehorn, which may have been where many of its workers were draining from since national miner employment was falling throughout the war.\textsuperscript{167} Other steel companies may have been losing employees as well, but their records are needed to know for certain. C.F. and I.'s inability to replace its losses explains why its management agreed to the 48 work week with the SWC, the employees (implicitly), and the War Manpower Commission when other companies did not. The company needed the steelworkers to accept extra hours to help it increase production in the face of its dwindling workforce, and the WMC supported this strategy. For the workers, the extra hours meant they could take pride in helping their country, and enjoy the extra wages.\textsuperscript{168} In any case, all industries in the U.S. were suffering from manpower shortages, which is why companies opened up new opportunities for minority groups.

Table 3.1: Number of employees at C.F. and I.

<table>
<thead>
<tr>
<th></th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of C.F. and I. Employees</td>
<td>11,525</td>
<td>10,944</td>
<td>9,854</td>
<td>9,264</td>
</tr>
<tr>
<td>Employees in military</td>
<td>1,254</td>
<td>2,232</td>
<td>2,647\textsuperscript{169}</td>
<td>2,809\textsuperscript{170}</td>
</tr>
</tbody>
</table>

In spite of all the latent discrimination problems at the company, all C.F. and I. employees worked more than the average steel worker. As Table 3.1 illustrates, the number of employees in the armed forces increased, while the number of actual employees decreased. Comparing this to the production statistics in Table 1.1 shows that production was higher in 1944 and 1945 than in 1943, but C.F. and I. had fewer employees. America's war effort required production to increase, and these demands fell on the employees as much as employers like Colorado Fuel and Iron. The Corporation increased production in these circumstances by having its employees work 48 hours a week. C.F. and I. personnel worked at least 3 hours more than the average employee in the American steel industry, who worked 45 hours a week in 1945.\footnote{Scamehorn, 155, Hogan, 1611-1612.}

These employees worked hard, but they received monetary compensation for their efforts. After all, the prodigious use of overtime work did not mean that overtime salary regulations had changed: workers scheduled for over 40 hours a week still received pay for time and a half.\footnote{Gropman, 35, Scamehorn, 155.} As much as patriotism or lack of national union support may have forced them to accept problems in their workplaces, it was the opportunity to earn money that probably drove them to accept and (in some cases) embrace overtime work. In fact, Hogan claims that the eventual termination of this rigorous work schedule, along with the resultant drop in employee work and income, helped to inspire the 1946 labor movement. Employees had gotten used to long hours/increased earnings, and striking seemed like a viable method of regaining their lost income.\footnote{Hogan, 1611-1615.}

The Corporation became dependent on the hard work of the few employees it could muster, some of whom were women.\footnote{Scamehorn, 155-157.} Women had never been employed in the mill before, but
the manpower shortage required that the company find any replacements it could.\textsuperscript{175} This probably explains why C.F. and I. was quick to accept female workers, while most companies in the U.S. resisted doing so. While C.F. and I. showed no reluctance to recruit female employees in its documents, it justified unequal wages using the same idea that (according to Basso) the rest of the war industry utilized to resist female employment and equal pay: supposed female physical inferiority.\textsuperscript{176} The reactions of Pueblo men to women workers seem to have been more welcoming. However, they may have been as hostile to the concept of semi-masculine “Rosies” entering their number as other men. Any acceptance offered by male workers at C.F. and I. appears to have been conditional on women worker's continued femininity (i.e., they were treated as weaker laborers than men), since men in the company continuously acted as masculine protectors and voiced their opinions in the paper. C.F. and I. reinforced these ideas with its policies. The Anaconda Mining Company similarly tried to placate male workers by describing female employees in the smelter as feminine and hysterical. Its publications once published a profile of a woman laborer who was depicted as using her job to support her husband at war or distract her from worrying about him.\textsuperscript{177} Anaconda and C.F. and I. both offered their male workers an assurance that women were still feminine, even if they performed masculine jobs.

Given that the War Manpower Commission nearly labeled Pueblo a manpower shortage area in 1943 and that the government had decided to recruit people to leave the area for other jobs, the

\textsuperscript{175} C.F. and I., “Shop's Men are Calm as Women ‘Inva de' Mill,” \textit{Blast}, May, 22, 1942, (CFI/BHS), 1; C.F. and I., “Who Thought We'd See the Day,” \textit{Blast}, August, 7, 1942, (CFI/BHS), 6. Women may have worked during the First World War, but the company claimed it had no verified accounts of this.


company should have felt fortunate that it could still find women to recruit.\textsuperscript{178}

The need for replacement workers swept the entire United States during World War II, which upset the prejudiced social hierarchy of the time. In Richmond, California, for instance, huge demand for production required the hiring of African-Americans and women. Henry Kaiser's shipyard's there hired them readily, but other companies were more resistant to the idea. The war had changed the landscape of employment through the needs of the U.S. military.\textsuperscript{179} In order to function, the military required supplies as well as soldiers, which put two enormous demands on America's industry and workers. About twelve million able bodied men served in the American military during the Second World War, and companies had to find workers to fill the gap this made in their employee rosters so they could supply those soldiers.\textsuperscript{180} Companies and the white male workers still employed by them fought hard against the idea of allowing women and non-white men to have the privilege of working certain jobs. Companies cited many reasons why they did not want to hire women or ethnic minorities. They might not be productive enough, and women in particular required new facilities (such as restrooms) to be set up.\textsuperscript{181} However, the U.S. government was adamant about ordering companies to accept women and non-white replacements. Production required that new workers be acquired.\textsuperscript{182} In C.F. and I.'s case, it suffered from a persistent lack of manpower in spite of its quick acceptance of replacement labor. This acceptance may have been conditioned upon unofficial policies of discrimination at the


\textsuperscript{179} Moore, 43-47.


\textsuperscript{181} Basso, 143-144, 267.

\textsuperscript{182} Moore, 46-47.
company, though. The inclusion of replacement workers fundamentally altered the social climate of the American workplace, at C.F. and I. as well as the rest of the United States.

John C. Anderson was one of C.F. and I.'s employees who left his job to serve in the U.S. military. At twenty-one years of age at the start of the war in 1941, John had been just old enough to be drafted. He entered the Navy, and served as an airline mechanic. Like the employees at the company, he did not serve on the front line. He supported combat troops, albeit from a location closer to the battlefield than the workers he left behind. He served in the same role throughout the war, until his honorable discharge by the Navy in 1946. By that time, he already had a family. He settled back in at C.F. and I., doing his old job. He still worked for the company at the time of the outbreak of the Korean War, when the issue of drafting employees reemerged. Anderson was not the only employee of C.F. and I. to be absorbed by the military during the Second World War. He would be one of 1,421 employees who returned to the Corporation after joining the military (the first wave of them returning in 1945, before Anderson).

The company men who left for the military had a tremendous psychological impact on those who knew them. People in Pueblo and at the company wanted to keep track of their friends and family in the military, particularly their trials and successes. C.F. and I. began running newspaper stories on the combat actions and letters home of community men to help the community stay informed about the war and their loved ones. It may have hoped to give workers, both old and new, a personal reason to contribute to the war effort. After all, Anderson was just

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183 Scamehorn, 155-157; Borzilieri, interview, (CFI/BHS); Puelen, interview, (CFI/BHS). She left the company in 1952. Her interview demonstrates how racism is a difficult issue to address at C.F. and I., as she rarely ever directly refers to it. Her interview, along with Borzilieri's and certain company documents, suggest that racism was present at the company.
one C.F. and I. employee called away to war. A total of 2,809 other C.F. and I. workers joined the military during the war. Several of them had active combat roles during the war, and some even earned honors for their efforts. One such individual was Al Cox, who had left his position as an auxiliary military policeman in July of 1942 to join the Marines. By 1945, he had accumulated four bronze stars and three campaign ribbons with Presidential Citations. The Tamez brothers were another group of employees lauded for the medals they won. Though all three of the brothers had received the Purple Heart, Cpl. Dan Tamez (of the U.S. artillery) stood out from his siblings. He had been awarded the silver star for bravely holding his ground as long as possible against a Japanese attack on the island of Okinawa, and only retreating after he had disabled his gun to prevent it from being used by the enemy. Having stories like these in the paper may have made the war seem more personal to workers. The company brought news about community members in the military to Pueblo, encouraging employees to work harder to support their friends and family on the front line.

When the men started leaving for the war, women like Margaret Hernandez Puelen took their places at the plant. Though she was not old enough, Puelen tried her best to start working at the mill. Eventually, at the age of 16, she enlisted the help of her mother in forging an identity to allow her to join C.F. and I.’s female workforce. They decided to pass her off as her deceased older sister, using her birth certificate to make it look like Margaret Puelen was old enough to be employed. Puelen did not describe the exact steps she and her mother took to accomplish this

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186 C.F. and I., Cpl. Dan Tamez Wins Silver Star,” Blast, June 22, 1945, (CFI/BHS), 12, C.F. and I., “Proud of Her Daddy,” Blast, July 6, 1945, (CFI/BHS), 1. Employees of Colorado Fuel and Iron did not all experience triumph, as the case of Capt. Melvin Evans proves. The story of this young man is told in two articles from the Corporation’s newspaper, the Blast: one published on April 17, 1942, the other on July 27, 1945. C.F. and I. had not employed Evans, but his father Wallace Evans worked at the company. As indirect as Capt. Evans’ relationship to the Corporation was, the Blast still noted the young man’s disappearance during the battle for Bataan in 1942. His fate remained unknown until 1945, when the Blast revealed Capt. Evans had died when the Japanese prison ship he was on had been sunk on December 15th, 1944. Though the paper does not mention what how his family reacted to this news, one can only imagine them as having been grief-stricken. This is yet another example of sacrifices C.F. and I. employees made to the war effort: their lives and those of their sons. That said, Americans all across the country endured similar tragedies.
task, but it worked. The company accepted her application in 1944, and assigned her to the Open
Hearth. Puelen did not elaborate on her exact job there. From then on, Margaret Puelen went to
work at the mill each day alongside her father. She continued to work there for seven years after
the war.¹⁸⁷

Though the way she started working may not have been the norm for women in Colorado
or the rest of the United States, there were numerous women who became replacement workers
across the nation. There are no concrete numbers from company documents that describe how
many women C.F. and I. hired, but recruitment numbers for the company's club for women
employees saw a 45% increase in members from 1940 to 1945.¹⁸⁸ The Sparkplug Club, as it was
was called, had been created to help female employees have fun as a group and organize
community events. Theoretically, these activities would strengthen the bonds between company
women who became members (usually called Sparkies). It also promoted the idea that the
company supported fun community activities, thereby improving its image. The club drew
members from multiple departments, including Engineering, Mining, and even Corwin Hospital.
From the list of member names in the club yearbook, it seems that the Sparkies mainly attracted
white women.¹⁸⁹ The clubs membership numbers do not tell the whole story of female company
employees, since not all women joined the club. Margaret Peulen, for instance, did not become a
“Sparky.” Though the exact number of women that entered C.F. and I.'s workforce is as yet
unknown, the determination of those who did is clear.

¹⁸⁷ Margaret Puelen, interview, (CFI/BHS).
¹⁸⁸ Sparkplug Club, Sparkplug 1940-1941 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91, Sparkplug
Club, Sparkplug 1944-1945 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 95. Membership fell to 43 by
1947, showing that the increase in women members was part of a wartime balloon.
¹⁸⁹ Sparkplug Club, Sparkplug 1940-1941 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91. Allison and
Hammerstrom are two examples of surnames of women recorded in the books, with most other members having
similarly Anglo-Germanic names. Examining membership lists from the rest of the war indicates that the new
women joining the club had similar names, and were likely white skinned if not of Anglo origin. Whether this
was the result of discriminatory membership practices or something else is not revealed in club documents.
While some Colorado Fuel and Iron employees fought on the front line, many more became involved in maintaining production on the home front, including women. The C.F. and I. and Pueblo newspapers rarely published stories about women workers at the company. The Ordnance Plant's female staff received far more attention, possibly because it was scheduled to have 4,000 of its workers be women in 1940. The plant's management did not comment on why they made this decision when it was announced in the Pueblo Chieftain. Still, the Blast did occasionally mention that there were women working in the mills. The first two women to “invade” this masculine space got their own newspaper feature. Helen Huber and Josephine Spitzer had only come behind the fence to do office work for the mill that freed more men to work in production. Even so, the paper treated this as an unbelievable development. The Blast also ran a similar article to profile Helen Toth, who biked around behind the fence to help with odd jobs at the mill offices. According to the article, the company had begun hiring women to work in offices around the plant.

This was a national phenomenon, with the same strategy being used by Anaconda Mining of Montana. They wanted to use women as replacements for office men sent to work masculine jobs. These articles did not discuss the company's gradual incorporation of women into production jobs at the mill. Both women and men workers cooperated with C.F. and I.'s management, making it successful. However, they did this because they had decided to tolerate the way the company treated them. Workers kept doing their jobs in order to win the war and earn money, not to help C.F. and I., a fact which is illuminated by the way they reacted to the company's attempts to control them.

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190 Pueblo Chieftain, “Ammunition Plant will Employ 8,000 Colorado Workers,” Pueblo Chieftain, December 29, 1940, 10, Rawlings, Microfilm, Reel 277.
192 Basso, 150.
While the government tried to control the workforce through wartime legal means, C.F. and I. tried to do the same with cultural tools. In effect, it attempted to forcibly maintain the cooperation of their workers, though these heavy-handed efforts could easily backfire. Safety and anti-absenteeism campaigns had become particularly common, and they often had government backing. C.F. and I. did its best to communicate the importance of avoiding lost time to employees throughout the war. After all, lost time lowered company profits and slowed down production for the war. As a result, C.F. and I. eagerly cooperated with national safety drives. Their local attempts to accomplish this goal could sometimes be excessive, though. The September 1942 drive, spurred onward by the War Production Drive committees of C.F. and I.'s departments, required that any company department with a lost-time accident to “shelter” three caricatures of Hitler, Mussolini, or Hirohito. These caricatures would be placed around the department so everyone working at Minnequa knew who had them. In addition, the front sign stated where each dictator was being “sheltered.”

When the company awarded the first caricature (Hitler) to the Casting Foundry, the company proclaimed it in The Blast. Similar campaigns were undertaken by Anaconda in Montana to combat absenteeism according to Basso, but that company does not seem to have singled out specific employees or departments for ridicule. Even propaganda posters that claimed riding to work alone helped Hitler did not attach a label to specific people. This campaign shamed the workers in front of their peers, calling them friends to the worst enemies of the United States. The events that followed the awarding of the Hitlers showed that the company could not control how its workers responded to

195 Basso, 135-136.
cultural stimuli.

Maintaining Cooperation by Force

Employees were supposed to be shamed and threatened into being safer by having three copies of one these caricatures placed around their department, with this sign declaring which department had them. The above Hitler caricature was among those burned, while the fates of the other two are a mystery. Image retrieved from the first page of the C.F. And I. Blast's September 4, 1942, issue stored in the Colorado Fuel and Iron Archives of Bessemer Historical Society.

Colorado Fuel and Iron wanted workers to be reviled by the idea of aiding America's enemies, and though they were, they resented the assertion that their accidents made them Axis collaborators. The fates of the Mussolini and Hirohito caricatures are not reported, but the workers at the Casting Foundry burned the Hitlers they had been given. The caricature did not even last a week in its new home. C.F. and I. does not seem to have taken any disciplinary action, other than asking the men to play along with the game in the company newspaper. Finger-wagging was apparently the only feasible response to an entire department rising up and burning safety drive materials out of hatred of the concept of aiding Hitler. The same article that reported the downfall of the Hitlers mentioned that the company had awarded the Mussolinis to another department, which apparently vowed to not burn them. The fact that six other accidents
happened during the month, and no more was heard of the caricatures, seems to indicate that the company had given up trying to get them to work. They acknowledged that the drive had not ended, but left the caricatures out of the discussion, but did not give up shaming tactics. For instance, the company started giving printed Reichsmarks to absentee employees two weeks later. These purported themselves to be a token of appreciation from Hitler and the Axis. They could also be burned by employees without major repercussions, since they were neither company nor government property (though no documents state whether C.F. and I.'s management, or anyone else, took this into account).\textsuperscript{197} The shaming tactics used by the government and company backfired on them, and certainly failed to put an end to accidents at Minnequa.

The use of shaming tactics shows that C.F. and I. hoped to leverage U.S. culture to help the Allies win the war, and the worker's reactions displayed how much they hated their enemies. The reaction the workers had to being awarded the Hitler caricature shows that they could not abide the idea of being collaborators.\textsuperscript{198} The burning and further promises demonstrate the nature of Colorado's workforce. There are no national stories about this burning, and not even the \textit{Chieftain} reported it. There are no documents which say this drive was limited to C.F. and I., but the articles announcing it imply it was a local component of a national initiative for production safety. If only C.F. and I. used this strategy, then this incident provides a small window into the mind of the workforce and the company's safety managers.\textsuperscript{199} It can be concluded from this drive, and from the context of other articles, that both groups loved their country and hated its enemies.

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{199} C.F. and I., “Safety Program Tonight At Steel Y To Launch Campaign,” \textit{Blast}, August 28, 1942, (CFI/BHS), 1, 12.
\end{enumerate}
\end{footnotesize}
Unfortunately, each group had differing ideas about how to pursue victory. Managers wanted employees to see the negative results of accidents as horrific. Employees despised the idea of being called aids to the enemy. They both wanted to win the war, but allegations of disloyalty infuriated the employees.

**Complex Workspace**

While women workers became vital to C.F. and I. during the war due to its constricted manpower supply, documentation shows that management either exploited its new workers or it did not value their contributions. It was a complex workspace, where women worked hard for management, and some even felt that they had fair wages. Battles against gender and racial discrimination at the company are obfuscated behind the company’s rose-colored image of cooperation. Management and employees collaborated at Minnequa, but only because of the tolerance of the employees. Even former workers do not fully address discrimination at the company. Grievance documents show a few of the positions women occupied at some of the facilities, but also only hint at inequality in the workforce. Women could be found working as mill janitresses, rolling mill finishers, and a variety of forge shop positions. In fact, C.F. and I. employed women in just about every part of the company. In each of these facilities, though, it consistently paid women less than men. It is surprising that C.F. and I. decided to do this, considering the fact that it bled employees for the entirety of the war. It maintained this system,

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202 Borzilieri, interview, (CFI/BHS); Puelen, interview, (CFI/BHS).
even though most other steel companies had adopted equal pay structures.204 Then again, the national battle over home front masculinity Basso addressed touched C.F. and I. as well. This may explain some of its management's discriminatory policies.205 Above all else, it is clear that management had a low appraisal of women worker's individual worth.

The company adapted to the changes in its workforce brought about by the Second World War by creating an established protocol for enforcing the gap in pay. According to management's representatives, the women workers could not match the work rate of the males they replaced and labored beside. C.F. and I. classified new female hires as trainees for a probationary period, during which the company decided if the woman could work as well as a man. If she did, she received the same wages as a man. All documented cases in the grievance file claimed that women could not keep up with their male coworkers.206 The usual message can be summed up in one quote, “I have investigated the request of the women on the roll straightener for full job rate, and this request is denied as it is evident that women are not capable of producing and maintaining responsible output on the straighteners as compared with men.”207 Basso's work shows that the concept of women being unable to physically handle the burden of men's war work had been used by companies to resist employing women in their operations.208 C.F. and I. probably used this idea to keep its pay bill lower, like other companies. Traditional steel studies, like Hogan's, tend to ignore the issue of women workers. Basso is the only author who focuses

205 Basso, 267.
208 Basso, 143-144.
The company did not oppose paying high wages to its workers. It gave them a raise in 1941, despite paying them more than the industry average. The fact of the matter is that the war strained C.F. and I.'s income. Increasing employee salaries would further reduce profits. Furthermore, its response to the presence of women workers may have been to emphasize to male workers that they could not be permanently replaced by women. After all, if women were too weak (or at least labeled as such) then C.F. and I. had no reason to use them as a permanent replacement for men.

The issue is not a simple and clear cut issue of inequality, but rather a case of management sidelining women workers through a combination of preexisting company employment frameworks as well as undefined new job categories. The company put women through pre-existing trainee positions, and used this period to evaluate the women. The system seems to have been a combination of ideas from two companies: North and Lukens. Auto companies seem to have employed a similar system in some cases, with women's rates governed by their productivity. Numerous other companies involved in war work made similar excuses to justify their discriminatory wages, according to Basso. C.F. and I., claimed it gave women the salary that befitted their productivity. However, management responses to employee grievances never defines a man's productivity. It gave no information that could let the women

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209 Basso, 267.
210 C.F. and I., “Salary Increase By Departments,” C.F. and I., Oct. 28, 1942, (CFI/BHS) PLA-0009, Folder 19, C.F. and I., “Estimated Change in Ratio of C.F. and I. Corporation Salaries to Salaries Paid By the Industry,” C.F. and I., Oct. 28, 1942, (CFI/BHS) PLA-0009, Folder 19. C.F. and I.'s salaries were evaluated as being 1.081 in comparison to industry's 1.00. Most of the industry was working a pay raise through the system at the time, which caused C.F. and I. some concern, and forced it to follow suit. It still had a higher average salary than the companies that had increased their pay before it put through its own raises. The ratio would have dropped to roughly 1:1.06. Still, C.F. and I. seems to have wanted to maintain its marginally higher wages.
214 Milkman, 70, 75-76.
215 Basso, 143.
know how high the bar had been set for them.\textsuperscript{216} Nationally, women had to petition the government in order to fight inequality.\textsuperscript{217} Technically, it is possible that C.F. and I. paid some women the same wages as men at. However, there are no known documents which say it did. Even in the case of complaints that were not about women's salaries, the company stressed the physical weakness of its female employees.\textsuperscript{218} Essentially, C.F. and I. regarded women as second class replacement workers in the mill.

It therefore seems Colorado Fuel and Iron generally accepted the idea that women employees deserved to earn less than men. Most other companies in America agreed, though apparently the majority of steel corporations did not.\textsuperscript{219} Lichtenstein points out that in the auto and airplane construction industries, for instance, companies sequestered women in certain jobs like C.F. and I. did.\textsuperscript{220} The company's grievance reports certainly imply management discriminated against gender. Indeed, W. Densmore once replied to a grievance by saying, “It has been demonstrated that women for this work (janitor) are not physically capable of performing an amount as compared to men... the same would hold true for similar work in the mill.”\textsuperscript{221} In all fairness, this institutional prejudice may have been based on accurate observations, but no documents have been found to corroborate it. The fact that the company operated above its rated capacity during the years when women worked there seems to indicate that they were a boon to production.\textsuperscript{222} Unfortunately, without actual numbers on individual employee output, it could also be argued that an all male workforce could have achieved more in the same circumstances.


\textsuperscript{217} Basso, 143-144.

\textsuperscript{218} Management Representative, Management Labor Dispute Decision, C.F. and I., April 25, 1944, (CFI/BHS) INR-652.

\textsuperscript{219} J. Rodney Irwin, “CFI Pay Assessment vs. Other Companies List,” Nov. 17, 1942, (CFI/BHS), PLA-0001, Folder 25.

\textsuperscript{220} Lichtenstein, 123-124; Borzilieri, interview, (CFI/BHS); Peuelen, interview, (CFI/BHS).

\textsuperscript{221} W. Densmore, “Case No.3 – File Yard Department,” C.F. and I., July 9, 1943, (CFI/BHS) INR-611, Folder 3.
In short, management clearly valued male workers over female ones.

Gender discrimination in job placement was common across the U.S. and at C.F. and I., and it was always determined by what jobs were thought of as feminine. While the Sparkplug Club's membership list (see page 60) shows a large number of women involved in light office jobs, Borzilieri mentioned that she was hired to work in producing wire along with at least twenty other women. That being said, she described men as doing the heavy lifting in her department. Similarly, the one complaint from a man about a woman at C.F. and I. confirms that women were being placed in lighter jobs across the plant. Interestingly, her job was considered a promotion above his, which meant that at least one woman at C.F. and I. experienced “positive” discrimination. Considering the numerous cases of women's wages at the company being kept low, though, it is likely she was earning less from that job than a man. The fact that she was removed from her job by the man's promotion shows that women's positions at C.F. and I. were subject to their male coworkers and managers. Nationally, women were being chosen for lighter jobs since these supposedly suited their femininity. Sometimes, these were promotions above men's jobs, which caused labor discord. However, in both the auto industry and electrical manufacturing, women received drastically lowered salaries for these jobs. The job assignment policies at C.F. and I. therefore resembled those of the rest of the nation, but with a notable exception. It does not seem to have bothered workers at C.F and I. as much since only one person complained about it, but the argument was not about the principle. There were no accusations of using cheap female labor to replace men, as at other companies. Instead, the man

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223 Borzilieri, interview, (CFI/BHS); Sparkplug Club, Sparkplug 1944-1945 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 95. 
225 Milkman, 58-60, 70-81.
just wanted to get the job his seniority earned him. Neither he nor the union supporting him asked for a policy change. Regardless of whether they got any preferential treatment, women at C.F. and I. were facing part of a national phenomenon that forced them to take jobs chosen by men.

**Sparkplug Club Member Departments**

![Image of Sparkplug Club Member Departments]

The above picture comes from the Sparkplug Clubs records, and shows the department where members worked. The image has been edited to reduce its height, and to hide the member’s personal information. Image retrieved from the 1945-1946 Sparkplug Club Yearbook stored in the Colorado Fuel and Iron Archives of Bessemer Historical Society.

C.F. and I.'s continuous resistance to the union's demands for increased wages for female workers meant that the union and women appealed to the government, which proved to be sympathetic to the cause following the end of the war. On the part of the union and the women workers, though, the unequal salary situation was unacceptable. As early as 1942, Rodney Irwin

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warned the company that the female workers at another mill would fight for equal pay, saying, “Girls in mill paid 15% less than men. Doubt if this difference can be maintained.” It took less than a year for women at C.F. and I. to start pressing for wage increases.

The wording of Irwin’s warning, as well as his report, illustrates that gender discrimination was deeply embedded in C.F. and I.’s management. The language he used to describe female employees differed drastically from what he used for men. While Irwin (head of Industrial Engineering) referred to both, “boys,” and, “men,” he only ever addresses women as, “girls.” There is a possible justification for this, though. “Boy,” generally referred to male workers who occupied less skilled jobs in the mill. Since the new workers, especially women, took over unskilled and less strenuous jobs, Irwin and his ilk may have called them, “girls,” as a means of expressing their relative status. Lichtenstein’s research shows that this kind of prejudice happened across the nation in other industries. Irwin supposedly incorporated promotion biases into his research, but he did not directly address hiring bias. Borzilieri and Puelen both mentioned working alongside other women for the most part. They had male bosses, but most of their departments seem to have been made up of women segregated due to their gender, and supposedly their color in some cases. C.F. and I.’s terminology denotes that the management unofficially saw women employees as low quality substitutes for men, but it may also indicate an obfuscated official mechanism of discrimination.

As early as 1942, the steelworker's union at C.F. and I. started lodging formal grievances

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227 J. Rodney Irwin, “CFI Pay Assessment vs. Other Companies,: Inland Steel” Nov. 17, 1942, (CFI/BHS), PLA-0001, Folder 25.
228 J. Rodney Irwin, “CFI Pay Assessment vs. Other Companies,: Inland Steel” Nov. 17, 1942, (CFI/BHS), PLA-0001, Folder 25.
229 Lichtenstein, 123-124.
230 J. Rodney Irwin, “CFI Pay Assessment vs. Other Companies,: Inland Steel” Nov. 17, 1942, (CFI/BHS), PLA-0001, Folder 25.
231 Borzilieri, interview, (CFI/BHS); Peuelen, interview, (CFI/BHS). Racism was not deeply addressed by either woman, but they supposedly had stories about it that they were not telling in the interviews.
on behalf of the female workers. Management's rejection of these grievances did not sit well with the union or the women, so they brought their case for equal wages to the War Production Board between 1943 and 1944, along with workers from across the nation. The struggle continued throughout the war as a constant source of background contention at Colorado Fuel and Iron. The case hung in the balance, with employees fighting for equal pay retroactive to 1943. This was part of a larger union pay initiative, which could be part of the reason management fought it so hard. The union got most of its demands fulfilled in 1945 when the National War Labor Board ruled in their favor. It even granted retroactive pay to the workers. The company finally instituted equal pay in 1946, once the burden of defeating the Axis had finally been lifted. C.F. and I. does not state why it took so long before the NWLB to reach this decision. It was probably considering claims from the employees of other companies as well as the limited finances available to pay workers during the war, which would explain why it did not grant the increase until the conflict ended.

Unequal mill wages for men and women were not even the standard in the steel industry, at least in 1942. Irwin's report of that year delves deeply into the issue of women employees, and contained a larger sample group than his job description research. He even managed to secure data from Bethlehem Steel for this study. Whether any of the other company's received the results of this research or even cared about it is not recorded in the archive files. Irwin's, “CFI Pay Assessment Vs. Other Companies,” report gives a good impression of the state of the steel industry as a whole, and the place of women in it. He states that, “...a difference in salaries exists in the offices of all companies,” (which contradicted the claims of companies like Republic) but

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notes that mill personnel had equal wages. Out of seventeen companies, nine employed women in the mill, and only three of those companies payed unequal wages. Interestingly, Irwin found that pay for office personnel was the least equal. All the companies he examined paid “girls” less than men there. Some companies, like Republic (based in Ohio and the Midwest), claimed they had equal pay system. However, Irwin's closer examination of the issue revealed a massive rate difference in practical terms. Specifically, position evaluation favored the men over the women in the offices. Irwin asserted that equal pay in the mills of six companies illustrates they valued mill women over office women, and his work reinforces that idea. Most of the steel companies that employed women found them valuable enough to pay them full wages, though they may have discriminated in other ways that Rodney does not detail (such as promotion preference). Even so, most other steel companies had set up a more equal pay system than Colorado Fuel and Iron.

Unequal pay was more than just a gender issue in the steel industry, it plagued America's workers and government since before the Second World War. It tied into the problem of uniform pay and job descriptions in the steel industry. The process of setting salaries and job responsibilities had been largely informal before the 1940s, which meant employees often had lower wages than less experienced or skilled peers. Workers, or at least the unions, supported standardization since the government gave them an input into the formulation of industry job descriptions. Hogan's research indicates that both unions and some of their members supported equalizing wages, since inequalities caused conflict between employees over who deserved to earn more. This helped the government during the war, since it needed to know who it could

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239 Hogan, 1186-1188.
safely draft into the army without taking experienced specialists and crippling production. It could also be good for most of the workers since their pay would be regulated by a structured system, and not the whims of a hiring manager. Drives for equal pay meant two things to steelworkers: standardization of the wage scale and the addition of women as equal partners in that scale.

Adding industry wide context to C.F. and I.'s salary decisions demonstrates that its management followed a unique course that drew inspiration from other steel plants, in particular “North” and the Lukens Steel Company of Pennsylvania. Both companies offered women the chance to earn as much as men if they could do the same work, though neither defined what that level of productivity was. Similarly, C.F. and I. justified its informal segregation of pay on the basis that women mill workers were too physically weak to handle the job of a man, but at least six steel companies (the majority of those employing women in the mill) seem to have been satisfied with the output of their female workers. Irwin himself does not comment on the issue, or provide any data that might have altered or confirmed management's mindset. Then again, considering the desperation for manpower (or, indeed, womanpower) at the time, some companies may have kept their wages high to attract more employees regardless of their sex or capabilities. Whatever the reasoning, C.F. and I. either disregarded Irwin's implication that women workers would demand equal compensation for their work or it assumed that a small gap would be tolerated by women workers. Only three cents divided male and female wages in most

241 Confidential Minutes of a Meeting on Irwin's Job Description and Pay Study, January 28, 1941, (CFI/BHS), PLA-0009, Folder 17.
cases, which may have been management's way of compromising.\textsuperscript{244} It gave the women employees decent wages, but made sure to keep them slightly lower to make up for what it felt about its women workers. The company did not support equal pay like the majority of the steel industry in 1942, and its male employees also took a unique position on the issue.

In fact, the most interesting aspect of this story is that it shows that male and female workers at Colorado Fuel and Iron had an unusually good relationship with each other. In the Montana mines, men had viewed the intrusion of women into their space as an affront. Anaconda stressed the fact that women were not a permanent addition to the workforce to appease male workers, and C.F. and I. seems to have wanted to make sure its men got this message as well.\textsuperscript{245}

At C.F. and I., though, the male workers apparently supported the women's drive for equal pay through the union. There are also no documents which show them opposing the hiring of women in the mill.\textsuperscript{246} In fact, Josephine Borzilieri described her male coworkers positively in an interview about her tenure in the company during World War II. She asserted that, “They treated me like their own sister.” She also casually mentioned that some of the men engaged in mild harassment (basically being overly friendly), though the older men apparently kept an eye on their male coworkers and reported them when they overstepped their bounds.\textsuperscript{247} Reports from management and female employees portray C.F. and I. as a workplace defined by inter-gender cooperation.

This relatively friendly treatment could also be skeptically termed as tolerance rather than  


\textsuperscript{247} Borzilieri, interview, (CFI/BHS).
acceptance of women workers as equals, though that would still be notable. The reason the union fought for equal wages may not have been a desire to help women, but rather to protect the wages of all workers from being dropped to the women's level. Matthew Basso states that the Anaconda Mining Company may have wanted to keep women workers employed after the war since it might allow them to lower all wages to those of women. Perhaps the union attempted to equalize wages at C.F. and I. during the war in order to counter a general pay decrease.²⁴⁸ The union continuously pushed for equal pay from 1943 until the end of the war. It dropped its drive for equal pay in 1945, but pursued the goal to its fulfillment in 1946. The company does not elaborate on the issue, but it had been forced to accept that positions had to have uniform pay.²⁴⁹ Interestingly, the WPB had struck down unequal wages on the basis of physical weakness at other plants in America as early as 1942, so the Board's ruling at C.F. and I. must have been delayed by demands from bigger companies.²⁵⁰ One should be careful about overselling the harmony in the C.F. and I. workforce, but it seems that men and women at the company tolerated each other enough to cooperate for the duration of the war.

Even if the evidence does not definitively state that C.F. and I. employees supported female hires, it does indicate that the men accepted women workers by using various justifications. Indeed, this development apparently did not shock the male employees (though the Blast played up the advent in its 1942 articles).²⁵¹ Perhaps only a few men felt that women threatened their job security. On the national stage, the idea of having women invade their workplaces disgusted some of the men in several companies. They feared they might be replaced by women, which threatened their profession-based masculine identity. C.F. and I. men

²⁴⁸ Basso, 144.
²⁵⁰ Basso, 144.
supposedly let the women in without protest, but that may have hinged upon a few of their management's views. Women were, for all intents and purposes, declared to be officially feminine by C.F. and I.'s management. The company officially claimed that women could not do the same level of work as men. Oral interviews do not clear up the exact feelings men had towards women workers, even if it does show they usually tried to be protective toward them. The managers of various war production companies did this across America, with the hearty endorsement of their male workers. In addition, both companies and their male workers generally understood that employing women was a temporary move to stave off a disastrous drop in productivity. As such, men generally did not greet replacement women workers as equals in Colorado or anywhere else in America, though they did seem to find reasons to tolerate their presence in masculine workplaces.

Since there is only one complaint by a man about a woman worker at C.F. and I., it appears that no major restructuring of gender ideas took place there. Still, he had complained because he felt he was entitled to a higher paying position held by a woman, which he eventually got. The wartime complaints women filed usually focused on wage inequality or problems with other women, not harassment from male workers. It is possible that the wartime grievance records are incomplete, or that problems went on that did not get reported. Borzillieri's testimony shows that men tried to protect the women while lusting after them, just like in traditional models of femininity. Borzillieri seemed to have no problem with this, even describing

253 Borzillieri, interview, (CFI/BHS).
254 Basso, 143-147, 208-209.
255 Management Representative, Management Labor Dispute Decision, C.F. and I., April 25, 1944, (CFI/BHS) INR-652. The management was less than thrilled about this outcome, since the woman did not have the strength to replace the man who took her job.
Feminist ideals fell out of favor during the war, according to Milkman. Borzilieri's reaction, combined with Milkman's research, confirms that women were not actively or widely challenging gender roles at the time. Though other women may not have agreed, the complaints files seem to indicate that it did not become a big enough problem for them to officially report it. On the other hand, some women may have been afraid to report male colleagues that took advantage of them. As far as one can tell, though, men did not mind working with women at the plant as long as they could be treated as traditionally feminine (i.e., physically weak, unsuited to hard labor, and only in the workforce to temporarily help the men).

Outside of work, women were expected to remain feminine, even if some did not. The Sparkplug Club is a good example of the roles women were taking outside of business hours. They planned parties for the community. The *Pueblo Star Journal* ran a “Society and Clubs,” page during the Second World War, which was primarily concerned with the Pueblo social life of women, and never discussed men or masculine labor. Indeed, it focused on advertising and discussing feminine social activities like dances and card parties. This message about female leisure is similar to what Basso states was being proclaimed in other parts of the nation, except that there was no accompanying moral outcry against the potential masculinity of women workers. The descriptions Puellen gives of the tough, swearing women she worked with matches perfectly with those Basso gives of some female workers in Montana. However, *The Blast* ignores the existence of such women. The *Chieftain* and *Star Journal* do so as well, during the periods examined for this paper.

The *Chieftain* spent more time attacking the wartime sexual indiscretions of women in

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257 Borzilieri, interview, (CFI/BHS).
258 Milkman, 152-154; Borzilieri, interview, (CFI/BHS).
259 Sparkplug Club, Sparkplug 1940-1941 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91.
260 *Star Journal,* “Society and Clubs,” *Pueblo Star Journal,* July 11, 1943, 4, Pueblo: Co. Pueblo Library Rawlings Branch, Microfilm, Reel 291. This is a good example of one such page.
261 Puellen, interview, (CFI/BHS); Basso, 143-149.
the community, indicating that Pueblo was caught up in the national moral panic brought on by the war. However, it was less involved in the struggle over masculinity. Two stories by the same author over a period of four days, in particular, focused on blaming woman rather than men for causing moral problems like adultery. In this case, the female author was responding to multiple messages from women, but she never reprimanded the men who were involved in the wartime adultery. A similar UP article the Chieftain published earlier in the year warned that teen girls and women were engaged in more crime than before, and specifically mentioned an increase in female prostitution. As such, it is clear that Pueblo was facing the national wartime worries of moral breakdown and the femininity of women. However, there was no desperate campaign fought by traditional society against the masculinization of women. Indeed, even the story about the increase in female criminals emphasized that they were engaged in a feminine crime: prostitution. There is no case for this lack of resistance being indicative of tolerance, considering all the pro-feminine messages in the community. Instead, the community had most likely decided to ignore masculine women.

Masculine and feminine working women were also not the only ones in Pueblo who supported their nation's fight. Others found different ways to support U.S. military production. For instance, they could gather scrap metal. This was of vital importance to Colorado Fuel and Iron. When the company got an “E” Award in 1942, one employee sent a memo to management to remind them of the importance of scrap collection to the company's operations. It helped the company by providing raw materials to maintain production. Scrap gathering proved to be necessary since C.F. and I. suffered from a labor shortage in the mines. The company even

264 Message from F.E. Watson, Nov. 1, 1943, (CFI/BHS), ADM-24, Folder 38.
cannibalized pieces of a war memorial out of desperation, and begged for Six million tons of scrap in its paper. Women across the nation also volunteered as gas attack wardens. Similarly, women in Pueblo became air raid wardens, though they also took on other auxiliary roles.

Total mobilization of America for war meant that even those not directly working for the war effort had to contribute to victory in some way. Whether it be gathering scrap, purchasing bonds, or building victory gardens, Puebloans in and out of C.F. and I. became heavily involved in the war effort.

**Image of Women Scrap Collectors**

This image, titled “Look at Me Now”, was published on page one of the *Blast* on September 4, 1942. It is contained in the Colorado Fuel and Iron Archives of the Bessemer Historical Society. It shows women posing around the scrap they had gathered for the company.

While male workers accepted women as temporary aids to production in industry, it is worth noting that C.F. and I. decided to retain its female workforce after the war ended. The question of how this affected C.F. and I. men's views of their female coworkers is an intriguing

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one. Management claimed that it kept the women workers on staff as a means of stabilizing production in the aftermath of the conflict. This makes sense considering that demobilization, and the resulting flow of men back to the company, continued into 1946.\textsuperscript{267} Nationally, the proportion of female employees in the steel industry fell to 9.4\% in 1946.\textsuperscript{268} Whether anything similar happened at C.F. and I. as more men came back is unknown, but neither documents or interviewees refer to any such event. Indeed, Borzilieri and Puellen (both of them being production workers), continued to be employed by the company until after the war.\textsuperscript{269} However, it should be noted that the Sparkplug Club lost twenty-four members between 1945 and 1946, as well as twenty more the next year. This was a 50\% reduction in size from its peak of 87 members in 1945, which carries implications about what was happening at the company.\textsuperscript{270} There are no solid numbers for how many women worked at the company or left it, but the wartime rise and fall of Sparkplug Club membership indicates that C.F. and I. probably followed national patterns. The other reason the company retained its female workers was probably that the women were still being treated as feminine. Management clearly stated that women could not match men in physical labor. W. Densmore responded to a union request for equalizing roll straightener wages by saying, “…this request is denied as it is evident that women are not capable of producing and maintaining reasonable output on the roll straighteners as compared with a man.”\textsuperscript{271} Perhaps

\textsuperscript{267} Geo. E. Diggery, Female Employee Seniority Message, Feb. 7, 1951, (CFI/BHS) INR-803, Folder 59, Returning Veteran form, Jan. 15, 1946, (CFI/BHS), COM-16, Military Service Folder. Investigating this issue up through the 1950s could provide some interesting discoveries. It might show how the men viewed the continued presence of female workers at their company. Part of the reason male workers accepted the use of women auxiliaries was because it as wartime.

\textsuperscript{268} Milkman, 50.

\textsuperscript{269} Borzilieri, interview, (CFI/BHS); Puellen, interview, (CFI/BHS).

\textsuperscript{270} Sparkplug Club, Sparkplug 1940-1941 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91, Sparkplug Club, Sparkplug 1944-1945 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91, Sparkplug Club, Sparkplug 1945-1946 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91, Sparkplug Club, Sparkplug 1946-1947 Yearbook, (CFI/BHS), Sparkplug Club Box 1, Folder 91.

\textsuperscript{271} W. Densmore, “Case No.7 – File Merchant Mill Finishing,” C.F. and I., Nov. 11, 1943, (CFI/BHS) INR-636, Folder 7. This attitude comes across in every complaint women and the union make about gender discrimination of wages. Management's representative always gives the excuse that women will be paid as much as a man when they can do the same work. These measurements are never defined in the documents.
some workers held the same view.

Complaints about women at the plant always hinged on the issue of their productive capacity and its inferior relationship to that of a man. While the union fought for equal wages, it made no direct assertions about the abilities of women workers. Either the union did this because its disapproval of that system could be understood in the context of the protest, or because it just wanted to keep women from dragging down male wages or jeopardizing male jobs. It based its complaints upon the idea that all employees held or deserved equal status under standard company regulations, which the company did not accept. The femininity or supposed inferiority of women workers was probably not the issue for the union and its male members. To truly understand how women and men fit together at Colorado Fuel and Iron, though, one has to look further ahead to see how things progressed with women working at the company.

While the wartime relationship between men and women at C.F. and I. is relatively clear, racial relations in the company and Pueblo are kept unclear by a lack of documents, with one exception. The company and Pueblo community put their anger toward, and distrust of, the Japanese in writing. Japanese-Americans were one of the main targets of American aggression during the Second World War, which Basso states helped to unite the American workforce during the conflict. This held true at C.F. and I. and Pueblo. Indeed, C.F. and I. does not seem to have had tremendous trouble with racial strife at its plants, even with the national wave of anti-Japanese sentiment sweeping through it and its host community. The company produced a statement of loyalty in December of 1941 and 19 employees signed it. The company's documents did not say how many Japanese workers refused to sign, if any. It also does not state if any


273 Basso, 154-155.
government authority pushed it to give its Japanese employees this statement. Records imply the company did this of its own volition. All markings on it are from the company, not a government department. The archive folder contained no info about what happened to these employees after they signed the oath. If the U.S. government did not recognize this oath as legitimate, then it may have had a limited impact.\(^\text{274}\) It speaks volumes about local sentiments, though, since it means that C.F. and I. had grown anxious about the presence of Japanese workers in its workforce.

Workers at C.F. and I. united with management in order to win the war, and their anger towards the Japanese may have been part of what motivated them to do so.

Japanese employees aside, there is little evidence of racial conflict disrupting the cooperation in Colorado Fuel and Iron, but oral interviews indirectly refer to discrimination occurring at the plant. One employee filed an official grievance stating that he felt the company had not promoted him due to his nationality, but the company's grievance committee denied the charge. According to the man, someone else had been elevated in his place. The company countered by claiming the did not qualify for the promotion he wanted, and that they were not discriminating because his brother was up for the same promotion. This is the only record of a protest over company prejudice from an employee.\(^\text{275}\) There are stories about discrimination at the plant from employees, though. One man had to change his Italian name to get a better job, according to his sister.\(^\text{276}\) Indeed, oral interviews about race at C.F. and I. during the Second World War often circle the issue, with comments suggesting the presence of racism in the plant without confronting it. In any case, racial issues do not seem to have distracted employees from their chief goal of winning the war.

The extent of racism at C.F. and I. has been obscured in documents and interviews, but

\(^{274}\) C.F. and I., Japanese Employees Oath of Allegiance to the U.S.A., (CFI/BHS), ADM-40, Folder X0854.


\(^{276}\) Borzilieri, interview, (CFI/BHS).
scrap of evidence indicate that the company probably used an informal system of racial discrimination. Relatives of the interviewees discussed the issue more than the interviewees themselves. Matt Puelen, husband of Margaret Puelen, confirmed that discrimination against Italians and Mexicans continued in the plant up to the 1950s. His wife had apparently run up against this during her employment at the company (which stretched from 1944-1952), as she and many other Hispanics apparently received worse jobs than white employees. All that can be said is that race seems to have had a low profile in C.F. and I., even involving the Japanese. Workers attest to cooperating in spite of race, but the issue seems to have been something of a taboo to speak about in spite of its constant presence. There are no records of protests about racially unequal wages at the company, nor did white workers there protest about the elevation of workers they deemed to be lesser. This could mean that the company did not change the racial hierarchy at its plant, which had caused problems in other companies. In fact, the only clear wage inequality in the plant seems to have been between men and women. The company disguised discrimination at the plant, and probably hid it within the promotion and job assignment systems. An informal note written during World War II denigrated a certain type of job as, “nigger work,” but it had been penciled onto a grievance document by an unknown hand. The exact nature of discrimination at C.F. and I. is vague and never brought to the forefront in its documents, possibly because racial conflict did not erupt at the company the way it did elsewhere in America.

The worker’s grudging tolerance of discrimination, oppression, and replacement employees at C.F. and I. for the cause of winning the war set them apart from most of their peers across the nation, and is what allowed the company to find its way out of the Great Depression.

277 Interview with Matt Puelen, April 10, 2012, (CFI/BHS); Margaret Puelen, interview, (CFI/BHS).
278 Lichtenstein, 124-126.
Wartime demand was part of the equation, but that could not have been met without the commitment of the company's employees. This goes to show that while C. F. and I.'s status as a company during World War II is important, one must not neglect the significance of its workforce or the environment they lived in. After all, World War II and its increased production demands required the participation of American workers in large numbers. At the same time, the war required that all companies allow employees to either join the army or be conscripted by it. In this environment, the average employee could wield immense power. He (or she) could either work incredibly hard in order to increase production, or lobby for higher wages. C.F. and I. employees did both, but generally focused on fulfilling their duty to work. In the end, the employees had a hand in all of Colorado Fuel and Iron's wartime achievements, because their decision to keep working in spite of their treatment by the company kept production going at the plant.
Conclusion

The Second World War brought C.F. and I. out of the Depression, but only because its employees carried it along as part of their effort to win the war for the United States. Workers endured discriminatory conditions and refused to take advantage of the manpower shortage to improve their position. Instead, they waited until after the war to push hard for their desires. Had they not done so, then C.F. and I. would not have been able to take advantage of wartime demand. From the top down, the history of the war is a story of the company's triumphant escape from the Depression. From the bottom up, the narrative shifts to one of a business taking advantage of its employees' determination to win the war in order to benefit. These two stories show some level of collaboration, with management and labor cooperating in Colorado for roughly five years (with one notable exception in 1943). For the duration of the war, C.F. and I. acted as the relative calm in the middle of a labor relations storm. However, the major reason for this was the tolerance of its employees, who accepted discrimination for the sake of military victory. Once that had been achieved, they once again began fighting as hard as they could for their own betterment. The Second World War narratives of both the management and workers of C.F. and I. had happy endings thanks to the postwar economy.

During the Second World War, C.F. and I. had contributed its fair share to the war effort, and had gotten a fair payment in return. It manufactured steel products at over 100% its capacity for three years, and earned not only the respect of the U.S. government, but also recognition from its customers. At the same time, C. F. and I. was transformed by its experience in the Second World War. The Corporation's steel production and sales had exceeded those of 1929, and its net
worth had risen to $50,564,493.\textsuperscript{280} Though one cannot say definitively whether or not the benefits it reaped were proportional to what the company contributed to the war effort, one can at least say that C. F. and I. gave all it could, and that it and its employees earned rich rewards for their efforts. It had a bright future ahead of it in 1947, thanks to the economic revolution that swept the United States, its Western regions, and the State of Colorado as a result of World War II.

Though 1946 delayed its impact, the enormous civilian demand for steel products took C.F. and I. to new financial heights. Indeed, it experienced the prosperity of the postwar American economy once its labor force ended their strike and the government lifted its price controls.\textsuperscript{281} The end of the Second World War had ushered in an enormous boom in civilian demand for all steel products. C.F. and I. found a thriving construction industry where it could deliver some of its products, but it did not contribute to other high demand steel markets, like the automobile industry. In fact, no specific boom industry needed C.F. and I.’s products, except in small amounts. In the end, the Corporation made its enormous profits in 1947 by selling the same products it had traditionally manufactured: rails and rail fastenings. The railroads may have needed new cars more than new rails, but there was still plenty of business for C.F. and I. to do.\textsuperscript{282} Perhaps it could have had even higher profits had it chosen to move beyond rails as its main product.

Colorado Fuel and Iron changed rapidly as the World War ended in 1945. Not only did it merge with the Wickwire Spencer Steel Company, but the Rockefeller family gave up its


\textsuperscript{281} Hogan, 2081.

controlling interest in C. F. and I. to Charles Allen Jr.’s financial coalition. Allen was a rising star on Wall Street at the time, reputedly known for his tendency to aggressively invest in small firms.\textsuperscript{283} With these changes, and the transition to a peacetime economy looming, the President of C. F. and I., W.A. Maxwell Jr., wrote a message to the company stockholders published in the C.F. and I. 1945 Annual Report. In this message, he made it clear that they had nothing to fear by saying: “Your Corporation is ready to move into the postwar period, believing that the demand for our regular line of products will be beneficial in maintaining our productive activity close to capacity.”\textsuperscript{284} Later that year, J.D. Sullivan, one of C.F. and I.’s Vice Presidents, preached a similar message about the hope filled future of C.F. and I. in an article printed by the company's newspaper \emph{(The Blast)}.\textsuperscript{285} Sullivan and Maxwell may have made their statements to counter the prevalent rumors of an imminent postwar depression or as disingenuous corporate propaganda, but there is no evidence to confirm this. Instead, they may well have been confident in their messages, since C.F. and I. continued to focus on manufacturing its staple product (rails).\textsuperscript{286}

World War II was a watershed for C.F. and I., not only bringing it out of the stagnation of the Great Depression, but allowing it to break its previous production and income records.

C.F. and I.'s experiences during the war do not change the narrative of how employees reacted to the end of the Second World War. Indeed, once the conflict ended, new concerns entered the minds of employees throughout the steel industry. Large scale overtime work became unnecessary since companies no longer needed to suspend income considerations to meet the

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demands of America's war machine. As a result, workers wanted improved wages throughout the American steel industry, and employees at C.F. and I. were no exception to this. C.F. and I.'s workers achieved their goals of higher wages, but at a great cost to their employer. Compared to other steel companies, C.F. and I.'s income clearly suffered the most from the strike of 1946.\footnote{Hogan, 1611-1615.} This may be partially due to the fact that both steel and mine workers went on strike. The mill was still integrated with the mines, meaning that one theoretically required the other to function. In addition, the company had to directly foot the bill for the increases demanded by its workers. Still, the profits of 1947 more than made up for this drastic increase in wages, which means that both C.F. and I. and its employees got what they wanted: more money.

The men's return to the factory after the war created a slight disruption in the workforce due to reincorporating them in the seniority hierarchy. The Director of Selective Service and Employment Department told the company it could not remove or demote employees to make room for returning veterans. Officials determined in April of 1946 that this could not legally be done, and forced companies to return jobs to those who had been demoted or fired. Unfortunately, legal battles over the issue continued into 1947, as veterans struggled to reestablish themselves in their old workplaces. Several court cases across the country reached contradictory verdicts on the issue of whether union officials had “super-seniority,” (i.e., a better claim to seniority) over veterans. Most of the judges decided in favor of the unions. Problems like these surfaced all over America, as well as at Colorado Fuel and Iron. In one case recorded in the grievance files, the union filed a complaint on behalf of two veterans, protesting that management withheld apprenticeships from them. In that case, it turned out the positions were
offered based on merit rather than seniority. The men still got their apprenticeships. Once the company had given the men what they asked for, it made sure to tell the union it had not done so because of any complaints. Management still controlled apprenticeships, and the union had no place in the issue.\footnote{Geo Diggory's message to all Department Heads and Superintendents about returning veterans, April 17, 1946, (CFI/BHS), INR-803, Military Service Folder, Howard J. Jones' about returning veteran seniority court cases, August 27, 1947, (CFI/BHS), INR-803, Military Service Folder.} With the end of the struggle over veteran seniority, C.F. and I. finally adjusted to a postwar world. Its employees had come home from the war and been employed, workers had gotten their salaries adjusted, the company continued to employ women workers, and the company was back to producing its standard product line.

Applying a model similar to Basso's to C.F. and I. shows how the war had a unique cultural impact on both the company and its surroundings. C.F. and I.'s treatment of its female employees put it in the minority of steel companies, but its male employees were unusually accepting of women workers. The company adapted its excuse for unequal wages from the national debates about allowing women workers in industry, but it did so in an odd way. Technically, the system at C.F. and I. allowed a woman to make as much money as a man, but redefined the issue to be about whether she could do the same amount of work. The problem with this is that it meant that the company left the term unquantified, and used it to deny any requests to raise women's wages.\footnote{W. Denmore, “Case No 1 File – Elec.,” C.F. and I., Oct. 28, 1942, (CFI/BHS), INR-647, Folder 1.} Female workers do not seem to have threatened the masculinity of C.F. and I.'s male employees, probably because they were seen as protective charges. The fact that men dictated women's roles at the company may not have been ideal, but no women from the time spoke against anything but the company's wage decisions. The company's policies toward women defied the norm in the steel industry, and the men's
conditional acceptance of female coworkers meant they ignored or did not care about the invasion of their sacred space.

U.S. national economic history is often themed around the largest and most successful firms, but C.F. and I. provides a small company's perspective on the changes brought by World War II. C.F. and I.'s case study shows that the war prosperity could not help it improve its standing among other steel companies. Hogan and Rogers only briefly mentioned C.F. and I. in their works, but the dynamics of their narrative are changed by the efforts of the company. It played an important part in specific industries, but was heavily limited by its competitors.290 Indeed, Colorado Fuel and Iron also failed to take into reckoning the forcibly stable nature of the steel market that Lauderbaugh and Warren noticed. It pulled out of step with the rest of the steel companies because the system of the time offered it few advantages.291 If C.F. and I. took over two large steel plants for a fraction of their construction cost, it would have overthrown the stability of the system and could have rivaled some of the less impressive big steel companies.292 Unfortunately for it, its profits were outmatched by larger companies that wanted to prevent major changes. As a result, it was only natural that U.S. Steel acquired the lion's share of the new facilities.293 C.F. and I. could not expand, at least not on the scale they hoped to. Economics did not allow it, and neither did the industry's culture.

292 Nash, World War II and the West, 134-136. The Geneva plant managed to consume one million tons of iron while it was under federal control after it had been finished in 1944. Nash called it the biggest integrated mill West of the Mississippi when it opened, making it bigger than C.F. and I.'s plant. Assuming that it would add roughly one million tons of steel to C.F. and I.'s total, the corporation would then be making as much steel as Jones and Laughlin. The extra steel produced by the Fontana plant of Kaisers, had he merged it with C.F. and I.'s facilities and the Geneva plant as planned, probably could have pushed C.F. and I. into the top six steel companies, though it may have still been behind Jones and Laughlin.
293 Hogan, 1655, 1687, 1709, 1747.
Colorado and C.F. and I.’s Second World War economic outcomes were also fairly limited from the perspective of Southwestern history, but the case study of the company and Pueblo still changes these regional narratives. Nash and Foster's claim that the Second World War liberated the American West from Eastern imperialists may have played out in states like California, but examining Colorado and C.F. and I. shows that they were exceptions to this rule. Even Gurda's optimistic description of how two Milwaukee firms typified wartime industrial progress does not fully apply to Colorado Fuel and Iron.\(^{294}\) While the situation of the West as a whole may have changed following the Second World War, Colorado and its steel company held the same position they had before the conflict. They had the same proportional amount of industry, and Easterners still controlled the company. Rockefeller left the company, but his control had been traded to a group of New Yorkers under Charles Allen Jr.\(^{295}\) In short, prosperity had come, but Eastern investors and leadership were still crucial to the company, even as Eastern companies quashed its growth. Scamehorn's history of C.F. and I. is a well rounded look at the company, but its chapter on the Second World War lacked important details on women employment at the company, national context, and discussion of racial issues like anti-Japanese sentiment.\(^{296}\)

In the end, Colorado Fuel and Iron was a small plant that felt that the Second World War offered it an opportunity to make a national name for itself, but not even the remarkable contributions of its employees could allow it to overcome the limitations imposed on it by its location and the culture of the steel industry. This does not make it unimportant to the study of steel, economics, and culture during the Second World War, it instead highlights the nature of the

\(^{294}\) Gurda, 32-34.

\(^{295}\) C.F. and I. 1945 Annual Report, (CFI/BHS), ADM-275, 7, Mahar et. al., 42.

time. The total commitment to production could be leveraged for more than just winning the war for the Allies, it also served as an opportunity to improve one's economic standing. The war's cultural impact on Pueblo, which influenced C.F. and I. through its workforce at the plant and in the mines, drove the improved production output of the plant. Massively increased economic demand for C.F. and I.'s products also allowed it to maintained its output. However, this required that the number of work stoppages be limited. C.F. and I. had to strike a careful balance of economic and cultural factors in order to perform to the extent it did during the war. Therefore, it seems that the only logical conclusion is to expand the scope of this study to include other time periods and closer examinations of other companies and their local circumstances. For now, it appears that even if C.F. and I., its workforce, and its supporting community were small, their Second World War history is worth noting for their aversions from, and reactions to cultural as well as economic national trends.
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