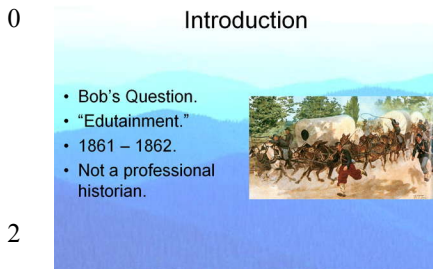


## Manna From Heaven – Northern Supply 1861 – 1862

A presentation to the Palm Beach County Civil War Roundtable



Good evening. My name is Robert Schuldenfrei. Almost from the time I learned about the American Civil War I have been bothered by a question. If the North dropped much of its equipment on the battlefield early in the war, how did they appear a few weeks or months later in complete “kit?” Call this “*Bob's Question.*” Over the

course of the next hour, interrupted by a resupply break of our own, I will attempt to answer this question.

Any meeting like this must of its very nature fall under the category of “edutainment” rather than scholarly work. I trust that the images, stories that illustrate my study, and a downright breezy presentation will mask the fact that there was a fair amount of research that went into this chat. You cannot entertain by focusing in on statistics to make your point. I am sure you all are familiar with what Benjamin Disraeli said, and Mark Twain repeated, about lies, damn lies, and statistics. And while I must quote some numbers, I will not put you to sleep with them.

The gentleman standing before you is not a professional historian and most of you in the audience know far more about the civil war than I do. I am not, however, without some qualifications. Back in the day I was an undergraduate in Economics. I spent two years in the US Army Transportation Corp where I taught career army officers about computers and how they relate to logistics. For a dozen years I built computer models of industrial distribution systems for Fortune 500 companies. While not pertaining to my own background my late father was in charge of all class 2 & class 4 supplies on the Normandy beachhead.

2

This is not original work

- David Miller
- Lenette Taylor
- Mark Wilson



And finally I have read many books on the civil war to include three that directly impact this talk:

*Second Only to Grant, Quartermaster General Montgomery C. Meigs*, by David W. Miller

*The Supply for Tomorrow Must Not Fail*, by Lenette S. Taylor

*The Business of Civil War*, by Mark R. Wilson

2

A peek

- Amount not much.
- Production capacity.
- Big three:
  - Technology
  - Information
  - Very competent people



I suppose if I were really an entertainer I would only give you the answer to *Bob's Question* at the end of the hour, but I am going to give you a peek under the kimono right here and now. First, the amount of material dropped on the battlefield and collected by the enemy was not as great as is popularly believed. Next, the amount of production capacity of the North towered over the South such that they could have wasted much more. And finally the big three: technology, information, and some very competent people.

3

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3

Antoine-Henri Jomini

- Moving armies.
  - Planning
  - Administration
  - Supply
  - Billeting
  - Road building
  - Intelligence
- 30 days leave.



Antoine-Henri Jomini was a key member of Napoleon's staff. In his *Summary of the Art of War* (1838), he defined logistics as "the practical art of moving armies," by which he meant the whole range of functions involved in moving and sustaining military forces—planning, administration, supply, billeting and encampments, bridge and road building, even reconnaissance and intel-

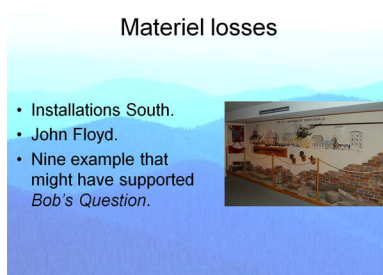
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ligence insofar as they were related to maneuver off the battlefield. In any case, Jomini was less concerned with the precise boundaries of logistics than with the staff function of coordinating these activities.

There is a story about Jomini, which may be a myth, which I find very instructive. It seems that Jomini requested 30 days leave from the army from the Napoleon. The great man was inclined to grant the leave, but he inquired of Jomini how he could know where the army would be 30

days from now since Napoleon himself had not decided where to go. Jomini retorted that you will be in the only place you can be and still supply your troops. He got his leave.

4



6

At the eve of Bull Run the “hot” war had been going on since the firing on Fort Sumter on April 12<sup>th</sup>. Even before that the South had taken over military supplies at forts, arsenals, and federal installations of all varieties. One of the biggest problems for the Union was the fact that with a

larger standing army and a horde of supplies the Confederates were in better shape to fight than was the Union in the late spring of 1861.

Of particular note is the action of Secretary of War John Floyd who single-handily transferred tons of supplies either into southern hands or placed them in a position where they could easily be seized. Picture if you will the ordnance depot at San Antonio. This was an immense collection of arms and ammunition that dropped like ripe fruit into the rebel basket. This story was repeated time and time again such that the Confederate States picked up more supplies just by walking in on government installations than from any battlefield loot or raiding party booty.

The first major section of this presentation consists of nine examples of southern materiel gains from the military stockpile of the north. These stories form the backbone of the line of reasoning that led to *Bob's Question*. As I have already suggested to you I was wrong about the question. Each of these vignettes will end the same way. None of them materially affected the war's outcome.

We are going to focus on Northern losses here in a moment, but as you know the Union did not lose every battle during this period. Although Shiloh and Antietam were pyrrhic victories, the boys in blue held the field after the battle and so lost little materiel.

6

## Bull Run

- "Poster child."
- South did not police the field.
- Meigs – 175 wagons
- Of 400 wagons sent out, how many lost?



8

What battle comes to mind where Billy Yank ran from the field? The first battle of Bull Run must certainly be the poster-child for the great “skedaddle.” You remember the scene of soldiers and civilian spectators running for their lives back to Washington. Yes, many did drop

their gear on the retreat, but this was not the great haul you might imagine. First of all the Southern troops did not go out of their way to police the field. And then in an audacious display of quick thinking, Quartermaster General Montgomery Meigs, much more about him later, ordered a salvage team to return to Bull Run and pick up the pieces. 175 four-horse wagonloads of supplies were collected from the route of retreat! Of the 400 wagons of supplies which were sent into battle with Irwin McDowell, how many do you think were lost? Only 13 were lost! Not bad for a day’s work the day after the battle was lost. Battle losses were nothing compared to the aforementioned haul that the act of secession afforded the South.

In a battle with a similar result, Ball’s Bluff in October of 1861, a rout of the boys in blue was highly publicized on both sides of the Mason-Dixon Line. Here, the Union troops were caught “astride the stream.” Those that made it across could not easily get up the steep embankment on the far side. But, with no follow up the defeat caused little damage to the total supply picture. As we get into 1862 Forts Henry and Donelson were northern victories and Pea Ridge was sort of a victory.

8

## “Commissary” Banks

- Shenandoah.
- Maj. Harmon \$125,185.
  - Wages 160 X.
  - Goods 25 X.
  - 3 million dollars
- Remember Mill Springs 3 million in horses alone.



10

This brings us to our next famous logistical disaster, Nathaniel “Commissary” Banks. This political general was beaten up badly by Stonewall Jackson during the spring of 1862. He lost so much materiel to the Confederates that he was given the nickname *Jackson’s Commissary*. This is really a deserved title as the story of the Shen-

andoah Valley campaign is one embarrassment after another. After the battle of Winchester Maj. John A. Harmon, CSA Quartermaster, reported: “In response to your inquiry in regard to the order of quarter-

master's stores that, came into my hands at Winchester, June 1 last, I beg leave to report that, upon a careful estimate, they amounted to \$125,185.” How much would that be worth in today’s dollars? Here we have to be careful because an 1862 dollar for wages is worth about \$160.00 today. However, an 1862 dollar for physical goods is worth only about \$25.00 today. Given that, Maj. Harmon’s booty is worth over 3 million dollars! And this was just the haul from the battle of Winchester.

But before we get all lathered up about the economic disaster Banks represents I would have you hark back to Mill Springs, Kentucky where the South “delivered” 10 cannon, 100 wagons, over 1,000 horses, and a number of boats filled with the goods of war. The going price for a horse was about \$120.00 in 1862, so just the 1,000 horses were worth \$120,000.00 in 1862 dollars or 3 million dollars today for the horses alone. So perhaps the north should have referred to the unfortunate General Felix Zollicoffer as *Thomas’s Commissary*. Further, as we shall soon see, by this time in the war, the North is really starting to rev up its economic engine. We are forced to conclude that the United States could afford Nathaniel Banks in a way that the Confederate States could not.

#### Peninsula campaign

- 150 wagon-loads/day.
  - Battle 3X
  - 1.5 tons/wagon
  - 225 tons/day
  - March – July 1862
- 400 ship & barge loads.
- If McClellan did what he said he would do.



OK, I can hear you all are ready to shout out: “Hey Bob, what about the debacle on the Peninsula?” Surely Bobby Lee and JEB Stuart picked General McClellan’s pocket clean in that campaign. As I started into this study the Peninsula Campaign was right up there with Bull Run in formulating *Bob’s Question*. Certainly the mate-

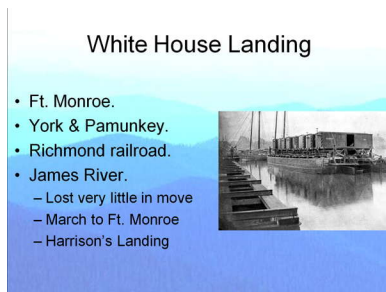
rial buildup to this expedition was massive. Stay with me now as we run a few interesting numbers. Besides the roughly 100,000 men in McClellan’s force, it took a staggering amount of materiel to support this army. A force of this size “ate up” 150 wagon loads of supplies per day. This is not battle losses. A campaigning army could use up three times this amount. Even if the men sat on their rumps, as they often did during this adventure, they consumed the one to two tons each of these



wagons. Picture this: If those 150 wagons held an average of 1½ tons we are talking about 225 tons today, tomorrow, and on and on for the days between mid March and the end of July 1862.

These numbers would not have been so bad if McClellan had actually done what he said he could do. If he had taken Richmond and if that had really ended the war, all would be forgiven, but of course he did not. The first major resupply point, after the initial landing at Ft. Monroe, was at White House Landing on the north shore of the peninsula at the confluence of the York and the Pamunkey rivers. This was chosen because there was a railroad bridge that crossed the river and that line lead directly to Richmond. After defeats by Lee, McClellan's army retreated, or as he put it "changed its base of operations" to ports on the James River. Notable of these was Harrison's Landing. It was fortunate that Lee did not attack or destroy the beachhead, but Lee was not in any great shape for an attack as he had taken the worst of the battle losses.

12



15

So, what did this campaign cost the North beyond the 15,849 casualties? Not as much as you may think. From the start of the build-up in mid-March until the final withdrawal in mid-August 1862, I could locate very little abandonment of equipment. Of course the battles took their toll of equipment beyond the obvious loss of life, but

the South took it on the chin even more than the Union did. I could only find one reference to the purposeful destruction of materiel on the part of the North. When they were moving their base of supply from the depots on the York River to supply points on the James River they did burn some foodstuffs.

However, and this is important, massive amounts of supplies were successfully transferred before the burning. Over 800,000 rations were saved in this manner. Col. Clarke, the officer in charge of the subsistence removal reported: "I still need information about materiel. No Union troops went hungry due to the above removal of food." I have

not found data on the said materiel, however, if there had been massive losses, it would have become common knowledge.

After the 7 Days, McClellan formed a strong defensive perimeter around Harrison's Landing where he wanted to stay. For two weeks in August he and Halleck exchanged messages where Halleck suggested and then ordered McClellan to "give it up" and come home. McClellan dragged his feet as long as he could, but by August 11<sup>th</sup> the retreat had begun and by August 21<sup>st</sup> it was over. I was surprised to learn that much of the supplies and many of the men simply marched southeasterly down the Peninsula to Newport News and Fort Monroe. The number of ship evacuations from Harrison's Landing was limited. As a result, most of the equipment went with the troops.


Naturally, much of the over 86,000 tons of supplies that went down the Potomac at the start of the campaign never came back. These tons however were consumed in use or were employed on the battlefield. So, we must conclude, that the Peninsula campaign was neither a tactical loss nor a supply disaster. If someone other than McClellan were in charge, the outcome might have been different. This "what if" remains a point of discussion even to this very day.

At this point I am going to discuss five more supply stories, but none of them in as much detail as the preceding four. All nine examples have the same conclusion: *Bob's Question* really was based on a false premise. The North never really dropped significant equipment on the field of battle. They did, however, lose much materiel in raids before and after battles.

15

2<sup>nd</sup> Bull Run

- Jackson's raid costly.
- Railroad repair.
  - Herman Haupt
  - Four days
- But, there was no pursuit by the South.



16


At the same time that the Peninsula campaign was winding down the two sides fought another engagement at Manassas Junction known as 2<sup>nd</sup> Bull Run. While it looked like a Northern victory at the start, once again the South carried the day. But the boys in Blue retreated back to Washington in an orderly fashion. There are

many fighting reasons why the South won, however Jackson's raid on the supply base at Manassas, twenty five miles behind John Pope on August 25<sup>th</sup>, was key to the Union loss. Not only did they lose tons of supplies, but this prevented effective reinforcements, for a short period of time, from McClellan's forces that had returned from the Peninsula. That, of course, was in addition to McClellan's reluctance to help Pope. Herman Haupt was a genius at railroad repair. He saw to it that transportation was repaired in short order.

16

Cavalry Raiding

- JEB Stuart.
  - Chambersburg, PA
  - Reputation not value
- Strategy of raiding.
  - Friendly population
  - Low enemy/space ratio
  - Worked for Stuart



18


I would like to give two examples of cavalry raiding as examples of another form of supply losses. The first is the October 11<sup>th</sup> interdiction of a wagon train by JEB Stuart near Chambersburg, PA. This action did much to alarm the Union, build Stuart's reputation, but did not make a material impact on the war effort of the United States. He did manage to destroy many wagons and capture 500 horses before returning to Virginia. That same Pennsylvania town was to sustain further war damage later, but once again it had no strategic impact.

Raiding works best when you have a low ratio of enemy forces to space. Further, it is more successful when you have a friendly civilian population. This worked against Stuart in the east, but the strategy favored Southern raiders in the west. This is because Stuart had neither small enemy forces opposing him nor large space in which to range. And, of course, Pennsylvania did not have a friendly population.

18

Bardstown, KY Oct. 1862

- "unnecessary" gear.
- Exception, not rule.
- Wagons picked up gear.
- Train manifest.
- John Morgan.
  - 51 loaded, 82 in all
  - Thomas Swords' quote



20

The next short vignette does take place in the west. It raises another popular bit of folklore. That is that Union soldiers discarded clothing and equipment by the side of the road during long marches. The time is October 1862. The quartermasters are trying to supply Buell's army out of Louisville in the direction of Bardstown,

KY. As the army began a march during a heat wave, the exhausted troops began discarding everything they deemed "unnecessary." Cloth-




ing, blankets, and other items were strewn along the route of march. While this did indeed happen, it was the exception and not the rule.

Wagon trains supplied the army in this area because the railroads had been destroyed. As the army advanced you had increasing distances over which supplies had to move. A small footnote should record that these supply trains could easily retrieve the “dropped” gear. The management of this resupply operation is a key factor in this story of logistics. These trains were put on the roads in groups of 100 wagons each. The shipment had a train manifest so that the shipping point, the destination point, and the train itself knew what goods were on the train. The content of these manifests is what I will call later “information.” Each train had a quartermaster officer on board and responsible for the goods. On October 19<sup>th</sup> John Morgan’s cavalry hit one of these trains of 82 wagons of which only 51 were loaded. While it was a total loss, it did not have a big impact on the supply of the army due to situational awareness.

20

Commerce Raiders

- South without yards or machine shops.
- England builds ships.
- Privateers.
- Ralph Semmes.
  - Sumter 18
  - Alabama 64
  - Florida 38 (Chas. Morris)



22

We often hear about the success of the blockade of southern ports and the sinking of the *Alabama*, but we don’t often study the impact of the Confederate commerce raiding on the high seas.

When the war began the South had no shipyards nor did it have a single machine shop capable of fabricating an engine large enough to power a

man of war. To make up for these deficiencies the South turned to English shipyards and with tremendous diplomatic skill gained contracts in June of 1861 for the raiders *Florida* and *Alabama*. In the fall they got a steamer to ship arms home and converted the ship to the ironclad *Atlanta*. This small fleet was expanded by adding privateers to the naval strategy of capturing or sinking United States merchant vessels. The history of Confederate privateers was short lived as they were not very effective at bringing in the prizes to port.

With a change in strategy, the South focused on sinking Union vessels rather than trying to bring them home and run the blockade. Raphael

Semmes was a legend with his first raider, *Sumter*, even before he assumed command of *Alabama*. *Sumter* burned 18 vessels during the second half of 1861. Once he got *Alabama* he bagged 64 more US ships. Add in the count from *Florida* and you get a total of 120 ships. There were other ships, but these were the biggies. The bottom line on commerce raiders was that they did not alter the outcome of the war. They did divert ships from blockading and drove up the cost of insurance to astronomical heights, but they were insignificant in reducing the North's materiel stockpile.

22

Fredericksburg, Dec. 1862

- Defeat was horrible.
- Delay of bridge.
  - Supplies did not cross
  - Men could retreat
  - Pontoons were pulled
  - River stopped Lee



22

My final example will put a date end point on this presentation. That would be the horrible defeat of the Union at Fredericksburg in December of 1862. It is ironic that the same Rappahannock River that caused the delay in the meeting of the two armies also saved the Union equipment from falling into enemy hands. Very little supplies

crossed with the men on those fateful days. And the river prevented Lee from pursuing the hapless Burnside. Thus, all of the means of war was still in Union hands for the pivotal year of 1863.

22

Civil War Supply

- Manna From Heaven
- Production & will.
- Logistics strategy.
- Industrial sites.
- Property.
- PA, NY, & MA.
- 92.5% of GDP.
- Revolutionary War.



24

With these nine examples behind us we have set the stage for the true story of Northern Supply. I have titled this presentation *Manna From Heaven* because the effective use of the North's production engine preordained that the Union would prevail if only it had the political will to continue the struggle. The next topic to be addressed con-

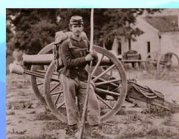
cerns itself with the nature of supply circa 1861. In order to introduce this subject we should first consider what a logistics strategy is all about. Early in the war the North focused in on defeating the armies of the South. As leaders of the United States began to realize that its large production capability and much greater amounts of manpower were its most valuable strategic weapon there was a gradual shift to wearing the Confederacy down.

Forgive me for employing a few numbers at this point. During the fiscal year ending 1 June 1860, the country possessed some 128,300 industrial establishments of which 110,274 were located in states that remained in the Union. The most heavily industrialized states, New York and Pennsylvania, each had more industry than all the seceding states combined. Pennsylvania, New York, and Massachusetts each had a larger property investment than the South as a whole. Finally, the North contributed 92.5% of the \$1.9 billion that comprised the total value of annual product in the country in 1860. While these figures are very well known, we tend to forget them when we delve into the glory and action of war. It is not altogether an error that we do so, consider the not so distant wars with England that were heavily stacked against the nascent United States of America. However, the 3,500 miles of open-ocean made the American Revolutionary War an entirely different supply operation.

24

What did it take?

- List of items.
- What did it cost?
  - 1,000 \$<sub>1862</sub>/Year
  - Pay 13 \$<sub>1862</sub>/Month
  - 156 \$<sub>1862</sub>/Year
  - Gear 844 \$<sub>1862</sub>/Year
  - 160 X vs. 25 X
  - Pay 24,960 \$<sub>2009</sub>/Year
  - Gear 21,100 \$<sub>2009</sub>/Year
  - Total 46,060 \$<sub>2009</sub>/Year



27

Without getting into too much detail just what is supply to a civil war era army? Roughly speaking it consists of animals, feed for animals, transportation equipment (road, rails, & water) and the materials for their maintenance, rations, arms, munitions, clothing, camp equipage, and fuel.

That last item was very small in wars fought prior to the civil war, but the use of railroads and steam ships changed all that. Going beyond the stuff of supplies, logistics means getting the goods from where they are to where they need to be. I spent 11 years of my career building computer models to solve this problem and trust me; it is not an easy dragon to slay.

Let's come at this in a slightly different way. It is estimated that it cost 1,000 \$<sub>1862</sub>/year to keep a private in the field. At \$13.00 per month we had wages of 156 \$<sub>1862</sub>/year or 24,960 \$<sub>2009</sub>/year. The rest, 844 \$<sub>1862</sub>/year, would be for support and that would be 21,100 \$<sub>2009</sub>/year. So you would get a man in the field for 46,060 \$<sub>2009</sub>/year. At any one time the North fielded between 700,000 and 1,000,000 men!

Producing these items had actually gotten easier by the time the civil war got started. The industrial revolution meant that arming the common soldier was fairly simple. Give him a mass produced gun and you were pretty much set. However, both sides had their supply nightmares. In July 1861 the newly appointed Quartermaster General, Montgomery Meigs was enough concerned about guns he asked Congress for 10 million dollars to buy weapons in Europe. He saw to it that he had an agent standing by in New York ready to sail to purchase same once the money was available.

It soon became crystal clear that each of the states could not supply the state regiments that were rapidly forming. In order to fully understand this comment we should spend a few minutes discussing decentralization versus centralization. This is not a new concept and we are still discussing it today. For example, should a computer program run on your PC or on your mainframe is an example of this balance almost 150 years later? At the time of the American Revolution the issue was much the same. Should the colonies each equip their own armed forces or should Congress go to countries like France to buy arms for a national army?

27

The Long War

- Small arms ammunition: 1 billion rounds.
- State controlled.
- Only a few large firms.
- 04/15/61 – 75,000 men.
- Brooks Bros.
- Centralized by fall 1862.



31

Although no one knew it at the time the Civil War would cost the Union one billion rounds of small arms ammunition, one million horses and mules, 1.5 million barrels of pork, 100 million pounds of coffee, six million woolen blankets, and ten million pairs of trousers. Take a minute to let these numbers sink in. All this was done

without computerized manufacturing and inventory control. When the conflict began each individual state raised its own regiments, the traditional standard building block of a mid 19<sup>th</sup> century army. This consisted of men AND materiel. The manpower was indeed supplied by the state in question. This was not a problem. The supplies, however, were a big problem. It was not the commonly believed issue of corrupt politicians earmarking contracts to their favorite producers. Rather there were only a few companies who had the size necessary to fulfill

these large contracts. For example, there were only a handful of arms manufacturers who could even supply rifles and muskets let alone large bore cannons. Even textile mills labored to produce the clothing needed to equip the states' huge orders.

When President Lincoln called for 75,000 troops on April 15, 1861 state officials were confused about who was going to supply what. Governors across the North wired Washington trying to get a handle on what this call up meant logistically. Each state began to make purchases, each in their own way. This made for a very decentralized and disorganized pattern of procurement. To make matters worse national figures, like Secretary of War Simon Cameron, set up parallel channels of supply and tried to coordinate this effort with the various states. It should come as no surprise that state officials tended to fill military orders by dealing with business and workers within their states. It brought a smile to my face to read that when New York first sought to buy uniforms they gave the whole 12,000 unit award to Brooks Brothers. As a footnote to this tale, the uniforms that they delivered were so badly made that they neither fit nor held up in use.

As was often the case when buying from a short list of manufacturers all of the state procurement officers collided on the same doorstep. For example when Indiana agent Robert Owen visited New York blanket manufacturer, A.T. Stewart & Co., he found that the federal government had gotten there first. By the fall of 1861 Meigs began to do the obvious. He shifted supply from this decentralized system to a more centralized model. This could not be made to work all at one time. So it was not until the spring of 1862 that central supply really took hold. And some local buying was taking place throughout the time period of this presentation. The reason this ship of logistics could not be turned on a dime was somewhat technical, but there was a healthy component of state-federal conflict involved. Illinois was still doing its own supply as late as the battle of Fredericksburg.

For the most part, these exceptions notwithstanding, by 1862 the logistical system of the United States military was centralized with Mont-



gomery Meigs in control. In the words of Shelby Foote, during the civil war we went from “the United States are” to “the United States is.” This move toward centralization went a long way into making that happen. What Meigs, and others, did to make it happen is the subject for the rest of this presentation.

31

#### Let's See Where We Are

- We began with *Bob's Question*.
- The nine examples demonstrated that it was false.
- That led us to explore true logistics.
- The people who made it happen.
- And that begins in 1818.

32

We should step back for just a moment and see where we are. We started this evening with *Bob's Question* and discovered in the course of nine examples that the premise on which it was based was false. That realization led to exploring the true nature of supply in the 1860s. Now it is time to investigate just how the people running the

show made it happen. This did not happen overnight as I have implied. The story actually has its birth in 1818 with the arrival on the scene of one Thomas S. Jesup.

32

#### Thomas S. Jesup

- QM General 42 years.
- Died in 1860.
- Appointed QMG 1818.
- Set of regulations.
  - Ahead of his time
  - Clear grasp of logistics
  - Ideas still in use today
- Built the QM Dept.



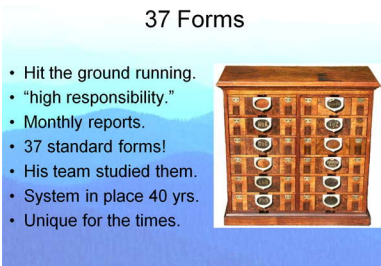
Father of the Modern Quartermaster Corps, he held the post of Quartermaster General for forty-two years. He died, with his boots on so to speak, in 1860. Rarely has one person stayed in the same position for such a long time or had a greater effect on the history of logistics.

34

General Jesup was born in Berkeley County, Virginia, on December 16, 1788, the son of a distinguished Revolutionary officer. In 1808 at the age of 20 he was appointed a 2nd Lieutenant of the 7th Infantry. In the War of 1812 he was a Major of the 19th Infantry at the age of 24. He was brevetted successively to Lieutenant Colonel and Colonel for gallantry in action. He was wounded several times and was finally taken prisoner when General Hull surrendered to the British at Detroit. He was appointed Quartermaster General at the age of 30 during the presidency of Monroe. Soon after taking office he promulgated a set of regulations for the Quartermaster Corps and that is why we are interested in him this evening. He showed a remarkably clear grasp of the problems of military supply. In my humble opinion he was way ahead

of his time. Many of his concepts and ideas are still used in military and industrial logistics today. After he had served ten years as Quartermaster General he was brevetted Major General for conspicuous and efficient service. The functions of the Quartermaster Department had been gradually enlarged to include all purchasing for the Army.

34



36

He hit the ground running so to speak. Just after his appointment in 1818 he wrote a letter to Secretary of War Calhoun to say that he knew his office was "one of high responsibility." He went on to further say that he would have to build the new bureau from the bottom up. In doing so, Jesup wrote, he would need "to introduce system

into a Department, hitherto without arrangement, without organization." Here is what he did over the next four decades to make that happen.

Jesup promulgated regular procedures that included each quartermaster officer at each supply depot around the country to submit monthly and quarterly reports to Washington. Washington would know what is in each location and how that was changing over time. To make this operational he instructed his officers to use 37 standard paper forms. Stop right here and think about this 1825 example of systematic management. 37 documents can control an Army! And these reports were not just sent to headquarters and filed. Jesup had a team of officers studying these papers to manage the business of defense. If something was amiss or not clear after close scrutiny the reports were sent back for correction. The quartermaster's shop was run to exacting standards in the 40 year run up to the civil war. This was extraordinary during a time when such a thing was virtually unheard of in neither American government or business. Although he is seldom recognized as such, Jesup ranks as a pioneer of systematic management.

In addition to the creation of a 19<sup>th</sup> century management information system of awesome power, Jesup was a "people person." He surrounded himself with a cadre of young bright managers to execute his plans. In July of 1838 Congress passed new legislation which allowed

for 30 commissioned quartermaster officers at the rank of captain or above. Of the original 30, nine would serve as senior quartermasters for the North in the Civil War. This gave the Union a great deal of continuity. The importance of the systems developed by Jesup is why Miller entitled his book on Montgomery Meigs: *Second Only to Grant*.

36

#### Technology & Information

- Focus on technology.
- Telegraph is different.
- Television is not SNL.
- Distant management.
- "Singing in the wires."



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With the “software” in place, thanks to Jesup’s forms, the stage was set for the technological wonder of the 19<sup>th</sup> century, the telegraph. In the next few minutes I will make a great distinction between technology and information. Just to be clear, the technology was the telegraph, the software was the coded forms, and the information

was the data about the levels and flows of stuff in depots.

At this point I am going to introduce one of the few original thoughts that I had in doing the research for this talk. While I believe the organization of what I am presenting tonight is original, all of the stories I have been relating have been gleaned from others. OK, here it is: In the study of the American Civil War we tend to focus in on technology. Who among us is not interested in the Spencer rifle, ironclads, or large bore artillery? So too is the telegraph of interest to us. But the telegraph is in a class by itself. It is a processor of information. The former three items have but one function: To deliver fire on a target. The telegraph delivers information the content of which can vary from the sonnets of Shakespeare to rifles lost to some Confederate raider.

The main point I want to make in this lecture is that people do not notice the difference between technology and information. They are not the same. With all due respects to Marshall McLuhan, the medium (technology) is not the message (information). That would be like saying Saturday Night Live is television. Or, to use a logistical setting, the amount of depot stock sent to Washington was the telegraph. We all appreciate the employment of the telegraph but we fail to notice what the information allowed the user to do. For the first time in history, a war could be managed from great distance. It was not the telegraph per se,

but the information “singing in the wires” that made it so.

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#### Inventory

- In Meigs' hands.
- Real time.
- Inventory folio.
- “Telegram to...”



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All of Jesup's careful design of an information system could now be in Meigs' hands in an instant. I want to stress could be, as not everything was transmitted by wire. In Jesup's early days, circa 1825 when he developed his system, it took days or weeks for the data to arrive in Washington. Now it could take minutes. For the first time you could control a battle in real time. Although I could go into detail about many of the forms, plus the many informal telegraph messages and letters that were transmitted, let me focus on just three.

First of these was the inventory folio. In its paper format it was a spreadsheet with hundreds of columns printed on large sheets of folio paper. Each column represented an item handled by the quartermaster in the field. Examples of these columns were for forage, transportation items, camp clothing, and garrison equipment. The rows represented items which came into stock, the amount of goods that were stored in a location, and the items which were released from the facility. Remember, these reports were issued monthly. In its electronic form these same sheets which could be created in Louisville and reproduced in Washington, DC or in any other location with a need to know.

I do not know the extent that these forms were being transmitted electronically, but I have found numerous examples of where they were wired. The Taylor book often mentioned Perkins telegraphed Nashville to request supplies and to inquire where the ordered materiel was. Even more than the book, in her dissertation that was the basis for the book, we find footnote after footnote saying: “Telegram, Simon Perkins to...”

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#### Bill of Lading

- Prepared in triplicate.
  - Shipping depot
  - Wagon master
  - Receiving depot
- Washington could know.
- Critical in disruption.
- First information war.



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The next form of interest is the bill of lading for each receipt or issues of stock. The sending depot prepared in triplicate everything a unit of transport was going to haul. If the unit was a wagon train, for example, one copy stayed in the shipping depot, one copy went to the wagon mas-

ter, and one copy went to the receiving officer. As goods were placed on the road Washington could know what was moving in real time. This was critical if there was some disruption along the way. And in war there is always disruption. While the inventory information was a monthly report, the bills of lading were only sent by telegraph if necessary. But, the key fact still remains. If Washington wanted the information, telegraph technology stood ready to supply. This is only a tad removed from the way we supply our armed forces today. This stands in stark contrast to the ways we fought wars before the Civil War. Could you imagine the Congress of 1778 getting Washington's bills of lading?

42

#### Purchasing

- The purchase order.
- 23<sup>rd</sup> Ohio requisition.
- Information for stuff.
- Supplying Buell.
- Morgan story again.
- Inventory management.



The last form I want to consider is the purchase order. Requisitions were on standard forms. A requisition had to be filled out by the responsible QM officer and authorized by the commanding officer of the particular command unit.

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An interesting example occurred when Perkins was at Gallipolis, Ohio, in spring 1864. Now I know that this is outside of my timeframe, but when you hear the names you will understand why I wanted its inclusion. He received a number of requisitions for the 23rd Ohio Infantry. These were submitted by Lt. William McKinley, the unit's regimental quartermaster. And, get this, they were signed by none other than Col. Rutherford B. Hayes, the commander of the regiment. Those documents are unique and very valuable, as they contain the only known samples of both future presidents' signatures on the same item!

There is a further benefit that accrues once you speed up an information system. You can make a trade off of information for stuff. For my entire professional career I developed, sold, and implemented logistical control software. Much of this was inventory control as we have been discussing all evening. And what is the object of inventory control? It is to accomplish the mission, be that a lean manufacturing company or an army. If you know what the demands for stuff are you can hold back the goods and ship them just in time to where they are needed. Think



about this for a minute. Without a rapid reaction system a depot might have to supply two units who might go into combat with two complete sets of materials. With a rapid reaction system you may need only supply one unit. Then, sometime later you might ship the excess to the second unit. Thus the overall amount of stuff is far smaller. You have traded information for stuff.

That is all well and good for modern times. How did this inventory theory work out during the Civil War? At the end of July, 1862 Perkins was supplying Buell's army in northern Alabama using railroad connections from Nashville to Decatur, AL. When the railroad service was disrupted he was forced to reroute his supplies using telegraph messages. Instead of storing all of the supplies in the forward areas where Buell's army might go he could ship the goods a long distance and keep changing the destination as Buell shifted position. He could do this even when his supply line was interdicted by enemy action, when Buell's supply officers made errors in their orders, and when others made demands on theater inventories. What Perkins was doing was trading information for stuff. If you have the information you may not need as much stuff.

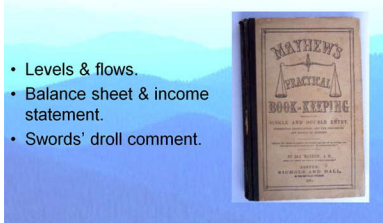
Let me tell a second story that ends with a touch of humor. In the fall of 1862 Col. Thomas Swords was the assistant quartermaster general in Cincinnati. The famous rebel marauder John Hunt Morgan greatly disrupted supply operations in the area of Bardstown, KY, not too far from Louisville. I have mentioned on October 19<sup>th</sup> Morgan captured 82 wagons. Swords received a wire for help in replacing the lost materiel. He replaced the wagons and livestock quickly, shipping them by water rather than the cheaper method of driving them overland. "I am in hopes soon of being able to supply all the wagons required if John Morgan does not take too many," he exclaimed. "[I] can hardly supply the wants of both ours and the Rebel Army without knowing how many they are to have!"

All humor aside, Swords was able to do this because he had the information almost at once. From the inventory data and the wagon train

bills of lading he knew what had been lost and what he needed to replace. Because he knew what his barge status was he knew what he could do; real-time inventory management.

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#### Record Keeping



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Let me give you a one minute lesson on inventory control. It is all about levels and flows. An accountant would reflect the level of an asset, like rifles in a depot, on a balance sheet. It is the number of weapons you have at any one instant of time. Contrast that with the income statement that reflects the flow of stock during a period of time bounded by a start time and an ending time. For example, how many rifles were received during the month of March 1862? The reports, documents, telegraph transmissions, and verbal communications about inventory have one or both of these concepts at the heart of the control mechanism. You can read this into Swords' droll comment.

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#### Gunny Sack Return Program



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Taylor relates that Simon Perkins had a natural talent for accurate record keeping. He probably acquired this gift from his business experience before the war. Sometimes this passion for detail, which infected the entire Quartermaster Department, reached ridiculous ends. Take for example the great gunny sack return program.


Meigs introduced a cost saving measure in August of 1861. He ordered the recycling of gunny sacks used to hold animal feed. His reasoning was that the reuse of grain sacks, that cost seven cents each, three or four times would save the government money. By the summer of 1862 Meigs ordered Swords who ordered Perkins to return empty sacks to Louisville for reuse. This was folly because the cost of collecting, returning, and accounting for the bags overwhelmed the savings. Think of the manpower and transportation costs involved. All this was going on with an army in the field whose location was constantly changing. Keeping up with empty gunny sacks and returning them to the appropriate supply officer would have been an onerous task for a unit that remained in one place, let alone an army on the march.

Never the less, Perkins gave an excellent accounting for this government property. Everyone who was involved in the bag exchange had to exchange the appropriate documents. In this the levels and flows were accurately accounted. I bring up this story because it is cute, but don't miss the importance of systematic management that backs this tale. Everything from warships to gunny sacks was managed in a highly professional manner. That is the point.

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Information Fights Battles

- Terrible news.
- Stanton's boast.
- 1,200 miles in 7 days.
- Record would stand until the mid 20<sup>th</sup> century.
- Wagons were an issue.
- Meigs and Perkins.



52

Permit me another violation from my ending date to relate to you one of the best stories of Civil War logistics that happened in November of 1863. When the terrible news of the battle of Chickamauga reached Washington in September, Lincoln met with his cabinet to discuss what to do. Stanton proposed that 30,000 troops could be

shifted from Meade's army and reach Rosecrans in five days. He was mocked: If the order was given today, the troops could even not reach Washington in five days. Stanton backed down just a little. The order was given on September 23<sup>rd</sup> that 23,000 men were to move. Command was given to Hooker, you remember Joe who got his clock cleaned at Chancellorsville, and the trains started to roll.

Now why am I telling you this in a story about supply? You all know by now that men and materiel move by written communications. By noon on the 24<sup>th</sup> the most powerful railroad officials in the nation were in Stanton's office. They were planning routes, timetables, and requirements for engines and rolling stock; troops were assembled at the loading stations. Railroad schedules had to be instantaneously altered. Once again the telegraph was the technology, but Stanton's plan was the information. The route was cleared and Hooker's men were entrained on the 25<sup>th</sup> for Bridgeport, TN. The first of the men arrived, after a trip of 1,200 miles, in 7 days. The last of the men came in 4½ days later. OK, Stanton was a tad off his 5 day forecast, but it was not until the middle of the 20<sup>th</sup> century that this logistics feat was duplicated.

Now I must tell you, in order to be "fair and balanced," that all did not

go as smoothly as I have just indicated. Hooker's forces arrived in Nashville with no transportation. Their wagons, teams, and teamsters had only begun leaving Virginia on October 4<sup>th</sup>. And, because wagons move much more slowly than trains, did not arrive for another two weeks. Further, supplies for this large wagon train were not released, as ordered, from the Army of the Potomac. So, again with the aid of the telegraph, wagon supplies that were intended for Nathaniel Banks were rerouted to Hooker. It seems that throughout the war "Commissary Banks" was always supplying someone else's army.

All of the local quartermaster decision making fell on the shoulders of our old friend Simon Perkins. It was he who collected up wagons and teams to support this effort. And he did it while the supply system sustained much interdiction from the enemy. Although he was able to scrounge some of the needs, it was only the arrival of Hooker's wagon train of some 600 general wagons and 150 ambulances that saved the day. In the middle of all this activity the Quartermaster General himself appeared on the scene in Tennessee. Now the logistical commands flashed back and forth between Meigs and Stanton. This is not unlike the control of Central Command in the Middle East today that is run out of MacDill Air Force base in Tampa, FL.

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#### Let's See Where We Are

- We began with *Bob's Question*.
- The nine examples shows that it was false.
- Southern horde from federal installations.
- That led us to explore true logistics.
- Jesup's planning set logistical direction.

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OK folks it is time to review where we are. We started the evening with *Bob's Question*. And we concluded that Bob did not know what he was talking about. The North did not drop a lot of stuff on the battlefield. However, the South did get a great horde by seizing Federal installations.

We then discussed nine instances of setbacks for the Union and how that really was not a great tragedy of supply. That study led us to investigate the true nature of supply. We just wrapped up how the Union supplied its armies in the field using the dictums laid down by Jesup.

What I would like to do now is flesh out the men, already introduced. This will paint a portrait of the handful of people who supplied a mil-

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## A Handful of People

- 3 who made it happen.
  - Meigs
  - Perkins
  - Swords
- 30 of 1830, < 1,500.
- Meigs' high standards.
- Honest men.



55

lion man army. I have chosen three officers: Meigs, Perkins, and a small bit about Swords. I chose these three because one was at the top, one was at the bottom, and Swords was in the middle. And it really was a handful of people. As you remember in 1838 Congress allowed for only 30

senior commissioned quartermaster officers. Now during the war that number swelled, but the number of federal quartermaster officers never reached 1,500 men and that includes turnovers, death, and relegation to other duties. It is clear from the early days of Jesup the Quartermaster Department was very lean on manpower. In an effort to compensate for quantity the men who ran supply depended on quality in the officers who they chose to work in this vital service.

Meigs had high standards, but he often got what every commander got. That is some excellent, some average, and some downright poor individuals to populate his command. It was to his credit that he could use the excellent, improve the average, and get rid of the poor. Here was what he wanted in a quartermaster officer. They should be “good accountants and persons who have been engaged in business of a mercantile character.” If getting good men was an issue, keeping them was a greater challenge. In the fighting services you could expect promotion. Not so in the Quartermaster’s Department. Men who employed thousands of workers, managed strategic shipping operations, or disbursed millions of dollars of government funds remained captains for the duration of the war. While some cases of corruptions did occur it was rare. There are three reasons for this: 1/ Oversight by Meigs and the War Department, 2/ the situation of military service, and 3/ the officer’s personal integrity.

55

## +/- Lack of Manpower

- Short command chain.
- Buell moves east.
- “without regard to cost.”
- Halleck chides Buell.
- Buell’s needs fulfilled.
- It cost him later.



57

As I have been implying, lack of manpower had both positive and negative aspects. One of the best aspects was the short chain of command. A captain in the field, like Simon Perkins, could wire Swords in Cincinnati who in turn could consult with Meigs and Stanton in Washington, DC.



This could take place within minutes and the requests, plans, and orders could be carried out within hours. Thus, the problem that I am going to address next seemed to have caused little, if any, disruption in quartermaster services. It was primarily due to the capability of the individual supply officers and the overall organization of the department.

The problems caused by the lack of manpower are practically uncountable. And this deficiency was not just in the ranks of the officers. Of the hundreds of examples I could cite one aspect of the supply issues confronting Buell in his effort to move east in 1862 is an excellent illustration. Among his many needs, Buell wanted teamsters. His chief quartermaster asked Swords to furnish 100 men and then 200 men and that they be hired “without regard to cost.” With great difficulty 100 men were sent. It was not enough for the huge volume of government wagon traffic. As he prepared to move out Buell really needed 300 more.

The shortage of teamsters not only posed a threat to Union logistics but also aggravated the conflict brewing between Halleck and Buell. When Halleck ordered Buell to operate against Chattanooga he directed Buell to turn over a significant portion of his wagons to the depot in Corinth. To drive his point home Halleck explained that Buell had twice as much transportation as either Grant’s Army of the Tennessee or Pope back east. Halleck claimed that Buell’s wagons had been idle. Buell retorted that the transport was hurt by teamsters running off and besides he had just been ordered to move east. Old Don Carlos was right about his needs as rail and river transportation was lacking at this time in northern Alabama. In the end he got what he needed. It was to Buell’s sorrow that he moved too slowly. Later that was to cost him his job.

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Montgomery C. Meigs

- Uninterrupted tenure.
- Inferior in rank.
- 5<sup>th</sup> in West Point class.
- Engineering projects.
- Took over from Jesup.
- “Not a fiber of red tape.”



Unlike the problem that Lincoln had with his fighting commanders, his chief supply officer, Montgomery C. Meigs had uninterrupted tenure from June 1861 until the end of the war. As I have been suggesting to you, he was responsible for the outstanding operations during my period

1:02

of interest and the whole war in general. In the time remaining I am going to tell you about Meigs, Swords, and Perkins. The points I wish to convey are: what their background was that made them so fit for the position. How they were selected. And finally, I will suggest a few more incidents that will continue the major premise of this presentation: How a few good men in supply could win the war.

It is hard to conceive of a better person in the role of Quartermaster General than Meigs. Although inferior in rank to the major generals who fought the battles, the brigadier general who ran the logistics of the war had more to do with the outcome than all but a few of them. His department spent more money than all of the other bureaus of the War Department combined. What was it that made Meigs so outstanding?

He entered West Point in 1832 and graduated fifth in his class of 49. Not only was he an outstanding officer, but he was a cracker jack civil engineer. That subject was the most important at the Point. Although born in Georgia, he considered himself a citizen of the United States. He worked for a number of years in various engineering assignments including one with Capt. Robert E. Lee on the Mississippi River. The Mexican war came and went without his active participation. Meigs was disappointed as war meant promotion and he was “stuck” performing engineering jobs. He did these jobs well. In November of 1852 he was stationed in Washington, DC where he was to spend the rest of his life. He now was put in charge of some very important engineering projects. These included the construction of a new aqueduct for the city, additions to the Capitol Building, and remodeling of the Post Office. During the Buchanan administration conflicts with John B. Floyd caused Capt. Meigs to be “banished” to Dry Tortugas for a year.

When the Lincoln administration took office the new president was informed of the reputation of this officer. Lincoln then said: “I do not know one who combines the qualities of masculine intellect, learning and experience of the right sort, and physical power of labor and endurance as well as he.” On May 17<sup>th</sup> Captain Meigs was promoted to Colonel and then less than a month later to Brigadier General and put in


charge of Jesup's old department.

I have already mentioned to you some of the events over which Meigs had direct bearing on the outcome on the field of battle. He had not been in the office a year when George Templeton Strong described Meigs as "an exceptional and refreshing specimen of sense and promptitude, unlike most of our high military officials. There is not a fiber of red tape in his constitution." Right from his first days in office he was clearly in command. He had that rare quality in management that allowed him to prioritize work. He first set about the task of supplying horses to the army. While, as in men as in horse flesh, he would have rather bought perfect horses, the issue was quantity in the days after Bull Run. He organized a system of contracting, stabling, and distribution of horses so as to provide a high valued transportation system. Water and rail transport was the premium, but getting supplies to the men in the field still depended on horsepower. This was not to change until after World War I.

1:02

Giant Sized Issues

- Two effective rules.
  - Kith nor kin
  - Non-interference
- "Bottom out of the tub."
- "Fiat" money.
- Cycle of contracting.



1:04

Meigs kept careful supervision of the contracting mechanism. He had two rules which kept corruption to a minimum. These were examples of why I believe he was such an effective leader. First, he continued a policy that had served him well in his career up to this point. He would not employ kith or kin. When his younger brother

Samuel joined the army in December of 1861 as a quartermaster no less, he kept him out of Washington and away from the office of the Quartermaster General. Second, and this was most important, he did not interfere with the decisions of the field quartermasters. In particular, he let his subordinates select their own staff.

Most of the stories I have told so far were of modest scale. But Meigs could handle the giant ones too. Congress was advised in November of 1861 that money that was slated to last until July 1, 1862 was all but gone. The treasury was not paying for supplies already purchased. It was to Meigs that Lincoln famously complained: "It is exceedingly dis-


couraging. General, what shall I do? The people are impatient; Chase has no money and he tells me he can raise no more; the General of the Army has typhoid fever. The bottom is out of the tub. What shall I do?" Meigs had some ideas and together with Chase created "fiat" money. At the risk of hyperinflation the government printed money. He actually went beyond greenbacks and employed quartermasters' vouchers and certificates of indebtedness or IOUs. These circulated as money. Because they were not abused inflation was kept at bay.

Our last large scale example that can be attributed mostly to Meigs and his staff is the whole cycle of contracting. While short cuts for expediency were taken, most of the Civil War business followed this pattern: 1/ The government advertised for the needed item. 2/ Proposals were received. 3/ Samples, where appropriate, were submitted. 4/ Inspections were performed. 5/ Awards were made. 6/ Deliveries were accomplished. 7/ Payment was made.

1:04

Simon Perkins, Jr.

- Trove of 20,000 items.
- Professional experience.
- A "people" person.
- Nashville.
- Ferry operation.
- Dockside dumps.

A black and white portrait of Simon Perkins, Jr., a man in a military-style uniform with a high collar and buttons, standing with one hand on his hip.

1:08

Having looked at the very top of the logistical chain of command, I want to turn to the lowest level officers in that chain. It is interesting to note that this position held the rank of captain and not lieutenant. As I have explained the doctoral dissertation of Lenette Taylor was based on

the life of Simon Perkins, Jr. The reason he was selected was the trove of over 20,000 boxed documents that his relatives retained rather than discarding them after his death. Aside from the wealth of material, Perkins is an excellent example of the small number of people of great ability who worked in the bowels of the supply system. What was in his background that prepared him for the role he was to play?

He came from a military family. His grandfather fought in the War of 1812 and his father was an officer in the Ohio militia. But these forbearers were only part time officers. Banking and transportation were their real professions as were the careers of other Perkins family members. Young Simon worked informally in his father's railroad office, but his formal OJT business education came from a position in an iron

manufacturing concern owned by David Tod, a close friend of the family. In 1858 he took a job in a Cleveland bank owned by his uncle. By the time the Civil War broke out Perkins was very well versed in finance, banking, and almost every aspect of running a railroad. Clearly he fit the model that Meigs desired in his officers.

Besides his business abilities, Simon had an amiable personality and a sense of humor that helped him make friends easily. He volunteered when Lincoln called for troops in April 1861. His career as a private was short lived. In spite of the fact that he could have used family connections to obtain a commission in a fighting unit, Simon pursued the role of an army businessman. Knowing the governor of Ohio certainly did not hurt his pursuit. In February of 1862 he reported to Col. Swords in Louisville as a captain.

In addition to the Perkins illustrations I have been telling you there is one small story which will serve to illustrate that he, like Meigs, hit the ground running. First, you need to understand, that there was no training camp for supply officers. Everything they needed to know had to be learned on the job or brought to the job from prior experience. So picture this newly minted captain reporting in to Gen. Buell in Nashville on February 25<sup>th</sup>. The city had just fallen the day before. Imagine the chaos that 10,000 Union troops all looking to set up camp would cause. Perkins and two fellow quartermasters were perhaps the busiest men in town. While the combat personnel enjoyed a little down time, these three were trying to bring order to the tangle that was the supply situation in the city.

Here is what they did. River steamers were directed to newly repaired docks so as they could unload troops, wagons, animals, harnesses, rations, hospital supplies, clothing, and all manner of equipage. The retreating Confederates had burned both the railroad and the public suspension bridges spanning the river so supplies arriving by rail in the yard at Edgefield had to be ferried to Nashville. Wagon traffic had to be routed from the makeshift supply dumps, and they were just dock-side dumps, to where they were needed in the field. Since Nashville



was to become the central supply base for Buell, this had to be systematically planned in the middle of execution. In his first days in service as a quartermaster Perkins performed tirelessly in making sure that the logistics of the army now based here was effectively and efficiently executed. I would ask any one of you, could you have done that? While I will not claim that all of the junior officers in the Quartermaster's Department were as good as Simon Perkins was, most of them were. This is how a few good men got the job done.

1:08

Lt. Col. Thomas Swords

- The 1838 "30."
- War with Mexico story.
- 2,200 miles to Hawaii.
- Efficient and effective.
- Would not take a bribe.



1:12

Finally, we should turn our attention to middle management. I have touched on Thomas Swords a couple of time during this presentation. You will remember that in 1838 Congress passed legislation allowing for 30 commissioned quartermaster officers at the rank of Captain or above.

Swords was one of that group of 30. Of course he was no "spring chicken" being 55 years old by 1861. And, what he brought to the table was tremendous continuity in the workings of the Quartermaster Department. He, and nine other officers from the 30, had worked day in and day out with Jesup and his system of supply. His over 20 years of experience in the job made Meigs' job so much easier. And that just counted his time in a senior command position. He was actually in a quartermasters' position right out of graduation from West Point in 1829.

While this is not a Civil War story, the following will give you some idea of what kind of a "take charge" guy this chap was. At the beginning of the war with Mexico, Swords rode with Stephen Kearney to San Diego. Upon arrival he realized that there were few local sources for clothing and other goods the men needed. Responding to this problem he chartered a ship to take him to the Sandwich Islands, today's Hawaii, about 2,200 miles away. After 18 days at sea he landed in Honolulu where he bought garments and construction materials on government credit. He then sailed safely back and distributed his supplies.

Since Swords was Perkins' boss and he worked directly for Meigs,

many of the brief vignettes I have been telling you all evening centered on his command. From all accounts I have read Thomas Swords carried out his duties both efficiently and effectively. In June of 1862 he was in charge of the Louisville depot. A potential supplier approached Swords offering a kick-back. Swords wrote the following back to the gentleman: "In regard to my retaining 'whatever per cent I wish to pay me for my trouble' I have to inform you that I am paid by the United States, for trouble and everything else incident to my office." Such were the men serving in the Quartermaster's Department.

1:12

#### My Objectives This Evening

- Northern supply.
- *Bob's Question*.
- 9 Examples.
- The biggest hit.
- Jesup.
- Information.
- Accounting.
- The men of the QM.



1:13

It was my objective this evening to relate to you a few details about Northern supply during the years 1861 to 1862. I trust I presented the material in an orderly manner. You will recall that I started out with *Bob's Question* about dropping stuff on the battlefield. I suggested to you that while this did happen, it was not the disaster I be-

lieved it to be. After telling you a bit about myself I proceeded to give nine examples of Union losses and their impact on supply. The biggest hit the North took was the capture of Federal installations at the time of secession. From here we proceeded to develop the reason why the Quartermaster's Department worked so well and the story of Jesup. At this point I felt comfortable introducing the one original thought of my own. That was the difference between technology and information and its impact on the management of logistics. Since the basis of information was accounting, there was the necessity to explain a little of the bookkeeping of war.

I concluded my talk with the most important element of all. That would be the men who made it happen. I, for one, was most impressed with the quality of those who served in the Quartermaster's Department. Too me, it was very close to what Churchill said of the men of the RAF in World War II. "Never in the field of human conflict was so much owed by so many to so few." Thank you.