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Army Capstone Concept & the Genesis of German World War One Assault Squad & Infiltration Tactics

The Historical Linkage

by Dave Shunk

Ideas matter. Emerging from specific human, historical, and technological contexts, ideas affect understanding and influence behavior. Ideas can serve as the driving force behind significant institutional change. Because the need for change will always be with us, the exchange of ideas and conceptual development must be among our top priorities.

Capstone Concept Forward¹

Military history is no manual containing well-formed theories, is no volume to pass the time in reading, but is a careful teacher, who enables us, if we are attentive, to view things and to conceive their value, as we would never have seen in life.

Development of Tactics²

How German Captain Willy Rohr changed infantry tactics, weapons and doctrine within the World War One German Army is a remarkable story. He succeeded in his task as a result of the German Army's ideas of operational adaptability, mission command and decentralized authority. This paper presents by historical example the basic ideas and inherent power in the Army Capstone Concept based on the German model. But first, a few Capstone Concept definitions as a baseline reference.

Capstone Concept Definitions

So what are mission command, decentralized operations and operational adaptability? According to TRADOC Pam 525-3-0, the Capstone Concept:

Mission command is the conduct of military operations through decentralized execution based on mission orders. Successful mission command demands that subordinate leaders at all echelons exercise disciplined initiative, acting aggressively and independently to accomplish the mission within the commander's intent (FM 3-0).³

Decentralized operations place a premium on *disciplined, confident small units* that can integrate joint capabilities and fight together as combined arms teams. Leaders must prepare their units to fight and adapt under conditions of uncertainty and, during the conduct of operations, must also ensure moral conduct and make critical time-sensitive decisions under pressure. Conducting effective *decentralized operations* will require a *high degree of unit cohesion*

developed through tough, realistic training and shared operational experience. The Army must refine its capability to *adapt training* to the mission, threat, or operational environment changes while ensuring that individual and collective training fosters adaptability, initiative, and confidence.⁴

Operational adaptability requires a *mindset* based on *flexibility of thought* calling for leaders at all levels who are comfortable with collaborative planning and decentralized execution, have a tolerance for ambiguity, and possess the ability and willingness to make rapid adjustments according to the situation. Operational adaptability is essential to *developing situational understanding and seizing, retaining, and exploiting the initiative under a broad range of conditions*. Operational adaptability is also critical to developing the coercive and persuasive skills the Army will need to assist friends, reassure and protect populations, and to identify, isolate, and defeat enemies.⁵

So how did the Germany Army of World War One use decentralization, mission command, and operational adaptability to create infiltration tactics and revolutionize infantry tactics in World War I? The story revolves around a Captain Willy Rohr.

Setting the Stage for Hauptmann Rohr - The German Army Tactical Dilemma in 1915

*The central problem was that the post-1870 fire tactics, based on the fire of linear formations of riflemen, were no longer effective in the face of quick-firing cannon and machine guns.*⁶

*Clearing that trench remained a problem – as long as they relied on rifle and bayonet, the Germans had no particular advantage over similarly armed defenders.*⁷

World War One began in July 1914 but by year's end the war of maneuver ended in the West and trenches extended along the entire European front. The tactical problem was simple - how to take trenches without unacceptable losses to the attacker. The Germans had three advantages to solve the problem – a decentralized command structure dating back to 1806, mission command orders which inherently pushed trust down to the lowest levels and a history of accepting new ideas.

Enter Captain Willy Rohr - The Beginnings of the Assault Squad and Infiltration Tactics

*One of the most important functions of the German General Staff was the identification, development and promotion of new ideas. Oberstleutnant [Lieutenant Colonel] Max Bauer, at key figure at OHL [Oberste Heeresleitung/Army HQ], was given the responsibility to gather and test new ideas and equipment, and to disseminate the best of these throughout the whole army.*⁸

*As soon as he took over command of the assault detachment Rohr began a period of rapid evaluation of ideas and equipment. In this he cooperated closely with [Captain] Reddemann, commander of the experimental flame thrower unit. In only a few weeks these two officers developed the Strossstuppgedanke (assault squad concept), which was to remain the basis of German infantry tactics for 30 years.*⁹

In 1915 the German Army needed fast tactical innovation and adaptation. The German General Staff turned to combat veteran and pioneer (engineer) named Captain Willy Rohr. He took command of the experimental unit to develop new infantry tactical ideas and weapons. On 8 Aug 1915 in keeping with the essence of decentralization and mission command - Captain Rohr's orders were to train "*according to the lessons that he had learned during his front line service.*"¹⁰

Captain Rohr had the support of his superiors but not their interference in this task. In keeping with decentralization and mission orders Captain Rohr had a free hand to develop, adapt and experiment with new weapons, tactics and infantry organization. However, his commander's did provide the new weapons for him to test, experiment and evaluate.

*General Gaede [Commanding General over Captain Rohr] also provides a machine gun platoon, a trench mortar platoon, and a flamethrower platoon. While General Gaede's reason for doing this was to give Captain Rohr a microcosm of a regiment or division so that he might experiment with new techniques of using these weapons, the assignment of so many supporting arms to a battalion-sized unit prepared the way for a new concept of how an infantry battalion should be organized and how it should fight. No longer the uniformly armed, deceptively symmetrical organization that had existed since the introduction of the bayonet at the end of the seventeenth century, the battalion was well on its way to becoming a team composed of different weapons, each with its particular virtues and vulnerabilities.*¹¹

Captain Rohr assumed command in August 1915 and never looked back. He immediately began experiments on the front line with new weapons, tactics and techniques. Innovative and adaptation flowed from his unit, other combat veterans like Captain Reddemann attached to the unit, and Rohr's creative mind. The following describes the new weapons and equipment developed by his unit.

1. Flamethrowers. Flamethrowers were among the first new weapons tested. Captain Rohr turned to another combat seasoned officer for his expertise.

*A Landwehr captain and Leipzig fireman, Reddemann, inspired by accounts of flame throwing weapons used in the siege of Port Arthur during the Russo-Japanese War, Reddemann had begun conducting field exercises with simulated flamethrowers in 1907. By 1915 he developed a back-pack model, with a crew of two men.*¹²

*The chief tactical effect of the flamethrower was the fear that it inspired in the hearts of enemy soldiers. The first use occurred in February 1915 near Malancourt, France. "The attack began with the flamethrowers spitting 40 meter long streams of burning oil in the French position. Even though most had not been burned by the oil, the defenders were too shocked to react when the German infantry attacked"*¹³

2. Infantry Assault Weapons. Captain Rohr also tested light weight cannon, grenades, machine pistols, mortars, and light weight machine guns. Captain Rohr looked for these weapons to restore firepower with maneuver.

*The essential elements of the tactics that Rohr developed in the course of these experiments were (1) the replacement of the advance in skirmish lines with the surprise assault of squad sized “storms troops” (Sturmtrupps or Stosstrupps), (2) the use of supporting arms (machine guns, infantry guns, trench mortars, indirect artillery, flamethrowers) coordinated at the lowest possible level to suppress the enemy during the attack, and (3) the clearing of trenches by “rolling them up” with troops armed with hand grenades.*¹⁴

*Recognizing the inadequacy of indirect fire artillery Rohr emphasized the importance of organic heavy weapons, Truppwaffen (squad weapons), within infantry units. While indirect fire was still essential for general suppression, the squad weapons enabled particular targets to be engaged with speed and precision. Their presence restored firepower to the infantry and so filled the gap in capabilities caused by the eclipse of the rifle.*¹⁵

3. Uniforms, Body Armor and Helmets. Not to be forgotten were the less than useful pre-war uniforms. The assault unit designed their own uniforms based on their combat experiences and future needs. Not all items proved useful to the troops. Body armor did not match up with Captain Rohr’s ideas of speed of maneuver.

*Captain Rohr discarded body armor. “Speed and violence of execution were far better protection than metal armor. The only piece of armor he adopted for all operations “was the coal scuttle helmet (Stahlhelm) that was late to become the trademark of the German soldier of both world wars.” Captain Rohr’s men had also substituted ankle boots and puttees for their 1866-pattern leather jackboots. The Stormtroopers had also started sewing leather patches on their elbows and knees – shielding their most vulnerable joints from the wear and tear of crawling.*¹⁶

Capt Rohr’s unit now had new weapons and uniforms but the big question remained - how to use all this in combat? He had a new answer – throw away the linear based organizations in use since Napoleon and try a new combat infantry organization called the assault squad.

4. Assault Squad. Individuals within the German army had experimented on a local level with squads of infantry attacking across no man’s land. Captain Rohr took the basic concept of a maneuver squad and quickly developed the new organization into an innovative force, the assault squad.

*What distinguished Rohr’s techniques from the prewar German tactical doctrine was the organization of attack forces in small groups deployed in depth, instead of advancing in a broad firing line, and the arming of individual infantry soldiers with various types of weapons, instead of the standard issue rifle.*¹⁷

*Since the individual infantryman was no longer required to participate in the battle for fire superiority, infantry formations and equipment were remodeled. Whereas the pre-war emphasis had been on fire power, the new emphasis was on assault power.*¹⁸

Rohr called these section sized units Strosstrupps or Sturmtrupps (assault squads) Each squad consisted of eight men and an NCO. This proved the most effective size both for command purposes and for best use of the terrain.¹⁹

Rohr combined the strengths of all the weapons into a new infantry organization the assault squads. This squad provided flexibility of maneuver and control, specialized weapons, and quick response to the changing conditions. The assault squad gave the on-scene infantry commander the optimum in flexibility of maneuver and combat power.

5. Tactics. After the development of the uniforms, weapons, and assault squad one more key item to match the innovative organization - new tactics. Rohr developed new tactics which depended on decentralized command for the infantry commander to choose where to attack the enemy, operational adaptability to organize the assault squad as the mission dictated, and mission orders for maximum freedom in tactics to accomplish the mission. The solution came to be known as infiltration tactics.

Infiltration Tactics: Dispersed and irregular character of moving swarms (as opposed to well defined line abreast formations) permit infiltrators to blend against irregular and changing terrain features as they push forward.

Small units exploiting tactical dispersion in a focused way—rather than large formations abiding by the “Principle of Concentration”—penetrate adversary to generate many non-cooperative (or isolated) centers of gravity as basis to magnify friction, paralyze effort, and bring about adversary collapse.²⁰

The flexibility of infiltration tactics allowed the infantry commander to use terrain, supporting artillery, and/or gas to close with the enemy. The infantry forces then selected which trench segment to attack based on real time reconnaissance. The heavy weapons and the offensive firepower within the squad made a local fire storm which over whelmed an isolated trench area. The infiltration tactics sought out a weak point to assault.

Captain Rohr’s assault tactics contained a basic attack flow that consisted of three waves. The three waves were done in sequence to fight for intelligence; the on scene commander acted on the intelligence and used his initiative to attack where necessary.

The first wave was an infantry probe (from the accompanying division) ... to identify enemy positions [for the storm companies]. Two hundred and fifty meters behind, the elite storm companies and flamethrower section, with additional [division] infantry support, attempted to penetrate the enemy zones by pushing through weak areas to envelop enemy positions. Supporting these efforts was the third wave, about 150 meters behind, which contained the storm battalion’s heavy weapons. This third wave provided fire to support the forward movement of the storm companies and to protect the flanks of the penetrations.²¹

Once the infiltration made a penetration into a weak point in the enemy trenches the German assault squads used indirect or flank attacks. This greatly aided in collapsing enemy resistance and widening the breakthrough gap.

*The penetrating force turned at an angle from the main direction of advance and assaulted the flanks and rear of enemy forces on either side, in order to widen the gap created. German instructions ordered units to 'breakthrough and roll up (aufrollen) from the flanks and to take the strong points by envelopment.'*²²

The Total Package - Stosstruppen Organization, Tactics and Weapons – In Combat

On 12 October 1915 Capt Rohr led his men into combat with the new ideas put into action. The new Stosstruppen squads and infiltration tactics over ran and rolled up the French trenches they attacked. Gone were the days of old linear infantry tactics.

*At 5:29 on the evening of October 12, 1915, six large flamethrowers opened fire on the French forward trench. From behind each flamethrower, a squad-sized Stormtroop followed the jets of burning oil into a designated portion of the enemy trench, systematically clearing that section of trench with hand grenades.*²³

Lessons learned and refinements were immediately applied to the organization, tactics and weapons by Captain Rohr. Highly successful combat tests occurred again in January 1916 and later in February 1916 at a battle and place called Verdun.

Timeline – notice the quick implementation – two months to the first combat test and six months to complete combat testing and experimentation.

- 1915 – 8 August 1915 – Captain Rohr takes command of the experimental unit
- 1915 – 12 October 1915 – First combat test & success of squad tactics & weapons in Vosges Mountains
- 1916 – 10 January 1916 – First combat test of the complete assault detachment, again in Vosges Mountains
- 1916 – 22 February 1916 - Assault Detachment successfully fights at Verdun

With the success of the assault squads and infiltration tactics Captain Rohr's next task is training. How big? Training the German Army on the Western front for an upcoming offensive.

*From the start, the [Rohr] assault detachment set up by OHL to develop new tactics was intended to become a training unit to disseminate its techniques to the whole of the infantry. This proved to be particularly necessary because assault squad tactics were much more difficult than the old fire tactics.*²⁴

The German Staff reacted quickly to the success of Captain Rohr's combat success and began a training program. Captain Rohr began to train other units and in time these units would train others. To quicken the training each army on the Western front formed its own assault battalion to train others. With these methods the assault squads and infiltration tactics quickly spread throughout the German forces.

Time line for training – again note the short time period.

1916 – 15 May 1916 – Commanding Officer of the German Forces, General von Falkenhayn ordered all armies on the Western Front to send parties to Captain Rohr for training.

1916 – 23 October 1916 each army on the Western Front was to form its own Sturmabteilung (Assault Battalion)

One of the key foundations for the success of the assault squads and infiltration tactics is the German Army's reliance on mission orders. Mission orders are part of a triangle of ideas that support each other. This triad of success relies on mission orders, operational adaptation and decentralization.

*In the German Army we use what we term "mission tactics"; orders are not written out in the minutest detail, a mission is merely given the commander. How it shall be carried out is his problem. This is done because the commander on the ground is the only one who can correctly judge existing conditions and take the proper action if a change occurs.*²⁵

*You must learn in peace that in war of movement you must go ahead without sufficient information of the enemy*²⁶

*In open warfare a leader will have to give his orders without having complete information. At times only his will is clear. If he waits for complete information before acting he will never make a decision.*²⁷

The German Army in 1915-1918 lived the ideas of mission orders. Why is this crucial? Mission orders give the objective but not the tactics. A German mission order may be "breakthrough the British front line trenches near the Crozat Canal." The mission order does not specify the tactics, the exact place to assault nor the selection of weapons the commander may choose to use in the assault. Mission orders give the on scene commander the freedom to tactically operate as needed.

The next step in the development of the assault squads and infiltration tactics is the formalization of the doctrine. This action began in November 1917 with the HQ call from the field for inputs and lessons learned.

*The process of developing principles to obtain this objective was a collective or corporate effort. Individual talents and personalities were essential, but the doctrine emerged in an atmosphere where ideas were discovered and shared, not invented and arbitrarily imposed. OHL solicited ideas and experiences from subordinate units and this genuine interest gave the final product the wide ownership that eased the acceptance and application of doctrine.*²⁸

After the training spread to the German Army a new doctrine was required to institute the concepts. The German General staff selected Captain Hermann Geyer, on the General Staff, to collect the feedback and write the doctrine which became known as *The Attack in Position Warfare*. Captain Geyer did it in just over two months.

On 1 January 1918 OHL published The Attack in Position Warfare which became the basic document for the German offensives of 1918...Attack described an attack-in-depth, a devouring of the entire enemy position instead of nibbling away at the enemy front line. Once again that "mere captain, Hermann Gayer", was instrumental in writing the text. ²⁹

Throughout the doctrine, keeping the enemy off balance, pressing the attack continuously, and retaining the initiative received great emphasis. ³⁰

The final chapter of the assault squads and infiltration tactics is the Spring Offensive of 1918 *Kaiserschlacht (Kaiser's Battle)* which began on 21 March 1918. The assault squads and battalions spearheaded the attack against the British lines.

The storm unit techniques and the new offensive doctrine emphasized a constant drive forward. Speed and timing were essential for rapid advance, and small unit initiative was crucial to seize the unpredictable and fleeting opportunities of the battlefield. There was no "secret formula" in these techniques. Enemy positions were reduced in a practical fashion: the physical and psychological effects of the advance reinforced each other. ³¹

The Stormtroopers quickly over ran the forward British trenches of the British 5th Army. The dispersed and moving swarms of assault teams not only over ran the trenches but the ability of the British high command to react to their rate of success and penetration.

The first three day's impact on British Forces without mission command and decentralization:

Day One: [The] haul of prisoners gives some indication of the effect that the German tactics had on the British and Portuguese defenders. Completely untrained for independent action, [British and Portuguese] small units were isolated psychologically by the bombardment and physically by the "infiltration" of the Stormtroopers between strong points. Once cut off, many of the men of these small units could imagine no other course but surrender.

Day Two: As had been the case on the first day of the offensive, the ability of the British to defend themselves against the German attack in a coordinated fashion was severely hindered by the slow reflexes of the British command system... Orders to hold certain lines or "switches" were received long after the terrain in question had fallen to the Germans, and some units retreated while others remained in action.

*By day three the "German Eighteenth Army kept up its furious march through the remnants of the British Fifth Army that were not in full retreat. By the evening of the twenty-third, Ludendorff was satisfied that he had broken through the British defensive system and [created a] 80-kilometer wide gap."*³²

The German breakthrough was successful, the breakout was not. German follow up forces, logistics, and equipment did not match the Allies ability to reinforce and resupply the interior lines. Tactically, however, the new infiltration tactics and assault forces were a tremendous success.

As an example prisoner British Brigade-Major Harold Howitt, 184 Bde, 61st Division recorded:

The next moment I was on the ground with Germans all around me, pointing their bayonets at my middle. I was a prisoner. They stripped me of everything I had of any value and marched me away. The first stop was at their company headquarters, which had been established in one of our gun emplacements, and they sat me on a pile of shells.

I couldn't help admiring the young officers I saw at the desk. There they were, just arrived, a mile or two behind our old lines and with no accurate maps of them, and yet they were working out their plans by candlelight in a most efficient manner...

After a time I was sent outside. I could see the next assault being prepared, mules carrying machine guns and mortars, and all in full array.³³

So how long did this process of operational adaptation take? The complete timeline for the Creation of German Stormtroops: (total time: Two Years and Seven Months)

- 1915 – 08 Aug 1915 Captain Rohr took command of Sturmabteilung Rohr
- 1915 – 12 October 1915 – First combat test of squad tactics and weapons in Vosges Mountains -success
- 1915 - December 1915 Capt Rohr established a one week training course for other units
- 1916 – 10 January 1916 – First combat test of complete assault detachment, again in Vosage Mountains
- 1916 – 22 February 1916 - Assault Detachment successfully fights at Verdun
- 1916 – 15 May 1916 – General von Falkenhayn ordered all armies on the Western Front to send parties to Captain Rohr for training.
- 1916 – 23 October 1916 each army on the Western Front was to form its own Sturmbataillon
- 1917 – November 1917, General Ludendorff asks each commanding general of each army to provide ideas for the upcoming Attack in Position Warfare (Der Angriff im Stellungskrieg)
- 1918 -26 January 1918 – Attack in Position Warfare (Der Angriff im Stellungskrieg) [Doctrine] published and issued
- 1918 – 21-31 March 1918 – German Spring Offensive

Lessons Learned

[In late 1914] the German Army identified the fact that the traditional equipment of the infantryman, the rifle with fixed bayonet, was unsuited to the conditions of trench warfare. The rapidity with which this problem was understood and the steps made to correct it, through the development of alternative weapons and tactics, indicates strongly that communication from the front-line troops to the higher command was very close. The adaptability to the market place of war suggests a high degree of professionalism.³⁴

Despite the German defeat in the First World War, the German efforts in tactical doctrine deserve close attention. In the development and application of new tactics for their army, the Germans generally displayed superior ability. The German doctrine

*achieved the balance between the demands of precision for unity of effort and the demands of flexibility for decentralized application.*³⁵

Captain Rohr changed squad warfare and German Army tactics in two years and seven months. Capt Rohr's unit did it all – experimented with new weapons and equipment, combat tested new ideas, evaluated new tactics, and trained those which would change an entire army. He completely revolutionized the infantry linear tactics of the preceding hundred years.

The German HQ used decentralization to great effect with Captain Rohr. No rules, regulations nor superiors held Captain Rohr back nor Captain Geyer in publishing the doctrine. This historical model illustrates the potential power and freedom of ideas within the Capstone Concept.

Conclusions

*OHL directed the talent of [Captain] Geyer and others to derive principles from combat experiences. These principles were sufficiently general to apply to a variety of tactical conditions, but sufficiently precise and specific to insure command understanding and unity of effort. Their flexibility was their strength, for these carefully and accurately developed principles could be modified without being discarded. Evidence from the battlefield was more respected than the doctrine, both in development and execution. Therefore, the process of deriving the doctrine was inductive, and the application was in the same inductive spirit.*³⁶

*A British officer who, in mid 1915, reported that: The Germans with their foundations of solid study and experience have been far quicker to adapt themselves to the changed conditions of war and the emergencies of the situation.*³⁷

A German *Stosstruppen* infantry leader from 1918 would nod his head in agreement from his point of view on infiltration tactics and combat experience with the following Capstone Concept ideas:

1. *Seizing, retaining, and exploiting the initiative*
2. *Adjusting rapidly to changing situations*
3. *Disciplined, confident small units*
4. *Decentralized execution*
5. *To make decisions and develop the situation through action*
6. *Operate effectively under conditions of uncertainty and complexity.*
7. *Decentralized operations will require a high degree of unit cohesion developed through tough, realistic training and shared operational experience*
8. *The concept of mission command, defined as the conduct of military operations through decentralized execution based upon mission orders for effective mission accomplishment.*
9. *The idea which requires [forces] to operate effectively under conditions of uncertainty and complexity.*

The Capstone Concept opens the way for innovation from the NCO and company grade combat veterans to influence the very heart of the Army via tactics, weapons, training, and

doctrine. By using the Capstone Concept may the NCOs and company grade officers of today and tomorrow be even more successful than Captain Rohr.

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End Notes

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