

Surfaces and Gaps Primer

Endnotes added by Colonel E.M. Walters

From John H. Poole, *One More Bridge To Cross: Lowering the Cost of War* (Emerald Isle, NC: Posterity Press, 1999)

Americans are just now starting to realize that they could have won WWII with less firepower. There's another (ancient) style of warfare that could have gotten the job done without running afoul of the laws of war. Officially adopted as doctrine by the United States Marine Corps in 1986, it is now called "maneuver" or "common-sense" warfare. Many of its precepts are virtual opposites to those for the traditional "attrition" style. Common-sense tactics depend more on surprise than on firepower. Western military analysts have known about this alternative way of fighting since WWI, but only the Germans have been able to decentralize control enough to use it.

Instead of trying to kill enemy soldiers per se, common-sense leaders bypass and demoralize their opponents whenever possible. Instead of controlling everything from the top, they delegate authority to subordinates. Instead of focusing inward to prevent mistakes, they focus outward on their adversary. They don't choose hilltops as objectives, but more strategically important targets like communication centers, ammunition dumps, or railheads.

To attack these strategic objectives, common-sense forces seek out gaps in the enemy's defenses and avoid strongpoints. Instead of always using the largest weapon available, they employ smaller weapons in series—one to set up their quarry for the next. They do not move methodically but with high tempo. They operate through "reconnaissance (recon) pull" instead of "command push." Instead of attacking all alone a line in the daytime, they punch a small hole at night and funnel through it. When surprise has been irreparably compromised, they stop attacking and sometimes back up. They prefer ambush and infiltration to direct confrontation. They defend only to regain momentum, and then often one or more "fire sacks" or traps. (pp. 48-49)

From MCDP 1-3 *Tactics* (Washington, DC: Headquarters, U.S. Marine Corps, 1997):

Gaining Battlefield Advantage: A basic principle of martial arts is to use the opponent's strength and momentum against him to gain more leverage than one's own muscles alone can generate, thereby gaining an advantage. The same concept applies to tactics. We strive to gain an advantage over our adversary by exploiting every aspect of a situation to help us to achieve victory, not by overpowering him with our own strength. (p. 39)

Asymmetry: Fighting asymmetrically means gaining advantage through imbalance, applying strength against an enemy weakness. Fighting asymmetrically means using dissimilar techniques and capabilities to maximize our own strengths while exploiting enemy weaknesses. Fighting asymmetrically means fighting the enemy on our terms rather than on his. By fighting asymmetrically, we do not have to be numerically superior to defeat the enemy. We only have to be able to exploit his vulnerabilities. (p. 55)

From MCI 7401A *Introduction to Warfighting* (Washington, DC: Marine Corps Institute, 1996)

Surfaces and Gaps. A surface is considered a hard spot or an enemy strength. A surface is an enemy position, unit, or strength where the enemy has sufficient combat power to detrimentally affect your mission accomplishment. A gap is considered a soft spot or an enemy weakness. A gap can be a simple separation between enemy units where the units cannot mutually support each other, or it can be a weakness in time or space where the enemy is unprepared and vulnerable to attack. **In maneuver warfare, you bypass enemy surfaces and attack and exploit gaps.** [Emphasis in the original—EMW] Gaps are rarely permanent; usually, they are fleeting opportunities. Once you locate a gap, you must **rapidly** and **ruthlessly** exploit it. If there are no existing gaps, you must create them by deception, penetration, or infiltration. (p. 14)

In maneuver warfare, you want to attack the enemy where he is weakest with the bulk of your forces....Your goal is to bypass enemy surfaces and attack and exploit gaps. A gap is any weakness in the enemy force, not just physical preparations and employment. Gaps include poor morale, tactical error, lack of preparation, lack of mutual support, and predictable opening patterns. You must seek gaps exploitation. (p. 77)

By attacking through gaps, you accomplish the following three things:

First, you get into the enemy's rear areas. Remember, you are trying to break his will to fight by attacking his critical vulnerabilities. If you can capture his command post, overrun his artillery, or cut his lines of communication, you may force his entire unit to surrender without even fighting his frontline forces.

Second, you reduce casualties. By avoiding surfaces and attacking through gaps, you avoid "throwing your bodies against his bullets." If you attack enemy surfaces, you are probably wasting your Marines' lives.

Third, attacking through gaps keeps the tempo of operations high. It is a way to keep the enemy guessing and off balance. Attacking surfaces slows you

down and it causes attrition of your forces against targets that may not be decisive.

Due to the fluid nature of war, gaps will rarely be permanent and will usually be fleeting. To exploit them demands flexibility and speed. We must actively seek out gaps by continuous and aggressive reconnaissance. Once we locate them, we must exploit them by funneling our forces through rapidly....Commanders must rely on the initiative of subordinates to locate the gaps and must have the flexibility to respond quickly to opportunities rather than following predetermined schemes.¹

Sometimes you have to create gaps. **You can create gaps through deception, penetration, and infiltration.** To create a gap through deception, you must use innovation and forethought to deceive the enemy of your intentions. Let's say that you are attacking an enemy who has his forces deployed frontally against you. If you conduct a feint, (a supporting effort designed to divert or distract the enemy's attention away from the main effort), he may shift his forces to deal with it. His original front may then become a flank, and you can attack this new gap in his forces.

To create a gap through penetration, you must actually attack the surface. One way that a rifle company can penetrate an enemy surface is by conducting a three-element assault. One element can provide support by fire to pin down enemy forces that could interfere with the main attack. The second element would be the main attack that would assault the enemy position and actually create the gap. The third element would be the exploitation element. Initially in reserve, the exploitation element can exploit the success of the main attack by moving through the gap and attacking the enemy's rear area. This method is the least preferred, but may be only option in certain situations.

To create a gap through infiltration, you must move through enemy forces without being detected. This is most effective when conducted in small groups. After infiltrating through the enemy's lines, your unit can regroup and attack his rear areas. During the Korean War, the Chinese Communist Army conducted successful infiltration attacks against Marines in the Chosin Reservoir campaign. (pp, 77-80)

From William S. Lind, *Maneuver Warfare Handbook* (Boulder, CO: Westview Press, 1985).

Lecture I: Surfaces and Gaps

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The concept of surfaces and gaps is one of several concepts that bear on tactics. It is of the same level of importance as mission tactics and the main effort [two other subjects to be covered later—EMW]....All of the concepts should be constantly at work during the execution of battle.

It is unimportant whether you refer to this concept as surfaces and gaps or soft-spot tactics or simply the idea of pitting your strength against the enemy's weakness. That is what it is all about, strength against weakness, call it what you will. The term surfaces and gaps is derived from the German term, *Flaechen und Luekentaktik*, which means simply, the tactics of surfaces and gaps, the surfaces being the enemy's strong points, which we avoid, the gaps being the weak points that we go through. We often hear of *Flaechen und Luekentaktik* being referred to as von Hutier tactics, von Hutier being the name of the commander of the 18th German Army on the western front, who had particular success using this form of warfare. Von Hutier did not invent the tactic. However his name is still attached.²

Basil Liddell Hart, the British author, called it the expanding torrent system tactic. He drew an analogy between an attacking army and a torrent of water:

If we watch a torrent bearing down on each successive bank of earth and dam in its path, we see that it first beats against the obstacle feeling it and testing it at all points. Eventually, it finds a small crack at some point. Through this crack pour the first driplets of water and rush straight on. The pent up water on each side is drawn towards the breach. It swirls through and around the flanks of the breach, wearing away the earth on each side and so widening the gap. Simultaneously, the water behind pours straight through the breach between the side eddies which are wearing away the flanks. Directly it is passed through it expands to widen once more the onreach of the torrent. Thus as the water pours through in ever-increasing volume the onreach of the torrent swells to its original proportions, leaving in turn each crumbling obstacle behind it.

The idea of putting *Flaechen und Luekentaktik* into practice was first implemented by the German Army in World War I. In 1918, as they prepared for Ludendorff's Spring Offensive, the German Army changed its offensive tactics. The Germans had found that they were being overpowered by the material available to the British and French. The Americans were coming and it was clear that Germany was going to lose if she did not do something differently. Because they did not have the option of matching the allies' strength in material, the Germans decided that they would have to outthink them. That is, they would have to have better tactics.

Germany did not succeed in winning the war. It was too late by this time. They were surrounded. The women and children were starving at home. It was simply too late for them to win. Yet, they made some tactical progress there at the last in the spring of 1918. They inflicted terrible defeats on their enemies to the point that the allied armies were seriously considering the prospect of giving up. At the tactical level, the Germans put their strength against weakness. They sought the gaps. Small assault groups called *Sturmgruppen* sought gaps in the enemy lines and attacked through them, assaulting with light machine guns, rifles, grenades, and flamethrowers, while heavy machine guns, direct and indirect fire weapons, including trench mortars, were used to suppress the enemy strong points.

But on the strategic level, the Spring 1918 Offensive failed. Why? Because Ludendorff, on that level, put strength against strength. Although he was seeking gaps, he was seeking gaps at the enemy's strong points. He committed his reserves before the enemy committed his, and his offensive bogged down.

Flaechen und Luekentaktik is an old term, dating from World War I, when tactics, compared to today's, were quite linear. One should not confuse the idea with linearity. It remains a useful concept if thought of in non-linear modern terms. Gaps are weak points. Surfaces are strong points. They are not necessarily strong and weak points along a line, like a dotted line of alternative dashes and spaces.

The idea of putting strength against weakness was, of course, born way before 1918. Clausewitz writes about it in Chapters 9 and 10 of book 7. In Chapter 9, regarding defensive positions, he states:

The attack cannot prevail against them. It has no means at its disposal to counteract their advantage. In practice, not all defense positions are like this. If the attacker sees that he can get his way without assaulting them, it would be stupid of him to attempt it. It is a risky business to attack an able opponent in a good position.

Chapter 10 is entitled, "Attack on Entrenched Camps." Says Clausewitz:

Not only reason, but hundreds and thousands of examples show that a well prepared, well manned, and a well defended entrenchment must generally be considered as an impregnable point and is indeed, regarded as such by the attacker. If we proceed from this factor on the effectiveness of a single trench, we cannot really doubt that the assault on an entrenched camp is a very difficult and usually an impossible task for the attacker. The offensive should only very rarely resort to an attack on an entrenched camp. Such an attack is advisable only if the defenses have been executed hurriedly, left incomplete, and lack obstacles to access, or in general if, as often happens, the camp is a mere sketch of what it ought to be, a half completed ruin. Then an attack may be advisable and an easy way to vanquish an enemy.

Employment of this concept of surfaces and gaps, then, gives us many advantages over what could be called slower moving forms of combat, where strength is thrown against strength. Attacking through gaps, avoiding surfaces, gives us an advantage of economy of force. If we are pitting strength against strength, assaulting enemy strong points, we are consuming our manpower as well as ammunition and supplies as we go along. If we go through the gaps, we are practicing economy of force. We are reaching our objective without using up our men. We are leaving the enemy behind. Because we are moving faster, we have the advantage of rapid exploitation.

Let us look first at the gaps and determine what we are talking about. We may look for already existing gaps or we may create gaps, but we prefer to find them already existing. Creating gaps takes time. It consumes resources, usually in the form of casualties. Therefore, exploiting ready-made weak spots is more efficient.

It may help to start with a very simple example, perhaps overly simple, but simple things can help us to understand. Envision yourself with the mission to get your force from Berlin in the East to Paris in the West. The enemy defensive line lies in between. If you can discover portions of the enemy line where the defenses are stretched thin, undermanned, or poorly manned you have discovered gaps—opportunities for your attack. This is old fashioned and linear but it may aid in understanding here in the beginning. We will come to more modern examples later on. If our mission is simply to get to Paris, clearly we are going to get there a lot faster if we go through the gaps. So, how do we find them? There is a multitude of methods. We will discuss a few.

First, the reconnaissance screen. This is what we call the reconnaissance pull technique as opposed to command push. Your reconnaissance is always preceding the main body and its mission out there is to find the gap. I am not talking about Force Reconnaissance or Reconnaissance Battalion. This is not a mission for specialized reconnaissance forces. Any company commander, any battalion commander, should have reconnaissance screen of some sort in front of him, drawn from his own troops. What kind of vehicles it uses, if any, and what it is armed with are going to be dependent on the situation. It should be at least as mobile as the main body, however. Preferably more so. If it is less mobile than the main body, its function will necessarily be temporary and intermittent.

The reconnaissance screen might be a company deployed over a very broad front. But its mission is not to attack. Its mission is to find the gaps. When it finds them, it relays this information back, so that the main body can push on through the gap. Gaps are found by delegating authority down to the lowest level, so that small unit commanders can find gaps and immediately start exploiting them without delay. If we are going to wait for directions from above, our force is going to be very slow moving, so this concept of surfaces and gaps depends on initiative at low levels.

The concept of surfaces and gaps demands leadership from the front as opposed to leadership from the rear. The commander must be where he can make swift decisions. He must be where the situation is developing. Obviously, leadership from the front had become a scarcity by World War I. J.F.C. Fuller, in his book, *Generalship*, wrote:

In the World War, nothing was more dreadful to witness than a chain of men, starting with a battalion commander and ending with an army commander, sitting in telephone boxes, improvised or actual, talking, talking, talking, in place of leading, leading, leading.

The result is unresponsive leadership and slow reaction.

Now, let us complicate the subject a little. We began looking simply at our route from Berlin to Paris. We had to get through a line that had gaps in it. This was

linear and old fashioned. Certainly, combat is not going to be that simple. The gap, then, might be any undefended point or any weakly defended point. It may be any enemy vulnerability. It might be the enemy's flanks

The term flank itself needs some elaboration. Think of it as a relative thing. John Boyd defines flank as "that aspect towards which a force is not devoting its primary attention." In other words, in fluid warfare, what is one moment the enemy's flank might the next moment be the enemy's front. It depends on how he is directing his attention. A gap for the infantry could be an enemy missile site manned by troops who are not combat oriented. The missile site might be a surface if you are flying an airplane but a gap if you a light infantryman who has gotten inside the enemy lines.

Let us say that we are unsuccessful in finding any gaps at all. We may have to create gaps and there are ways of doing this. First, let us look at what the Germans call *Stosstruppentaktik*.³ This is the sequence of suppression, assault, and exploitation. In other words, we punch our way through. Usually, it is costly. This is why we prefer to find gaps. But do not forget the first word of the sequence: **suppression**. Suppress the enemy to make him get his head down, and the assault should follow immediately on the heels of the suppression. Use artillery and mortars to suppress. Usually they have a more valuable function in suppressing than they do for actually inflicting casualties. They may inflict lots of casualties, but the real value you derive is from the suppression effect.

Although suppression is certainly the most valuable effect of artillery and air, there are two other effects which should not be discounted. Those are disruption and attrition. Disruption quickens the enemy's undoing. Attrition is helpful to your cause, but its effect on the enemy is realized most slowly of the three.

The assault should follow suppressive fires in seconds, as soon as possible. While the enemy is suppressed, we punch a small assault force through. Assault forces in this method are generally characterized by relative smallness. Small units are manageable.

It is the reserve—or exploitation force—that is characterized by relative bigness. After we have successfully created the gap, we exploit by getting as many of our reserves through as quickly as we can. If we have friendly forces pinned down on the right and left, the best way to get pressure off them is to get in deep behind the enemy.

Another way of creating gaps is through supporting attacks. By attacking one point along the line we may divert the enemy from another point and by drawing him off, create a gap. Again, this is in linear terms for instructional purposes, for simplicity. But do not get a linear mind-set. Sometimes a less costly way of creating a gap is through deception, by causing the enemy to think that we will

attack at one point, thereby enticing him to draw his forces off from another point. And we attack at that point where he has weakened himself.

But what do we do about surfaces, that is, the strong points? Sometimes they are best bypassed. Once the enemy has been bypassed, his strong point may be cut off from its support and in that way his strong point eventually withers away and becomes a weak point which we can attack later.

Fire suppression is a means of neutralizing the strong points so that we can bypass them safely. Remember that the essential element of effective fire suppression is always time. Hours and hours of bombardment may not give you the desired effect, if you then lift your fire and try to attack too late, hoping you have killed the enemy. Artillery's function in suppression is neutralizing the enemy to give you time to accomplish your mission. Smoke or poison gas can be used to this same effect; that is, preventing the enemy from seeing you, and preventing the enemy from reacting against you.

A holding or pinning attack may be a means of dealing with the surface. This is a limited objective attack not designed to annihilate the enemy in the particular strong point, but rather to neutralize or preoccupy him so that your operation can continue to bypass or attack at another point.

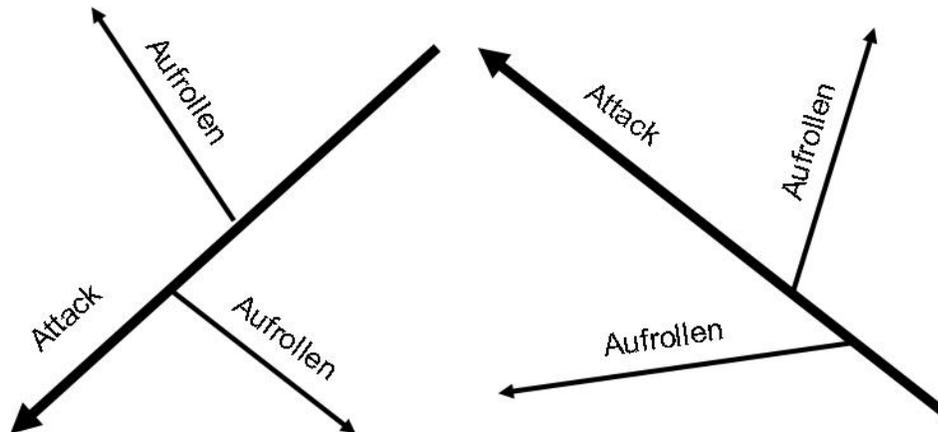
Another means of dealing with a strong point is the infiltration attack. This may be seen as surfaces and gaps at the micro level. That is, instead of throwing a rigid line of assault troops into the enemy, our assault force seeks gaps in the enemy strong point and infiltrates into it. Often, this is best accomplished at night.

There are certain problems presented by the concept of surfaces and gaps, especially to commanders who are used to slow moving forms of combat. One is that the commander will not always know where all his people are. In the Marine Corps we have become used to being accountable at all times, for knowing exactly where every man is. In this faster moving form of combat, to do so would be impossible. Your subordinates are out finding the gaps and exploiting them.

Another problem is that artillery and air may not be controlled as closely as is possible in slower moving forms of combat. The desired effect is that the faster pace of our operations will keep the enemy off balance so that he can inflict fewer casualties on us. There is always the danger that artillery and air may strike our forces. Of course, we do everything we can to prevent that. But in the final analysis, we come out better if we keep our tempo moving faster than the enemy's. After all, he is trying to direct his fire against us. We may have some casualties resulting from errors but our control measures help prevent this. The result of faster tempo on our side will be fewer casualties on our side and a quicker victory.

Another problem associated with the concept of surfaces and gaps is that as we penetrate deeply, often on narrow fronts, our flanks become exposed. There are, however, compensating factors, again related to speed. We are moving quickly. The enemy is always off balance. Remember the old adage, “there is security in speed.” Other friendly penetrations, nearby, in deep thrusts can reduce enemy pressure more efficiently than slower, plodding “flankers” that characterize slower moving forms of combat. The Germans had a term called *Aufrollen*, which means, literally, “thrusting upon.” If you are attacking in one direction, you may make minor attacks to the left and right of your main attack going out tangentially on narrow fronts and protecting your flanks in that way. Here speed is not sacrificed. If the main body slows down to the pace of flankers on the left and right, speed is sacrificed.

Aufrollen (“Thrusting Upon”) Concept

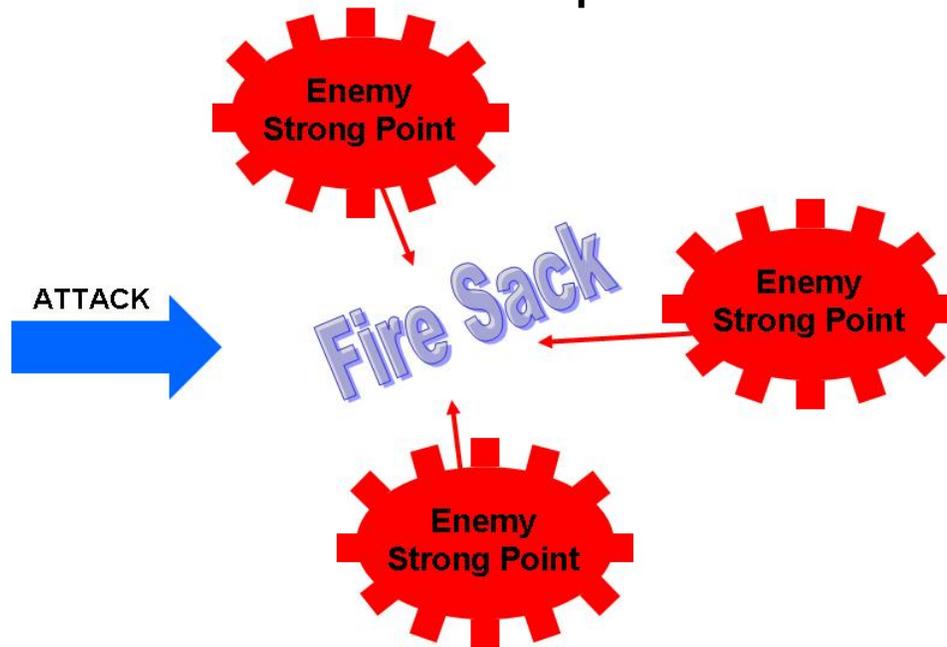


One of the problems that comes to mind in studying this concept focuses on the Soviet so-called “fire sack defense.” Again, this relates to the need to modernize this concept and ensure it is non-linear. Note the diagram:

There are three Soviet strong points surrounding a fire sack. The desire is to draw the enemy into the fire sack so that he can be reduced from the surrounding strong points. If we look rigidly at the concept of surfaces and gaps,

then we would see ourselves going through the gap, bypassing the strong point and ending up in the fire sack exactly where the enemy wants us.

Soviet “Fire Sack” Defensive Concept



The student must understand that the concept of the gap is a relative concept. The commander must evaluate each new situation. He must determine which are surfaces and which are gaps. There are no rules for this, but the fire sack, though it may appear as a gap, because there are no enemy is actually a surface. It is a hard spot. It is a place where we are vulnerable. In this situation the gap may well be the strong point because if we can reduce one of the mutually supporting strong points, perhaps by an infiltration attack, we have then weakened the enemy and made him vulnerable. A Marine officer once commented to me in discussing this concept that he felt, were he commanding a unit seeking out enemy gaps, he would probably find himself right in the middle of a fire sack. So he may have. But I had to remind him of the interview with German General Hermann Balck. Balck states that warfare is an art. And like any art, there are only certain great artists. As Balck said, everyone cannot expect to be a Raphael.⁴ Clearly, this officer was not a Raphael. It is an art, distinguishing surfaces from gaps. That is why you should study history. It will help you see the distinctions.

Critics of these faster moving forms of combat characterized by initiative at the low level fear that they will lead to groups of men moving willy-nilly about the

battlefield and that commanders will lose control. This need not be so. If the concept of surfaces and gaps is employed properly, it will not be so. That is why we have control measures. The boundary, the limit of advance, the phase line, can still be used. It must be remembered that these control measures should serve their function, but not be rigid lines that cannot be changed or ignored when the situation changes. They should be kept to a minimum and must always be flexible. The tactics must never follow the control measures. On the contrary, the control measures must follow the tactics. And the tactics must always be based on the enemy. Other concepts that will be discussed in the chapters ahead, especially that of the main effort, give us means of keeping control over our troops and preventing a situation where they can be said to be moving willy-nilly about the battlefield.

Endnotes:

¹ FMFM 1 *Warfighting* (Washington, DC: Headquarters, U.S. Marine Corps, 1989), p. 75. The revision of this document, MCDP 1 *Warfighting* (Washington DC: Headquarters, U.S. Marine Corps, 1997), contains similar exhortations to take advantage of gaps, although these are not as explicit:

We concentrate strength against enemy critical vulnerabilities, striking quickly and boldly where, when, and in ways in which it will cause the greatest damage to our enemy's ability to fight. Once gained or found, any advantage must be pressed relentlessly and unhesitatingly. We must be ruthlessly opportunistic, actively seeking out signs of weakness against we will direct all available combat power. (p. 75)

If the enemy system, for example, is a fortified defensive works, penetrating the system may mean an infiltration or a violent attack on a narrow frontage at a weak spot to physically rupture the defense, after which we can envelop the enemy positions or roll them up laterally from within. In this way we defeat the logic of the system rather than frontally overwhelming each position. (p.77)

² For a discussion on how German infiltration/stormtroop tactics were labeled "von Hutier tactics" and why this is inaccurate, see Timothy T. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*, Leavenworth Papers No. 4 (Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, July 1981), p. 42.

³ Often termed "Stormtroop Tactics" or—perhaps best of all—"Infiltration Tactics." See Bruce I Gudmundsson, *Stormtroop Tactics: Tactical Innovation in the Germany Army, 1914-1918* (New York: Praeger Publishers, 1989).

⁴ Hermann Balck's comments are thus: "No one thinks of becoming a great painter simply by imitating Michaelangelo. Similarly, you can't become a great leader just by imitating so and so. It has to come from within. In the last analysis, military command is an art: one man can do it and most will never learn. After all, the world is not full of Raphaels either." Translation of Taped Conversation With General Hermann Balck, 13 April, 1973 (Columbus, OH: Battelle Laboratories, 1973), p. 42.