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# AIR COMMAND AND STAFF COLLEGE

## STUDENT REPORT

TANNENBERG AND THE PRINCIPLES OF  
WAR--A HISTORICAL BATTLE ANALYSIS

MAJOR ROBERT S. NOONAN, JR. 84-1890

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**TITLE**

TANNENBERG AND THE PRINCIPLES OF WAR--A HISTORICAL  
BATTLE ANALYSIS

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Submitted to the faculty in partial fulfillment of  
requirements for graduation.

**AIR COMMAND AND STAFF COLLEGE**

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## PREFACE

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This product was written for ACSC/EDCJ. That office has specified a format different from the ACSC study format. The material contained in this product can be used to develop a seminar lesson investigating how the principles of war were used, misused, or ignored during an actual historical battle.

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# TABLE OF CONTENTS

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|  |     |
|--|-----|
| Preface . . . . .  | iii |
| About the Author . . . . .   | iv  |
| INTRODUCTION . . . . .   | 1   |
| SECTION ONE - DESCRIPTION OF THE BATTLE OF TANNENBERG . . . . .  | 3   |
| Initial Deployment Plans . . . . .   | 3   |
| The Battle of Gumbinnen . . . . .  | 4   |
| Eighth Army Change of Command . . . . .  | 7   |
| The Advance of the Second Russian Army . . . . .   | 8   |
| The Battle of Tannenberg . . . . .   | 9   |
| SECTION TWO - THE PRINCIPLES OF WAR AND HOW THEY WERE APPLIED<br>AT THE BATTLE OF TANNENBERG . . . . . | 12  |
| Objective . . . . .  | 12  |
| Offensive . . . . .  | 15  |
| Surprise . . . . .   | 17  |
| Security . . . . .   | 18  |
| Mass and Economy Of Force . . . . .  | 19  |
| Maneuver . . . . .   | 21  |
| Timing and Tempo . . . . .   | 22  |
| Unity Of Command . . . . .   | 23  |
| Simplicity . . . . .   | 25  |
| Logistics . . . . .  | 26  |
| Cohesion . . . . .   | 28  |
| SECTION THREE - DISCUSSION QUESTIONS . . . . .   | 30  |
| APPENDICES . . . . .   | 36  |
| Appendix 1 - Present Day Europe . . . . .  | 37  |
| Appendix 2 - East Prussia in 1914 . . . . .  | 38  |
| Appendix 3 - Battle of Gumbinnen and Subsequent Movement . . . . .                                     | 39  |
| Appendix 4 - The Battle of Tannenberg, 27 August . . . . .   | 40  |
| BIBLIOGRAPHY . . . . .   | 41  |

## INTRODUCTION

The German Eighth Army fought the Russian First and Second Armies during the opening days of World War I. This battle, the Battle of Tannenberg, had a profound significance. After Tannenberg,

The Russian Second Army had ceased to exist. General Samsonov [its commander] was dead, and of his five corps commanders two were captured and three cashiered for incompetence (4:345).

General Guchkov, later Russian Minister of War, felt that after the Battle of Tannenberg, the war was lost for Russia (4:345). As a result of the battle, Hindenburg gained the status of a German national hero (4:345). Perhaps most significantly, Russia's ally, the French accomplished their goal: the Germans withdrew two corps from the western front prior to the Battle of the Marne. Marshal Foch said this made the task of the Allied armies easier (1:ix). Sir Alfred Knox stated:

Possibly the detachment from the Western theatre that the Russian raid wrung from the German Supreme Command saved the Allies in the West and so turned the whole course of the war (3:92).

One way military leaders can enhance their effectiveness is through study of the application of the principles of war during historical battles such as the Battle of Tannenberg. This battle serves as an excellent example of the use and misuse of the

principles of offensive, surprise, maneuver, unity of command, and cohesion.

This study consists of three sections and four appendices. The first section is a concise description of the battle. In the second section, each of the AFM 1-1 principles of war is defined and then examined to show how it was used, ignored, or violated by the Germans and the Russians. The third section is a series of discussion questions, in guided discussion format, which can be used in developing a seminar on the Battle of Tannenberg and the principles of war. The four appendices are four map sketches showing the location of the battle relative to current geopolitical boundaries, the geography of East Prussia as it existed in 1914, the situation on 20 August, and the situation on 28 August 1914.

## Section One

### DESCRIPTION OF THE BATTLE OF TANNENBERG

The Battle of Tannenberg was the first battle in World War I between the Germans and the Russians. Fought in the German province of East Prussia (see Appendices 1 and 2), it actually consisted of a series of clashes, 17 - 30 August 1914, leading to a titanic Russian defeat.

### INITIAL DEPLOYMENT PLANS

The Germans had a problem, that of fighting a two front war. Out of this dilemma, Count Alfred von Schlieffen, Chief of the German General Staff, developed his war plan in 1906 (4:35). He decided to throw the weight of the German army against France in the hope of obtaining a quick victory over France. The German Eighth Army, consisting of four and a half corps, was forced to defend East Prussia against Russian invasion (1:394).

The original Russian plan was to deploy four armies (the 4th, 5th, 3rd, and 8th) against the Austrians and only one army (the 1st under General Rennenkampf) against the Germans. Two armies were to be kept in reserve (the 2nd under General Samsonov near Warsaw and the 9th at Petrograd) (3:47). Franco-Russian conferences in 1911-13 resulted in the agreement that Russia

would begin operations against the Germans by the fifteenth day of mobilization even though mobilization was not complete (1:54).

As a result of these conferences, the Russians revised their deployment plans. The new Russian plan was to attack East Prussia with two armies in a pincer movement around the Masurian Lakes and cut off the retreat of the smaller German forces to the Vistula River (4:85). The northern pincer, the First Russian Army, was to advance west from the Vilna Military District around the northern end of the lakes. The other pincer, the Second Russian Army, was to march north from the Narev River around the western side of the lakes. In order to prevent a premature German retreat, the First Army was to advance two days ahead of the Second Army and draw the Germans toward it to allow the Second Army to move in behind the Germans and close the route to the Vistula River (4:85).

The German Eighth Army, less in numerical strength than the Russians, could choose between two options when faced with a stronger enemy advancing on two wings: withdrawal before the Russian forces or attack of one Russian wing before the other (4:87). They chose offensive action.

#### THE BATTLE OF GUMBINNEN

On 17 August, the First Russian Army crossed the East Prussian frontier (3:56). Their immediate objective was the Insterburg Gap, approximately 37 miles ahead (4:302). This gap (see Appendix 2) was a stretch of land between the Masurian Lakes

to the south and the fortified area around the East Prussian capitol of Konigsberg to the north (4:302). The Russian advance included the following units deployed north to south: XXth Corps, IIIrd Corps, IVth Corps, and 5th Rifle Brigade (1:396, Plate 8). Each of the Russian flanks was protected by a cavalry corps (4:303).

The German Eighth Army, commanded by General von Prittwitz und Gaffron, guessing that Rennenkampf's advance would be faster than that of Samsonov, detached one corps, the XXth under General Scholtz, to block the Second Russian Army in the south and with three and one half corps advanced east to meet Rennenkampf (4:306). Prittwitz decided to meet the Russians at a well prepared position along the Angerapp River (4:308). The German forces moving east included the following units from north to south: Ist Corps under General Francois, XVIIth Corps under General von Mackensen, Ist Reserve Corps under General von Below, and 3rd Reserve Division under General von Morgen (1:394, 4:309, 310).

Francois advanced well to the east of the Angerapp River and at 1100L on 17 August met the Russian IIIrd Corps near Stalluponen only a few miles inside the Prussian frontier (1:111). The Russian 27th Division broke and fled back to the frontier. This held up the Russian advance for a day (4:307). That night Francois' Corps retreated back toward Gumbinnen (4:307). Francois' thrust to the east upset Prittwitz's plan to meet the Russians at the positions along the Angerapp River.

Rennenkampf halted east of Gumbinnen (4:308). On 19 August, Prittwitz, receiving word that the Second Russian Army had crossed the frontier to his south (Knox states that Samsonov's army didn't enter Prussia until the 21st (3:56)), decided to attack Rennenkampf's army on 20 August (4:309). (See Appendix 3.)

Francois, without waiting for the remainder of the Eighth Army to advance from its positions along the Angerapp, attacked the Russian XXth Corps at 0400L (4:309). The northern flank of Rennenkampf's army gave way before Francois' attack (1:88). Because of Francois' precipitous attack, the other German Corps lost the element of surprise. The German XVIIth Corps reached the front at 0800L; the 1st Reserve Corps at 1200L (4:309-310). The XVIIth Corps was routed and the 1st Reserve Corps forced to retreat to protect its flanks (4:310). The 3rd Reserve Division started later from the Angerapp and did not arrive at the front until the fight was over (4:310). At 1800L Prittwitz ordered Francois to fall back (4:311).

The Battle of Gumbinnen was a victory for the Russians (3:56). The Germans were in retreat. German casualties were estimated to be 40,000 men (3:88). Between the battering his army took at Gumbinnen and further reports of the advance of the Second Russian Army, Prittwitz was sufficiently panicked to call the German Supreme Headquarters at Koblenz to inform them that the Eighth Army would retreat to the Vistula River (4:313). The Russian First Army did not take advantage of this disarray on the

German side. Immediately after the battle, Rennenkampf ordered a halt (4:311). As a result the Russians lost touch with the German Army on the 21st (3:88).

#### EIGHTH ARMY CHANGE OF COMMAND

The Eighth Army staff was trying to talk Prittwitz out of retreat to the Vistula. One of the staff officers, Colonel Hoffmann, developed a plan (see appendix 2) based on the lack of movement by Rennenkampf (4:316). Francois' Corps would get on trains and travel via Konigsberg, Marienburg, and Deutsch Eylau to reinforce Scholtz's right flank. Morgen's Division would be sent to Scholtz's left flank via a second railroad line. Mackensen's and von Below's corps would wheel and march to take up a position on Scholtz's left. This would leave only cavalry and Konigsberg reserves to screen Rennenkampf's army (4:316). Orders to entrain the 1st Corps were issued to Francois on the 21st. However, no one informed the Supreme Command that the Eighth Army was no longer in full retreat (4:317).

General Moltke, Chief of the German General Staff, was aghast at Prittwitz's intention to abandon East Prussia (4:313) and decided to replace him (4:317). On 21 August, Moltke chose General Ludendorff as the new Chief of Staff of the Eighth Army. Ludendorff had established his reputation during the siege of Liege in Belgium (4:317). Moltke picked a retired general, General von Hindenburg, as Commander of the Eighth Army (4:318). Ludendorff and Hindenburg were contacted the next day.

Ludendorff reached Koblenz that evening. After being briefed by Moltke, he issued orders for Francois' corps to entrain and support Scholtz's corps, and for Mackensen's and von Below's corps to complete disengagement and refit until 23 August (4:318). Ludendorff then boarded a train to the eastern front, picking up Hindenburg at Hanover at 0400L the next morning (4:318).

#### THE ADVANCE OF THE SECOND RUSSIAN ARMY

The Russian Second Army, commanded by General Samsonov, consisted of the following units from west to east (see Appendix 3): Ist Corps and a cavalry screen under General Artamonov, part of XXIIIrd Corps under General Kondratovich, XVth Corps under General Martos, XIIIth Corps under General Klyuev, VIth Corps and 4th Cavalry Division under General Blagovyeshchenski, and Ith Corps (this Corps was transferred to Rennenkampf on 22 August) (3:89). Facing this army was only Scholtz's XXth Corps. Samsonov's army crossed the southern frontier of East Prussia on 21 August (19 August according to Tuchman (4:309)) and occupied a line Wittenberg - Ortelsburg - Neidenburg the following day (3:56).

On 23 August, Martos moved north from Neidenburg and met Scholtz dug in on a line Frankenau - Orlau in the late afternoon. After fierce fighting, the German positions were overrun on the morning of the 27th (3:63). During this engagement, Russian casualties were 4,000 and the estimated German losses 6,000

(3:64). Scholtz retreated about ten miles setting up a new headquarters in the village of Tannenberg (4:324). The Russians occupied a general line from north of Neidenburg to north of Ortelsburg and hoped to take Allenstein the next day (3:60). On 25 August the Second Army units reached the following positions: 4th Cavalry Division and VIth Corps were northwest and north of Ortelsburg, XIIth Corps west of Ortelsburg, XVth Corps on a line Orlau - Frankenau, part of XXIIrd Corps west of Neidenburg, Ist Corps and its cavalry screen northwest and west of Usdau, and part of XXIIIrd Corps still detraining at Ilovo (3:66). The Russians thought the Germans were preparing a counterattack from near Tannenberg (3:67).

#### THE BATTLE OF TANNENBERG

When Hindenburg and Ludendorff arrived at the Eighth Army on 23 August, the crucial question was whether or not to turn the entire army south against Samsonov. This, in turn, depended upon what Rennenkampf would do. Rennenkampf did start to advance again on the 23rd, but instead of edging to the south to trap the German army, he moved straight to the East (4:323-324). After conferring with Scholtz on the 24th, Ludendorff decided to throw the weight of the Eighth Army against Samsonov. Ludendorff's plan was to have Francois envelop Samsonov's left flank by attacking Usdau on 25 August. Francois refused on the basis that his heavy artillery was not yet unloaded from the trains (4:323-324). On 25 August, Ludendorff sent orders to Mackensen

and von Below to complete the double envelopment of Samsonov's army by attacking his right flank on the 26th. Meanwhile Scholtz, reinforced by Morgen, was to renew the battle at Samsonov's center (4:328). Also on 25 August, Moltke made the decision to withdraw two corps from the Western Front and send them to the Eighth Army. This move would not affect the Battle of Tannenberg as the fresh troops would not arrive before the battle was over (4:329).

On 26 August, General Artamonov came under heavy attack from Francois. General Martos reached as far as Hohenstein but was driven back by Scholtz. General Klyuev was moving toward Allenstein meeting only light resistance. Samsonov was "content and satisfied" (3:69). Unknown to Samsonov (he would not find out until 0930L on the 28th (3:74)), Mackensen had outflanked and routed the VIth Corps on Samsonov's right flank (4:336).

On 27 August, Francois captured Usdau at noon. (See appendix 4.) Klyuev reached Allenstein against little opposition. Martos engaged in heavy fighting but held (3:72). By 28 August, the extent of the Russian disaster was becoming clear. Artamonov and Kondratovich were forced back on the left. The Martos still held in the middle. Klyuev, recalled from Allenstein to support Martos, "arrived late and attacked without energy" (3:81) Blagovyeshchenski on the right continued to retreat through Ortelsburg (3:73,81). The Germans poured through the gap on the left and occupied Neidenburg (3:81). In the early morning hours of 29 August, Martos finally abandoned his positions and tried to

move south (3:81). Martos and Klyuev finally surrendered with their staffs on 30 August (3:86).

The last time Knox saw Samsonov was late on the 28th. Samsonov had disbanded his headquarters and with seven of his staff and a small detachment of Cossacks went forward to take personal command of the battle (3:73-74). General Postovski, Samsonov's Chief of Staff, later told Knox of Samsonov's death the night of 29-30 August:

Samsonov said repeatedly that the disgrace of such a defeat was more than he could bear. 'The Emperor trusted me. How can I face him after such a disaster?' He went aside and his staff heard a shot. They searched for his body without success, but all are convinced that he shot himself (3:82).

With Samsonov's army destroyed, Hindenburg and Ludendorff could turn their attention back to Rennenkampf. The Eighth Army attacked on 9 September and turned Rennenkampf's left flank. In this action the Russians lost another 60,000 men (3:90).

The results of this campaign in East Prussia are staggering. In a little over three weeks, the German Eighth Army, averaging a little over 150,000 men, inflicted losses of almost 250,000 men and drove the Russians from East Prussia (3:92). In the Battle of Tannenberg alone, 92,000 prisoners were taken, requiring 60 trains to bring them to the German rear (4:343).

## Section Two

### THE PRINCIPLES OF WAR AND HOW THEY WERE APPLIED AT THE BATTLE OF TANNENBERG

Principles of war are "major truths" that have been proven true in battle time after time (5:4). Today's military professional can use them as guidelines to learn how to fight and win. In this section each of the principles of war found in the new draft Air Force Manual 1-1 is defined. Use of each principle is illustrated by showing examples of how each side used, ignored, or misused them during the Battle of Tannenberg.

The Battle of Tannenberg, 15 - 30 August 1914, was the initial battle of World War I between the Germans and the Russians. During the battle, the German Eighth Army drove two Russian armies, the First and the Second, out of East Prussia. Russian losses amounted to almost a quarter of a million men (3:92). However, the action caused the Germans to withdraw two corps from the western front prior to the Battle of the Marne and because of this might have altered the outcome of the war (3:92).

#### OBJECTIVE

The most basic principle for success in any military operation is a clear and concise statement of a realistic objective. The objective defines what the military action intends to accomplish and normally describes the

nature and scope of an operation. An objective may vary from the overall objective of a broad military operation to the detailed objective of a specific attack. The ultimate military objective of war is to neutralize or destroy the enemy's armed forces and his will to fight. However, the intimate bond which ties war to politics cannot be ignored. War is a means to achieving a political objective and must never be considered apart from the political end. Consequently, political imperatives shape and define military objectives. It follows that the objective of each military operation must contribute to the overall political objective (5:4).

### German

The German strategic objective was to defend East Prussia while achieving a rapid and decisive victory in the West against France. Tactically, the Germans wanted to defeat one Russian army at a time (4:87). The Germans accomplished their objectives in East Prussia, but at the cost of their strategic objective in the west.

The Germans held steadfast to their objectives in East Prussia. General Prittwitz und Gaffron, Commander of the German Eighth Army attempted to stop General Rennenkampf's First Russian Army at Gumbinnen on 20 August 1914. This engagement was a Russian victory (3:56). Prittwitz was sufficiently panicked to inform the German Supreme Headquarters that he would retreat out of East Prussia (4:313). Because Prittwitz threatened to abandon the objective, General Moltke, Chief of the German General Staff, replaced him with General von Hindenburg, as Commander, and General Ludendorff, as Chief of Staff (4:317-318). Relative inactivity by Rennenkampf following Gumbinnen allowed the Germans to pivot their army and envelop General Samsonov's Second Russian

Army advancing from the south. In the ensuing Battle of Tannenberg, Samsonov's army was destroyed. The Germans then moved back north and drove Rennenkampf back out of Prussia (3:90).

As great as this military victory was for the Germans, it did not come without a cost. Moltke lost sight of the overall strategic objective of rapid victory over France. Worried by Russia's early success at Gumbinnen, he removed two corps from France to reinforce the Eighth Army. These corps arrived too late to be a factor in Prussia (4:329). However, their absence in the West during the Battle of the Marne was significant. Marshal Foch said that their removal "eased the task of the French and British armies at the Battle of the Marne" (1:ix).

### Russian

From a Russian viewpoint, the Battle of Tannenberg is an excellent example of political objectives controlling military objectives. Originally Russia planned to act on the defense against Germany while going on the offensive in the south against Austria. The First Russian Army would hold Germany at bay in Prussia. The Second Russian Army would be held in reserve near Warsaw (3:46-47). Franco-Russian conferences in 1911, 1912, and 1913 resulted in Russia agreeing to attack Germany by the fifteenth day after mobilization (1:54). Tsar Nikolai II agreed to have two armies attack East Prussia (1:68-69). Even after mobilization in August 1914, Russian military objectives remained in a state of flux. French Ambassador Paleologue begged Nikolai to

have his armies go on an immediate offensive; "otherwise there is a risk of the French army being overwhelmed" (1:88). The Russians developed a new objective--Berlin (1:89). The end result was a movement of corps between the two armies in the Northwest Army Group. Neither Russian army would take the field at full strength.

### OFFENSIVE

Unless offensive action is initiated, military victory is seldom possible. The principle of offensive is to act rather than react. The offensive enables commanders to select priorities of attack, as well as the time, place, and weaponry necessary to achieve objectives (5:5).

#### German

The Germans constantly followed the principle of offensive. They chose to attack Rennenkampf's army from a prepared position along the Angerapp River (4:308). Because of Francois' Ist Corps' precipitous attack on the Russians near Stalluponen, Prittwitz moved the attack forward to near Gumbinnen. Even after the Russians won the encounter, the Germans maintained the offensive, wheeling their entire army to the south to attack and overwhelm Samsonov.

The only time the Germans wavered from the principle of offensive was after Gumbinnen when Prittwitz wanted to retreat to the Vistula River (4:313). This threatened retreat caused Moltke to relieve Prittwitz (4:313,317), thus maintaining German adherence to the principle of offense.

## Russian

Although the French doctrine of "the offensive at all costs" had a great impact on the Russian General Staff (1:61), the lack of offensive action by the Russians is what doomed Samsonov's army. Specifically, it was the inaction by Rennenkampf after Gumbinnen that allowed the Germans to wheel and attack Samsonov. Rennenkampf waited until the 23rd before advancing. During that time he lost contact with the German army and advanced in the wrong direction (4:323).

This delay has proved controversial. Knox criticized Rennenkampf for halting.

B----- [one of Rennenkampf's staff] asked the General if he might go to bed, and was told he might, but that he should not undress. He lay down for an hour and was awakened by Rennenkampf, who stood beside his bed, smiling and said: 'You can take off your clothes now; the Germans are retiring.' If Rennenkampf and his staff had any proper understanding of their task they would have recognized that the time when the Germans were retiring was precisely the time to exert every effort to keep in touch, and certainly not the time to undress and go to bed! (3:88).

Golovin was more charitable toward Rennenkampf. Rennenkampf delayed because he was without reserves and feared a possible German counterattack (1:155). Rennenkampf delayed to reorganize his lines of communication (1:157). As for Rennenkampf losing contact with the Germans, Golovin believed that the longer ranges of modern combat made such "breakaways" from an enemy much easier (1:154).

## SURPRISE

Surprise is the attack of an enemy at a time, place and manner for which the enemy is neither prepared nor expecting an attack. The principle of surprise is achieved when an enemy is unable to react effectively to an attack. Surprise is achieved through security, deception, audacity, originality, and timely execution. Surprise can decisively shift the balance of power. Surprise gives attacking forces the advantage of seizing the initiative while forcing the enemy to react. When other factors influencing the conduct of war are unfavorable, surprise may be the key element in achieving the objective. The execution of surprise attacks can often reverse the military situation, generate opportunities for air and surface forces to seize the offensive, and disrupt the cohesion and fighting effectiveness of enemy forces.... Surprise requires a commander to have adequate command, control, and communications to direct his forces, accurate intelligence information to exploit enemy weaknesses, effective deception to divert enemy attention, and sufficient security to deny an enemy sufficient warning and reaction to a surprise attack (5:5).

### German

The Germans did not utilize the principle of surprise until after Gumbinnen on 20 August 1914. Knox stated that the Russian General Staff accurately forecast the German deployment in Prussia, the German troop strength, and their defensive posture (3:41). It was only when they broke away from Rennenkampf that the Germans were able to use surprise.

As late as the 27th, the Russians had no idea that the Germans were no longer in retreat but had wheeled and were enveloping Samsonov's army. On this date General Jilinski, Commander-in-Chief Armies of the Northwest Front, ordered Rennenkampf to pursue "those enemy troops which do not take refuge in Konigsberg and may be supposed to be retreating to the

Vistula" (4:333). That same day scouts from one of Samsonov's corps reported troop movements. Samsonov's staff concluded they were elements of another of his corps. Actually the troops were General Mackensen's German XVIIth Corps (3:84).

### Russian

The Russians never utilized the principle of surprise. The Germans had long ago purchased an early version of the Russian two-pronged attack plan (4:87). The Russians had only three railheads from which to launch an offensive against East Prussia (1:106). This made German intelligence gathering easier. Finally, Samsonov relied on radios to transmit orders, and these were sent in the clear allowing the Germans full knowledge of Russian intentions (3:84).

## SECURITY

Security protects friendly military operations from enemy activities which could hamper or defeat aerospace forces. Security is taking continuous, positive measures to prevent surprise and preserve freedom of action. Security involves active and passive defensive measures and the denial of useful information to an enemy. To deny an enemy knowledge of friendly capabilities and actions requires a concerted effort in both peace and war. Security protects friendly forces from an effective enemy attack through defensive operations and by masking the location, strength, and intentions of friendly forces (5:5).

### German

The Germans successfully used the principle of security, hiding their wheeling maneuver and envelopment of Samsonov until it was too late for the Russians to escape. The Germans also had

an effective intelligence network. General Postovski, Samsonov's Chief of Staff, admitted that the German Intelligence Service was far superior to that of the Russians (3:82). The Germans were also able to use effective aerial reconnaissance of the Russian positions. The Russians could do nothing about this (1:186).

### Russian

The Russians exhibited a total lack of security. The Germans bought a version of the Russian attack plan (4:87). The Russians transmitted orders over the radio without encoding them (3:84). As one of the German staff acknowledged, "We had an ally, the enemy. We knew all the enemy's plans." (4:344).

In addition to their lack of security, the Russians had no effective intelligence on the Germans. General Martos, one of Samsonov's Corps Commanders, stated, "I approached Neidenburg blindfold." (1:186). Russian divisions did not have intelligence officers (3:66). Knox relates the following conversation with Postovski:

I asked him if he thought any troops had been moved from the Western theatre, and he confessed: 'Unfortunately we have taken no note of the units opposed to us.' (3:82).

### MASS and ECONOMY OF FORCE

Success in achieving objectives with aerospace power requires a proper balance between the principles of mass and economy of force. Concentrated firepower can overwhelm enemy defenses and secure an objective at the right time and place. Because of their characteristics and capabilities, aerospace forces possess the ability to concentrate enormous decisive striking power upon selected targets when and where it is needed most. The impact of these attacks can break the enemy's defenses,

disrupt his plan of attack, destroy the cohesion of his forces, produce the psychological shock that may thwart a critical enemy thrust, or create an opportunity for friendly forces to seize the offensive. Concurrently, using economy of force permits a commander to execute attacks with appropriate mass at the critical time and place without wasting resources on secondary objectives. War will always involve the determination of priorities. The difficulty in determining these priorities is directly proportional to the capabilities and actions of the enemy and the combat environment. Commanders at all levels must determine and continually refine priorities among competing demands for limited aerospace assets. This requires a balance between mass and economy of force, but the paramount consideration for commanders must always be the objective. Expending excessive efforts on secondary objectives would tend to dissipate the strength of aerospace forces and possibly render them incapable of achieving the primary objective. Economy of force helps to preserve the strength of aerospace forces and retain the capability to employ decisive firepower when and where it is needed most (5:6).

#### German

The Germans effectively used both economy of force and mass of firepower in East Prussia. Numerically inferior, the Germans used economy of force by attacking first Rennenkampf with all but one of their available corps and then wheeling and attacking Samsonov with all their force except for two brigades of cavalry which screened Rennenkampf (3:92).

In addition to using economy of force, the Germans effectively used the principle of mass. First, as described above, the Germans did not split the Eighth Army but, except for screening forces, kept it whole. Second, each German Corps had twice the firepower--artillery and machine guns--as a Russian Corps (1:23). Golovin stated that the defeat of both Samsonov and Rennenkampf was "entirely due to the overwhelming

preponderance of the German batteries." (2:133). Knox described the battle for Frankenau: "The German machine-guns were deadly, mowing down rows of Russians immediately as they raised themselves in the potato-fields to fire or to advance." (3:64).

### Russian

The Russians used neither economy of force nor mass effectively. As described above, Russian corps did not have adequate artillery (3:xxii). They separated their two armies, one on each wing and were never able to bring them together. In addition, Jilinski transferred the IInd Corps from Samsonov to Rennenkampf on 22 August. As a result, "the IInd Corps wandered about between the two Russian wings, helping neither" (3:89).

### MANEUVER

War is a complex interaction of moves and countermoves. Maneuver is the movement of friendly forces in relation to enemy forces. Commanders seek to maneuver their strengths selectively against an enemy's weakness while avoiding engagements with forces of superior strength. Effective use of maneuver can maintain the initiative, dictate the terms of engagement, retain security, and position forces at the right time and place to execute surprise attacks. Maneuver permits rapid massing of combat power and effective disengagement of forces. While maneuver is essential, it is not without risk. Moving large forces may lead to loss of cohesion and control (5:6).

### German

In no other campaign of the First World War was maneuver more of a factor than that leading to the Battle of Tannenberg (1:xiii). The Germans moved first in one direction against Rennenkampf, wheeled, moved in another direction, and enveloped

Samsonov. These maneuvers were incredibly complex. To move a corps like Francois' 1st Corps required "170 railway cars for officers, 965 for infantry, 2,960 for cavalry, 1,915 for artillery and supply wagons, 6,010 in all, grouped in 140 trains and an equal number again for all their supplies" (4:95). During the wheeling maneuver, day and night, trains rolled across East Prussia at 30 minute intervals (1:215).

### Russian

The Russians also attempted maneuver with their use of a pincers movement. Their experience illustrates the inverse of this principle, the risk of losing cohesion and control. The Russians never managed to close the pincers and trap the German army.

### TIMING AND TEMPO

Timing and tempo is the principle of executing military operations at a point in time and at a rate which optimizes the use of friendly forces and which inhibits or denies the effectiveness of enemy forces. The purpose is to dominate the action, to remain unpredictable, and to create uncertainty in the mind of the enemy. Commanders seek to influence the timing and tempo of military actions by seizing the initiative and operating beyond the enemy's ability to react effectively. Controlling the action may require a mix of surprise, security, mass and maneuver to take advantage of emerging and fleeting opportunities. Consequently, attacks against an enemy must be executed at a time, frequency, and intensity that will do the most to achieve objectives. Timing and tempo require that commanders have an intelligence structure that can identify opportunities and a command, control, and communications network that can responsively direct combat power to take advantage of those opportunities (5:6).

### German

During the preliminary Battle of Gumbinnen, the Germans violated this principle, and ended losing the encounter. Francois, commanding the northernmost and most advanced German Corps, began his attack before the other German corps had advanced from their defensive positions along the Angerapp River. Thus he had the element of surprise and turned the Russian northern flank. The other corps lost the element of surprise and the Russians broke through Mackensen's Corps in the center (4:309-310).

The Germans did effectively use this principle against Samsonov. As described under each of the following principles, they used surprise, security, mass, and maneuver to take advantage of the opportunity afforded to them by Rennenkampf's failure to advance after Gumbinnen.

### Russian

The Russians never used this principle of timing and tempo. By failing to close their pincers after the German defeat at Gumbinnen, the Russians squandered their opportunity and allowed the German army to break contact.

### UNITY OF COMMAND

Unity of command is the principle of vesting appropriate authority and responsibility in a single commander to effect unity of effort in carrying out an assigned task. Unity of command provides for the effective exercise of leadership and power of decision over assigned forces for the purpose of achieving a common objective. Unity of command obtains unity of effort by the coordinated action

of all forces toward a common goal. While coordination may be attained by cooperation, it is best achieved by giving a single commander full authority (5:6).

### German

Although both the Germans and Russians subscribed to this principle of unity of command on paper, the Germans put it into action. In contrast to Samsonov's army in which each corps fought its own separate battle during the final days of the Battle of Tannenberg, the German corps fought as a whole commanded from above (1:236). This is not to say that the Germans were without frictions. On 26 August, Francois was ordered to attack Usdau by 1000L. He refused because his artillery had not been completely detrained. He was told:

The Army Commander cannot delegate to the Commander of the I Corps the right to settle the time of attack, as the decision regarding this question does not depend alone upon the operations of the I Corps (1:238).

### Russian

Russian unity of command failed utterly. By 29 August, "centralized control of the [Russian] army became a fiction" (1:290). The Russians had two major command and control problems: the communications system and Samsonov himself. The communications system often delayed orders until they reached field commanders too late (3:84). There were orders and counterorders (3:86). General Klyuev, Commander XIIIth Corps, ordered to take Allenstein on the 26th, waited until afternoon before starting to advance because he thought the order would be countermanded (1:218).

The other Russian command and control problem was the absence of the army commander, Samsonov. Samsonov wanted to see the battle with his own eyes (3:85). Early in the morning of the 28th, he rang up the Northwest Army Group and told them: "I shall be temporarily without communication with you." (1:254-255). With his departure his army ceased to be under his control.

### SIMPLICITY

To achieve a unity of effort toward a common goal, guidance must be quick, clear, and concise--it must have simplicity. Simplicity promotes understanding, reduces confusion, and permits ease of execution in the intense and uncertain environment of combat. Simplicity adds to the cohesion of a force by providing unambiguous guidance that fosters a clear understanding of expected actions. Simplicity is an important ingredient in achieving victory, and it must pervade all levels of a military operation. Extensive and meticulous preparation in peacetime enhances the simplicity of an operation during the confusion and friction of wartime. Command structures, strategies, plans, tactics, and procedures must all be clear, simple, and unencumbered to permit ease of execution. Commanders at all levels must strive to establish simplicity in these areas, and the peacetime exercise of forces must strive to meet that same goal (5:7).

#### German

The Germans executed a very complex entrainment and wheeling maneuver successfully. This implies that the principle of simplicity was adhered to. Each step had been simple, practical, and practiced.

#### Russian

The relatively simple Russian pincers movement failed due to, in part, the lack of timing between the wings. The previous

spring (April 1914), the Russians simulated the same advance during war games held at Kiev. Even then the maneuver failed because the "Germans" attacked the northern wing before the southern could advance to close the trap (1:37). Even in practice Jilinski attacked before mobilization was complete and ignored his lines of supply and communication (1:38). What is unworkable in practice often fails in war.

### LOGISTICS

Logistics is the principle of sustaining both man and machine in combat. Logistics is the principle of obtaining, moving, and maintaining warfighting potential. Success in warfare depends on getting sufficient men and machines in the right position at the right time. This requires a simple, secure, and flexible logistics system to be an integral part of an air operation. Regardless of the scope and nature of a military operation, logistics is one principle that must always be given attention. Logistics can limit the extent of an operation or permit the attainment of objectives. In sustained air warfare, logistics may require the constant attention of an air commander. This can impose a competing and draining demand on the time and energy of a commander, particularly when that commander may be immersed in making critical operational decisions. This competing demand will also impose a heavy burden on a command, control, and communications network. The information, mechanics, and decisions required to get men, machines, and their required materiel where and when they are needed is extensive and demanding. During intense combat, these logistics decisions may even tend to saturate the time and attention of a commander. To reduce the stresses imposed by potentially critical logistics decisions, commanders must establish a simple and secure logistic system in peacetime that can reduce the burden of constant attention in wartime (5:7).

#### German

The Germans used logistics to their advantage.

Transportation was an integral part of the German military

establishment. The first person the German General Staff informed of the change of command of the Eighth Army was the Director of Railways on the Eastern Front (4:320). It was this close cooperation between the German commanders and the logisticians that allowed the intricate movement of Francois' entire Corps a long distance by rail as cited above.

### Russian

Throughout their campaign in East Prussia, the Russian armies were hampered by logistics. Golovin drew this conclusion from Rennenkampf's decision to delay:

The existence of a supply system which functions properly and constantly is the most important condition in fighting a modern fire battle, otherwise an army is forced to halt, and to let a defeated enemy escape from its pursuit, and, what is still worse, to break off a battle and retreat owing to lack of ammunition (1:157).

Russian logistic problems came in three general areas: attacking before mobilization was completed, lack of transportation, and lack of food. General Postovski characterized the advance of Samsonov's army as an "adventure" and said: "Sufficient time has not been allowed for the mobilization and the transport is not up" (3:61). The Russian army simply did not have a sufficient logistics infrastructure. In 1914, the Russian government had only 679 automobiles and was only able to requisition an additional 475 over the 13 months after mobilization (3:xxxv). Russia had only one kilometer of railroad per 100 square kilometers compared to Germany's 10.6 kilometers for the same area (2:34). In addition the Russian

railroads were built to get troops to the frontier, not to move troops along the frontier as were Germany's (2:35).

The result of these shortcomings was a lack of support for the troops. A Russian Vith Corps staff officer stated, "[the corps] had marched 13 days without a halt, without proper transport and most of the time without bread" (3:74).

### COHESION

Cohesion is the principle of establishing and maintaining the warfighting spirit and capability of a force to win. Cohesion is the cement that holds a unit together through the trials of combat and is critical to the fighting effectiveness of a force. Throughout military experience, cohesive forces have generally achieved victory, while disjointed efforts have usually met defeat. Cohesion depends directly on the spirit a leader inspires in his people, the shared experiences of a force in training or combat, and the sustained operational capability of a force. Commanders build cohesion through effective leadership and generating a sense of common identity and shared purpose. Leaders maintain cohesion by communicating objectives clearly, demonstrating genuine concern for the morale and welfare of their people, and employing men and machines according to the dictates of sound military doctrine. Cohesion in a force is produced over time through effective leadership at all levels of command (5:8).

### German

As was pointed out above the Germans fought as one unified army. Knox noted:

They [the Germans], however, knew their own machine and properly assessed the value of that of the enemy. They knew they could count on the co-operation with one another of the corps and subordinate leaders, who had all been trained in one school of military doctrine, and that they could rely on the educated patriotism of the men who were defending their homes (3:92).

Russian

As early as 25 August, Knox noted "unfortunately there seems to be a lack of proper co-operation between the Russian corps commanders" (3:65).

## Section Three

### DISCUSSION QUESTIONS

This section consists of a series of discussion questions in a guided discussion format. These questions are designed for use by a seminar chairperson in guiding seminar discussion of the use and misuse of the principles of war by each side during the Battle of Tannenberg. The questions are not all-inclusive but, rather, should illustrate some of the possible areas of discussion.

#### 1. Lead-Off Question

What were the German national and military objectives?

#### Discussion

The German national objective was to beat the French, British, and Russian allies. Militarily, in an effort to avoid a protracted two-front war, the Germans adopted the Schlieffen Plan (4:35). They threw the weight of their military might against France in the hope of quickly knocking her out of the war. In the East, against Russia, Germany assumed a defensive posture with only a minimum force in East Prussia (1:394).

a. Follow-Up Question

Does this mean that the Germans disregarded the principle of the offensive?

Discussion

Although assuming a defensive posture in East Prussia until the French could be defeated, the Germans did not forget the principle of offensive. They knew that the Russians would attack with two armies, one on each side of the Masurian Lakes in the hope of trapping the Germans between the two pincers. The Germans heeded the principle of the offensive by attacking the army that advanced more rapidly. When that army delayed after Stalluponen, the Germans maintained the offensive by swinging around to the south to attack Samsonov.

b. Follow-Up Question

Did the Germans accomplish their objectives?

Discussion

The Germans accomplished their tactical objectives. They successfully defended East Prussia by crushing Samsonov's army at the Battle of Tannenberg. In doing so they lost sight of the overall strategic objective and withdrew two corps from the Western Front. This contributed to the German defeat at the Battle of the Marne and the subsequent stalemate in the west (1:ix).

## 2. Lead-Off Question

What were the Russian national and military objectives?

### Discussion

The Russians wanted to beat the Germans and their allies, the Austrians. Militarily, the Russian objectives in East Prussia shifted from going on the defensive (3:47) to using two armies trying to trap the Germans in a pincers movement (4:85). During the mobilization, the Russians even changed this objective to that of a quick advance toward Berlin (1:89).

### a. Follow-Up Question

What was the cause of this change in objectives?

### Discussion

The French knew that most of Germany's army would be aimed at them, so they pressured the Russians into attacking East Prussia as rapidly as possible to take some of the German pressure off of the Western Front (1:88). Thus political considerations kept changing the Russian military objectives.

### b. Follow-Up Question

How did the shifting Russian objectives affect Russian performance during the Battle of Tannenberg?

### Discussion

Russia attacked East Prussia before mobilization was complete. This exacerbated their logistics problems. The shifting objectives caused the Russians to shift the composition of the

two armies attacking East Prussia. Because units were still in transit as the Battle of Tannenberg commenced, Samsonov's army was not at full strength. This violated the principles of mass and economy of force. Finally, by attacking before the two armies were completely mobilized, the Russians caused problems of unity of command, cohesion, and timing and tempo. Rennenkampf's army mobilized closer to the border and was able to attack first. Samsonov's army was never able to catch up. The Russian pincers never closed.

c. Follow-Up Question

Did the Russians succeed in meeting their objectives?

Discussion

The Russians failed completely in their invasion of East Prussia. This contributed to the eventual disintegration of the Russian Tsarist government. The Russians did succeed in causing the Germans to withdraw some forces from France.

3. Lead-Off Question

How did the Russian and German logistic infrastructures compare?

Discussion

Russia was ill-prepared for war. There was a shortage of motorized vehicles. The Russian railroad network was less than one tenth as dense as that of the Germans (2:34). The Russian industrial base and armament industry was much less developed than that of Germany.

a. Follow-Up Question

How did the Russian railway system contribute to their defeat at the Battle of Tannenberg?

Discussion

Russia had only three railways approaching the East Prussian frontier (1:106). Thus the Russians had very little freedom of choice as to where the invasion routes would enter Prussia. The Germans knew these routes; the element of surprise was lost. Second, none of the Russian railroads paralleled the border (2:35). This delayed the shifting of units from one army to the other and contributed to the problems of the two armies not being at full strength.

b. Follow-Up Question

How did the German railway system contribute to its victory at the Battle of Tannenberg?

Discussion

The railroad system in East Prussia was dense and was built to facilitate movement of troops along the frontier with Russia. Thus after the Battle of Gumbinnen, the Germans were able to rapidly shift Francois' Corps by rail from near Insterburg to near Deutsch Eylau. The railway system allowed rapid German maneuver, allowed them to remain on the offensive, gave them the element of surprise, and allowed them to control the timing and

tempo—all important factors in the German victory at the Battle  
of Tannenberg.

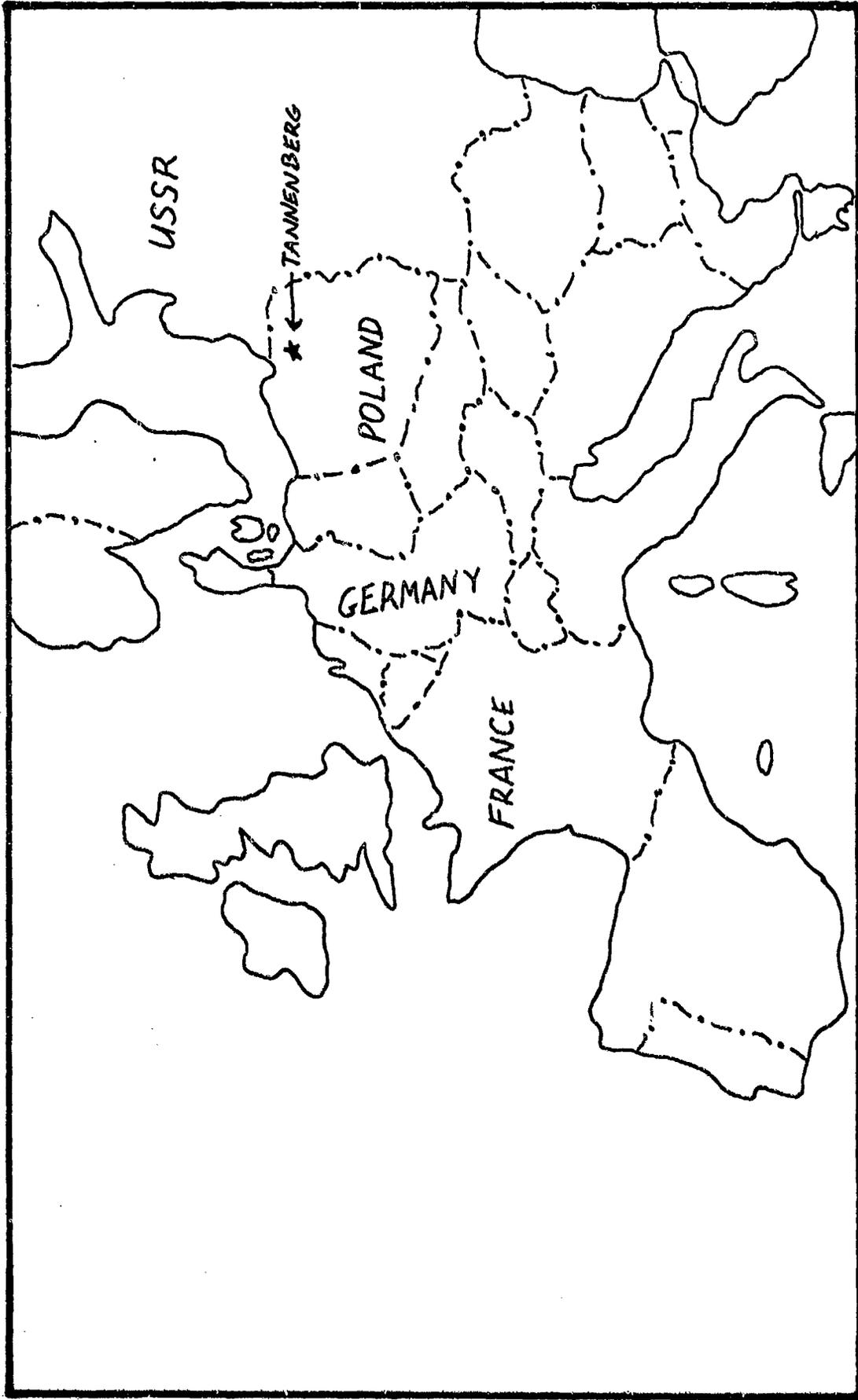
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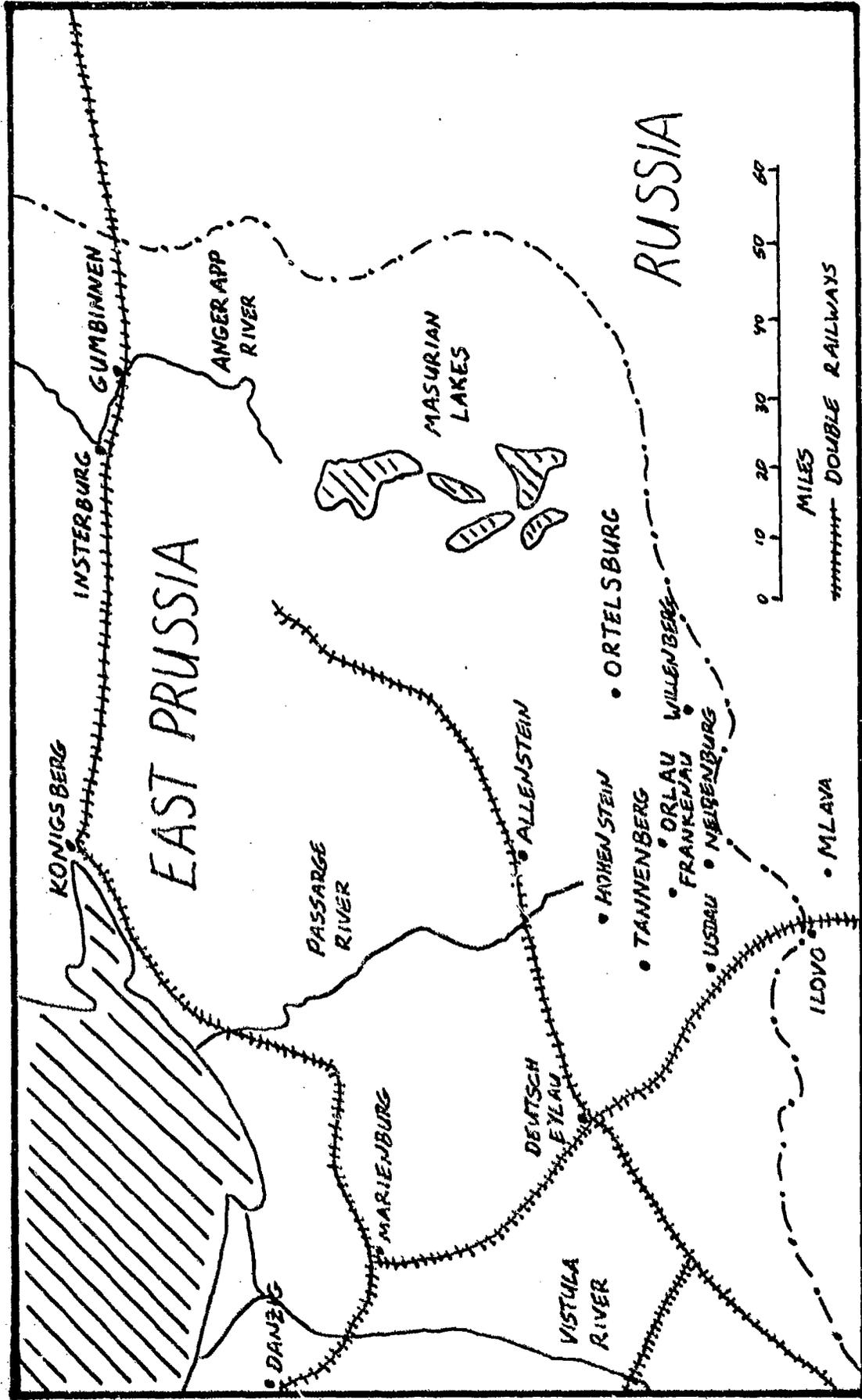
APPENDIX

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APPENDIX I. PRESENT DAY EUROPE



APPENDIX 2. EAST PRUSSIA IN 1914 (AFTER 3:MAP 2)





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