

THE GREAT WAR

SITUATION BOOK & DESIGNER'S NOTES



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1. THE SITUATIONS

There are eight Situation Games and one Campaign Game in Great War. The Situation Games are more or less identical as to rules and general course of play, and each is described in a separate Situation Outline. The Campaign Game is so different from the Situation Games that a special section of the rules is devoted to it; however, for the Situation Games each Situation Outline contains the same basic information.

1.1 The Situation Outline

Situation Game and Number. Indicates which of the eight situations is being played.

Length. The number of game turns in the situation, with real-time equivalent months.

Fronts. In most situations this is used to indicate which areas on a particular "front" are jointly occupied by both sides in the game. Thus, if the section reads: "Salonika: Albania, Epirus, South Macedonia," and you are directed to place Units on the Salonika Front, you are free to place them in any of the indicated areas in any way you wish.

Starting Forces. The players may deploy ground units either as field or trench units, subject to limitations in Technology Notes. A layer may be mandated to place units in a specified area, or the instructions may merely indicate a certain number of units must be on a certain front as noted above. The formula used is: "1 x 6-4 & 1 x 3-4 Artois," which means the player must place one 6-4 army and one 3-4 corps in Artois. All nationality indications must be obeyed.

This section also includes the units available to each neutral should any such become involved in the Game.

Mobilization Pools. This section gives each country's remaining mobilization pool at the start of the situation.

National Resource Credits. This section sets forth the NRC balance available to each country at the start of the situation.

Notes. This section includes various modifications to the basic situation, such as the entry of hitherto neutral powers, occasional optional historical variants, and so on. The portion labeled "Technology" indicates the types of units and attacks and the number permitted per game turn to each side. The "NRC Spending Ceiling" indicates the percentage of its starting NRC each country may expend voluntarily on any one game turn, but the US is not bound by this limit. The "Territorial Notes" indicate who controls certain areas at the start of the situation where ambiguity may exist.

2. SITUATION 1: THE GUNS OF AUGUST

2.1 Length: five game turns (Aug.-Dec. 1914)

2.2 Starting Forces:

Central Powers (Move First)

Germany:

4 x 8-4 Westphalia

Austria:

1 x 6-4 Banat

2 x 8-4 Lorraine

1 x 8-4 Alsace

1 x 8-4 East Prussia

1 x 4-4 Hanover

2 x 8-10 Nav Oldenburg

1 x 2-10 Nav Albania

ALLIES (Deploy First)

Britain:

1 x 3-4 Kent

1 x 8-10 Nav Kent

2 x 8-10 Nav & 1 x 1-2 Mar Scotland

1 x 2-10 Nav Malta

Russia:

1 x 6-4 Kovno

1 x 6-4 Warsaw

1 x 6-4 Volhynia

1 x 6-4 Podolia

1 x 3-4 Batum

2 x 3-4 & 1 x 4-10 Nav

St. Petersburg

1 x 4-10 Nav Crimea

NEUTRALS

Turkey:

3 x 3-4 Constantinople

2 x 3-4 Trebizond

Italy:

3 x 6-4

2 x 4-10 Nav

Greece: 2 x 3-4

Holland: 1 x 3-4.

2.3 MOBILIZATION POOLS

Germany: 4 x 8-4; 9 x 4-4; 2 x 8-10 Nav; 1 x 1-2 Mar.

Austria: 2 x 6-4; 1 x 3-4; 2 x 4-10 Nav.

Britain: 8 x 6-4; 3 x 3-4; 2 x 8-10 Nav.

France: 3 x 6-4; 2 x 3-4; 3 x 4-10 Nav.

Russia: 10 x 6-4; 1 x 3-4; 2 x 4-10 Nav.

Serbia: 2 x 3-4.

Belgium: 1 x 3-4.

Turkey: 5 x 3-4.

Bulgaria: 2 x 3-4.

Italy: 3 x 6-4; 4 x 3-4; 2 x 4-10 Nav.

USA: 8 x 6-4; 4 x 3-4; 1 x 8-10 Nav.

Greece: 1 x 3-4.

Romania: 1 x 3-4.

Holland: 1 x 3-4.

2.4 NATIONAL RESOURCE CREDITS

Germany 50

Austria 28

1 x 3-4 Dalmatia

1 x 3-4 Bosnia

1 x 6-4 Galicia

1 x 3-4 Bukovina

1 x 4-10 Nav Trieste

France:

3 x 6-4 Verdun

2 x 6-4 Belfort

1 x 3-4 Gascony

1 x 3-4 & 1 x 4-10

Nav Provence

1 x 1-2 Mar **Picardie.**

Serbia:

1 x 3-4 Belgrad

1 x 3-4 **Montenegro**

Belgium:

2 x 3-4 Brabant

Bulgaria:

3 x 3-4

USA:

None

Romania: 3 x 3-4.

Britain 42
France 30
Russia 30
Serbia 4
Belgium 6

Italy 21
USA **
Greece 5
Romania 6
Holland 6

1 1 . Territorial Notes. All countries control their respective national territories. Luxembourg is considered part of Belgium and Montenegro part of Serbia.

3 SITUATION GAME 2: STALEMATE

2.5 NOTES

1. Violation of Neutrality Costs: these need not be paid among Germany, Austria, Britain, France, Belgium, Russia and Serbia.

2. Economic Warfare: neither side may institute economic warfare except as follows. Britain may begin restricted economic attacks against Germany on the Oct 1914 game turn; Germany may not undertake economic warfare at any time, but beginning on the Sept 1914 game turn may undertake three free restricted economic attacks against Britain each game turn thereafter unless at least two naval combat strength points of British naval units are kept off the map for each such economic attack. These German limited economic attacks may be valid each game turn the British do not keep naval units off the map in sufficient amounts through the December 1914 game turn. Britain may not combat these German economic attacks by devoting NRC to them.

3. Turkey: beginning on the September 1914 game turn, and on each game turn thereafter, the Central Powers player may roll a die to determine if Turkey enters the war as a friend of the Central Powers. A roll of one or two is sufficient to bring Turkey into the war, or one through four if a German naval unit is interned in Turkey.

4. Italy. At the start of the Game, after all initial deployments have been made, the Central Powers player rolls a die to determine if Italy enters the war on his side: a roll of one is sufficient. If a one is not obtained, Italy remains neutral and no other rolls are made.

5. Romania: same provision as for Italy.

6. Belgian Neutrality Optional Rule: the game may begin with Belgium and Britain neutral. Britain enters the game as a French ally only on a German violation of Belgian neutrality, or on a die roll of one or two made at the start of each game turn, but Britain may never enter the game if France violates Belgian neutrality.

7. German Mediterranean Squadron Option. Instead of a German 2-10 naval unit in Albania at the start of the game, place a German 4-10 naval unit. The Goeben and her escort were scheduled to be replaced by an equal force within weeks of the outbreak of the war. If the schedule had been slightly different both German task forces would have been available at the outbreak of the war.

8. Amphibious Warfare Restriction. Only Britain may conduct amphibious landings during the 1914 situation.

9. Technology: field status only; assault attacks only; limited economic attacks as noted above.

10. NRC Spending Ceiling: 250 of each major power's initial game NRC on any one game turn.

3.1 LENGTH: six game turns (Jan-Jun 1915)

3.2 FRONTS

Western: Flanders, Artois, Picardie, Verdun, Alsace.

Eastern: East Prussia, Warsaw, Kielce, Krakow, Bukovina.

3.3 STARTING FORCES

ALLIES (Move First)

Britain:

1 x 6-4 & 1 x 3-4 Western
1 x 6-4 Kent
1 x 3-4 & 1 x 8-10 Nav &
1 x 1-2 Mar Alexandria
2 x 8-10 Nav Scotland.

France:

6 x 6-4 Western
1 x 4-10 Provence

Serbia:

2 x 3-4 Belgrad

Belgium:

2 x 3-4 Flanders

Russia:

5 x 6-4 Eastern
1 x 3-4 Batum
1 x 3-4 & 1 x 4-10 Nav
St. Petersburg
1 x 4-10 Nav Crimea.

CENTRAL POWERS (Deploy First)

Germany:

6 x 8-4 & 2 x 4-4 Western
2 x 8-4 & 1 x 4-4 Eastern
2 x 8-10 Nav Oldenburg
1 x 2-10 Nav Constantinople

Austria:

3 x 6-4 Eastern
1 x 3-4 Dalmatia
1 x 3-4 Bosnia
1 x 3-4 Slavonia
1 x 3-4 Banat
1 x 4-10 Nav Trieste

Turkey:

2 x 3-4 Constantinople
1 x 3-4 Jerusalem
1 x 3-4 Aleppo
1 x 3-4 Batum

NEUTRALS

Bulgaria:

3 x 3-4

Italy:

3 x 6-4
1 x 4-10 Nav .

USA:

None

Greece:

2 x 3-4

Romania:

3 x 3-4

Holland:

1 x 3-4

3.4 MOBILIZATION POOL

Germany: 4 x 8-4; 7 x 4-4; 2 x 8-10 Nav; 1 x 1-2 Mar

Austria: 1 x 6-4; 2 x 3-4; 2 x 4-10 Nav

Turkey: 5 x 3-4

Bulgaria: 2 x 3-4

Britain: 6 x 6-4; 2 x 3-4; 2 x 8-10 Nav

France: 2 x 6-4; 4 x 3-4; 2 x 4-10 Nav; 1 x 1 – 2 Mar

Russia: 9 x 6-4; 2 x 3-4; 2 x 4-10 Nav

Italy: 3 x 6-4; 4 x 3-4; 3 x 4-10 Nav

USA: 8 x 6-4; 4 x 3-4; 1 x 8-10 Nav

Serbia: 2 x 3-4

Belgium: 1 x 3-4

Greece: 1 x 3-4

Romania: 1 x 3-4

Holland: 1 x 3-4

3.5 NATIONAL RESOURCE CREDITS

Germany 64

Austria 33

Turkey 16

Bulgaria 5

Britain 49

France 25

Russia 40

Italy 27

USA **

Serbia 4

Belgium 0

Greece 5

Romania 6

Holland 6

3.6 NOTES

1. British Navy: on the Feb 1915 game turn the Allied player gets one Br 2-10 Nav at any port in England.

2. Italy: beginning on the Mar 1915 game turn, the Allied player rolls a die each Reinforcement Segment to determine if Italy joins the Allies. A roll of one or two is sufficient.

3. Technology: trench or field status; assault attacks only; limited economic attacks only .

4. NRC Spending Ceiling: 25 percent of each major power's initial NRC on any one game turn.

5. Territorial Notes: all players control all areas behind their fronts. In the Caucasus, Russia controls all of Russia except Batum, which is contested with Turkey.

6 . Special Historical Options: the players may introduce any of these which they feel are of interest.

A. Italy as a Central Power: the Central Powers have control of Italy, the Italian units and the Italian NRC. Deployment Limit: France must place one 3-4 from the Western Front in Provence; Italy must place at least one 3-4 in Piedmont; Austrian 4-10 Nav may deploy with the Italian naval units.

B. Romania as a German minor ally: the Central Powers control Romania, the Romanian units, and the Romanian NRC . Deployment Limits: the Eastern Front includes Moldavia.

C. Greek Participation: on the Jan 1915 game turn a die is rolled. On a one Greece becomes a friend of the Allies; on a six Greece becomes a friend of the Central Powers; on a two through five, roll again next game turn .

D. Turkey: assume either that Turkey is neutral (but may join the Central Powers by die roll as in Situation 1), or is a friend of the Allies.

4 SITUATION GAME 3: THE DONKEYS

4.1 LENGTH: six game turns (July - Dec 1915)

4.2 FRONTS

Western: Flanders, Artois, Picardie, Verdun and Alsace.

Eastern: East Prussia, Warsaw, Kielce, Krakow and Bukovina.

Italian: Tyrol and Trieste.

4.3 STARTING FORCES

ALLIES (Move First)

Britain:

2 x 6-4 Western

1 x 6-4 Gallipoli

1 x 6-4 & 3 x 8-10 Kent

1 x 8-10 Alexandria.

Russia:

6 x 6-4 & 1 x 3-4 Eastern

1 x 6-4 Erzerum

1 x 3-4 & 1 x 4-10 Nav St. Petersburg

1 x 4-10 Nav Crimea

Serbia:

3 x 3-4 Belgrad

CENTRAL POWERS (Deploy First)

Germany:

7 x 8-4 & 2 x 4-4 Western

3 x 8-4 & 1 x 4-4 Eastern

1 x 4-4 Banat

2 x 8-10 Oldenburg

1 x 2-10 Constantinople

Turkey:

2 x 3-4 Gallipoli

1 x 3-4 Kut

2 x 3-4 Erzerum

1 x 3-4 Constantinople.

NEUTRALS

Bulgaria:

3 x 3-4

Greece:

2 x 3-4

Holland:

1 x 3-4.

4.4 MOBILIZATION POOL

Germany: 2 x 8-4 ; 6 x 4-4; 2 x 8-10; 1 x 1-2 Mar.

Austria: 2 x 4-10 Nav .

Turkey: 3 x 3-4.

Bulgaria: 2 x 3-4.

France:

7 x 6-4 & 1 x 3-4 Western

1 x 4-10 Nav Alexandria

Italy:

2 x 6-4 & 2 x 3-4 Italian

and Venetia

2 x 4-10 Nav Puglia

Belgium:

2 x 3-4 Flanders

Austria:

2 x 6-4 Eastern

3 x 3-4 Italian and Carinthia

1 x 6-4 & 3 x 3-4 Bosnia,

Dalmatia and Slavonia

1 x 4-10 Nav Dalmatia

USA:

None

Romania:

3 x 3-4

Britain: 5 x 6-4; 2 x 3-4; 1 x 8-10 Nav ; 1 x 1-2 Mar .

France: 2 x 6-4; 2 x 3-4; 2 x 4-10 Nav ; 1 x 1-2 Mar .

Russia: 6 x 6-4; 2 x 3-4; 2 x 4-10 Nav .

Italy: 2 x 6-4; 2 x 3-4; 2 x 4-10 Nav .

USA: 8 x 6-4; 4 x 3-4; 1 x 8-10 Nav .

Serbia: 1 x 3-4.

Belgium: 1 x 3-4.

Greece: 1 x 3-4.

Romania: 1 x 3-4.

Holland: 1 x 3-4.

4.5 NATIONAL RESOURCE CREDITS

| | |
|------------|-----------|
| Germany 76 | Italy 34 |
| Austria 39 | USA ** |
| Turkey 16 | Serbia 4 |
| Bulgaria 5 | Belgium 0 |
| Britain 59 | Greece 5 |
| France 35 | Romania 6 |
| Russia 45 | Holland 6 |

4.6 NOTES

1. Bulgaria: beginning on his September Reinforcement Segment, the Central Powers player rolls a die for Bulgarian entry: a roll of one or two indicates Bulgaria is part of the Central Powers; otherwise it remains neutral and the roll is made again each succeeding game turn, decreasing the die roll by one for each additional game turn it has to be made.

2. Technology: trench or field status; assault attacks and, for the Central Powers, no more than one tank/infiltration attack per game turn; unrestricted economic warfare.

3. NRC Spending Ceiling: 25 percent of each major power's initial NRC on any one game turn .

4. Territorial Notes. Russia controls Turkish Armenia.

5. Special Historical Options: The players may select any of these that interest them.

A. Gallipoli: instead of a British 6-4 and two Turkish 3-4s in Gallipoli, select any one of the following: Brusa: British 1 x 6-4 in Brusa; Turkish 2 x 3-4 in Brusa & 1 x 3-4 in Gallipoli rather than Constantinople.

Frisia: British 3 x 3-4 in Frisia & 1 x 3-4 in Kent in lieu of 1 x 6-4; German, 3 x 4-4 in Frisia and no 4-4 on the Western Front or in the Banat; Turkish, 1 x 3-4 in Gallipoli & 3 x 3-4 in Erzerum. **Add Dutch 3-4 and Dutch NRC's to Germany. Holland is minor German ally. Also, reduce British NRC balance by 6 for cost of occupying the Dutch Empire. Give Germany a die roll advantage of one on any die roll for US entry.**

Jutland: deployment as for Frisian Option, but in Jutland.

B. Greek Participation: assume Greece is friendly to either the Central Powers or the Allies at the start of the game.

C. Bulgaria: assume Bulgaria does not participate or, by the same die roll as for participation as a Central Powers friend, it becomes friendly to the Allies.

D. If US entry precipitated by Unrestricted Economic Warfare, NRC growth is 1 for the first month and 2 for the second.

5 SITUATION GAME 4: ATTRITION

5.1 LENGTH: 12 game turns (Jan-Dec 1916) .

5.2 FRONTS

Western: Flanders, Artois, Picardie, Verdun and Alsace.

Eastern: Kovno, Vilna, Grodno, Lublin, Galicia and Bukovina.

Italian: Tyrol and Trieste.

5.3 STARTING FORCES

CENTRAL POWERS (Move First)

Germany:

7 x 8-4 & 2 x 4-4 Western
3 x 8-4 & 1 x 4-4 Eastern
1 x 4-4 South Macedonia
2 x 8-10 Nav Oldenburg
1 x 2-10 Nav Constantinople

Austria:

3 x 6-4 Eastern
3 x 3-4 Italian and Carinthia
1 x 3-4 South Macedonia
1 x 4-10 Nav Dalmatia

Turkey:

2 x 3-4 Gallipoli
1 x 3-4 Constantinople
1 x 3-4 Kut
2 x 3-4 Erzerum Bulgaria
3 x 3-4 South Macedonia

ALLIES (Deploy First)

Britain:

3 x 6-4 & 1 x 3-4 Western
1 x 3-4 South Macedonia
1 x 3-4 Gallipoli
1 x 6-4 Kent
1 x 3-4 Kut
3 x 8-10 Nav & 1 x 1-2 Mar Scotland
1 x 8-10 Nav Alexandria

France:

7 x 6-4 & 1 x 3-4 Western
1 x 3-4 Paris
1 x 4-10 Attic

Russia:

8 x 6-4 Eastern
1 x 3-4 Erzerum
1 x 3-4 & 1 x 4-10 Nav St Petersburg
1 x 4-10 Nav Crimea

Belgium:

2 x 3-4 Flanders

Greece:

none

NEUTRALS

USA:

None

Holland:

1 x 3-4

Italy:

2 x 6-4 & 2 x 3-4 Italian and Venetia
2 x 4-10 Nav Puglia

Serbia:

1 x 3-4 South Macedonia

Romania:

3 x 3-4

MOBILIZATION POOL

Germany: 2 x 8-4; 5 x 4-4; 2 x 8-10 Nav; 1 x 1-2 Mar.

Austria: 2 x 3-4; 2 x 4-10 Nav.

Turkey: 2 x 3-4.

Bulgaria: 2 x 3-4.

Britain: 5 x 6-4; 1 x 8-10 Nav

France: 1 x 6-5; 2 x 3-4; 2 x 4-10 Nav; 1 x 1-2 Mar.

Russia: 4 x 6-4; 2 x 3-4; 2 x 4-10 Nav.

Italy: 4 x 6-4; 1 x 3-4; 2 x 4-10 Nav.

U.S.A.: 8 x 6-4; 4 x 3-4; 1 x 8-10 Nav.

Serbia: 1 x 3-4.

Belgium: 1 x 3-4.

Greece: 3 x 3-4.

Romania: 1 x 3-4.

Holland: 1 x 3-4.

NATIONAL RESOURCE CREDITS

Germany 170

Austria 84

Turkey 32

Bulgaria 12

Britain 150

France 86

Russia 100

Italy 78

USA **

Serbia 0

Belgium 0

Greece 10

Romania 12

Holland 12

5.4 NOTES

1. Greece is Allied, but has no forces mobilized at the start of the situation.

2. Romania: beginning June 1916 the Allied player rolls the die each Allied Reinforcement Segment. On a one or a two Romania becomes one of the Allies.

3. Technology: trench and field status; assault, attrition and tank/infiltration attacks (Allies 1 and Central Powers 3 T/I attacks per game turn); unrestricted economic warfare.

4. NRC Spending Ceiling: 10 percent of each major power's initial NRC on any one game turn .

5. Territorial Notes. Albania is neutral. The Allies control all of Greece except South Macedonia. Russia controls Turkish Armenia.

6. Greek Participation Options.

A. Neutrality: no Allied forces in South Macedonia; no Serbian forces in the game; released forces deployed at the player's option.

B. Pro-Allied: the Greeks have 3 x 3-4 anywhere in Greece as an Allied friend.

C. Pro-Central Powers: The Greeks have 3 x 3-4 in South Macedonia as a Central Powers friend.

7. If the US is brought into the war, use 1917 NRC growth rate.

6 SITUATION GAME 5: 1917 – THE CRITICAL YEAR

6.1 LENGTH: 12 game turns (Jan - Dec 1917)

6.2 FRONTS

Western: Flanders, Artois, Picardie, Verdun and Alsace

Eastern: Dobruja, Moldavia, Bukovina, Galicia, Volhynia, Minsk, Vilna, Kovno and Courland

Salonika: Southern Macedonia, Epirus and Albania

Italian: Trieste and Tyrol

6.3 STARTING FORCES**ALLIES (Move First)****Britain:**

5 x 6-4 Western

1 x 3-4 Salonika

1 x 3-4 Sinai

1 x 3-4 Kut

1 x 6-4 & 1 x 3-4 Kent

4 x 8-10 Nav Scotland

1 x 8-10 Nav Alexandria

Russia:

8 x 6-4 Eastern

2 x 3-4 Erzerum

1 x 6-4 & 1 x 4-10 Nav St. Petersburg

1 x 4-10 Nav Crimea.

France:

6 x 6-4 & 2 x 3-4 Western

1 x 3-4 Salonika

1 x 4-10 Nav Attic

Italy:

3 x 6-4 & 2 x 3-4 Italian and Venetia

3 x 4-10 Nav Puglia

Belgium:

2 x 3-4 Flanders

Serbia:

1 x 3-4 Salonika

Romania:

1 x 3-4 Moldavia

Greece:

1 x 3-4 Attic

CENTRAL POWERS (Set-up First)**Germany:**

8 x 8-4 Western

3 x 8-4 & 2 x 4-4 Eastern

1 x 4-4 Salonika

3 x 8-10 Oldenburg

1 x 2-10 Constantinople

Austria:

1 x 6-4 & 2 x 3-4 Eastern

1 x 6-4 & 2 x 3-4 Italian and Carinthia

1 x 3-4 Salonika

1 x 4-10 Nav Dalmatia

Turkey:

1 x 3-4 Jerusalem

1 x 3-4 Kut

3 x 3-4 Erzerum

1 x 3-4 Constantinople

Bulgaria:

2 x 3-4 Salonika

1 x 3-4 Dobruja

NEUTRALS**USA:**

None.

Holland:

2 x 3-4

6.4 MOBILIZATION POOLS

Germany: 7 x 4-4; 1 x 8-10 Nav; 1 x 1-2 Mar.

Austria: 1 x 6-4; 1 x 4-10 Nav.

Turkey: 1 x 3-4.

Bulgaria: 2 x 3-4.

Britain: 2 x 6-4; 1 x 1-2 Mar.

France: 1 x 6-4; 1 x 3-4 ; 2 x 4-10 Nav; 1 x 1-2 Mar.

Russia: 1 x 6-4; 1 x 3-4; 2 x 4-10 Nav.

Italy: 2 x 6-4; 1 x 3-4; 1 x 4-10 Nav.

USA: 8 x 6-4; 4 x 3-4; 1 x 8-10 Nav.

Belgium: 1 x 3-4.

Serbia: 1 x 3-4.

Romania: 1 x 3-4.

Greece: 2 x 3-4.

Holland: none.

6.5 NATIONAL RESOURCE CREDITS

| | |
|-------------|------------|
| Germany 180 | Italy 80 |
| Austria 89 | USA ** |
| Turkey 32 | Belgium 0 |
| Bulgaria 12 | Serbia 0 |
| Britain 164 | Romania 0 |
| France 99 | Greece 10 |
| Russia 111 | Holland 12 |

6.6 NOTES

1 . USA: there are two optional provisions for US entry.

A. Variable Mandatory Entry: if the German player does not force US entry into the war by the Sept 1917 Game turn, roll the die for US entry each Allied Reinforcement Segment anyway: on a one through three, the US enters as one of the Allies. On the game turn after US entry, it receives one 8-10 Nav anywhere in the British Isles, plus 10 NRC for grants only .

B. Rigid Entry: US declares war on the Central Powers in April. US NRC and 8-10 Nav are available beginning in May.

2. Technology: trench and field status; assault; attrition and tank/infiltration attacks (Allies 3 and Central Powers 6 T/I attacks per game turn); unrestricted economic warfare.

3. NRC Spending Ceiling: 10 percent of each major power's starting NRC per game turn.

4. Territorial Notes: Russia controls Turkish Armenia; Persia is neutral.

5. US NRC Growth Rate: on the game turn the US enters the war, it receives zero NRC . Thereafter, on each succeeding Allied Reinforcement Segment, it receives NRC as follows: 1; 2; 3; 4; 5; 6; 7; 8; 9; 10.

6. Special Historical Option: early US entry . Assume the US entered the war in Dec 1916.

7 SITUATION GAME 6: KAISERSCHLACHT

7.1 LENGTH: seven game turns (Jan-Jul 1918)

7.2 FRONTS

Western: Flanders , Artois, Picardie, Verdun and Alsace.

Eastern: Livonia, Kovno, Vilna, Minsk, Volhynia, Galicia, Bukovina, Moldavia and Dobruja.

Salonika: Southern Macedonia, Epirus and Albania.

Italian: Tyrol and Venetia.

7.3 STARTING FORCES

CENTRAL POWERS (Move First)

Germany:

9 x 8-4 & 4 x 4-4 Western
3 x 4-4 Eastern
1 x 4-4 Hanover
3 x 8-10 Nav Oldenburg
1 x 2-10 Nav Constantinople

Turkey:

1 x 3-4 Constantinople
2 x 3-4 Jerusalem
1 x 3-4 Baghdad
1 x 3-4 Erzerum

ALLIES (Set-up First)

Britain:

5 x 6-4 Western
1 x 3-4 Salonika
1 x 3-4 Baghdad
1 x 6-4 Jerusalem
1 x 3-4 Italian
1 x 3-4 Kent
4 x 8-10 Scotland
1 x 8-10 Alexandria

Russia:

4 x 6-4 & 3 x 3-4 Eastern
1 x 3-4 Batum
1 x 4-10 Nav St. Petersburg
1 x 4-10 Nav Crimea

USA:

1 x 3-4 Western
1 x 8-10 Nav Scotland

Serbia:

1 x 3-4 Salonika

Greece:

1 x 3-4 Salonika

NEUTRALS

Holland: 2 x 3-4

7.4 MOBILIZATION POOLS

Germany: 1 x 8-4; 2 x 4-4; 1 x 8-10 Nav; 1 x 1-2 Mar.

Austria: 1 x 3-4; 1 x 4-10 Nav

Turkey: 1 x 3-4.

Bulgaria: None.

Britain: 1 x 6-4; 1 x 3-4.

France: 1 x 6-4; 2 x 4-10 Nav.

Russia: 2 x 6-4; 2 x 4-10 Nav.

Italy: 2 x 3-4; 1 x 4-10 Nav.

U.S.A. : 8 x 6-4; 3 x 3-4.

Austria:

2 x 6-4 Eastern
4 x 3-4 Italian
1 x 3-4 Budapest
1 x 4-10 Nav Trieste

Bulgaria:

3 x 3-4 Salonika
1 x 3-4 Sofia

France:

5 x 6-4 & 1 x 3-4 Western
1 x 3-4 Italian
1 x 3-4 Salonika
2 x 4-10 Nav Puglia

Italy:

3 x 6-4 & 1 x 3-4 Italian
3 x 4-10 Nav Puglia

Belgium:

2 x 3-4 Flanders

Romania:

1 x 3-4 Dobruja

Belgium: 1 x 3-4.
 Serbia: 1 x 3-4.
 Romania: 1 x 3-4.
 Greece: 2 x 3-4.
 Holland: none.

7.5 NATIONAL RESOURCE CREDITS

| | |
|------------|-----------|
| Germany 98 | Italy 41 |
| Austria 49 | USA ** |
| Turkey 21 | Belgium 0 |
| Bulgaria 8 | Serbia 0 |
| Britain 90 | Romania 0 |
| France 56 | Greece 5 |
| Russia 0 | Holland 6 |

7.6 NOTES

1. Russia: each Central Powers Reinforcement Segment roll a die for Russian exit from the war: on a 1 through 4, Russia and Romania both leave the war and the Central Powers gain 18 NRC immediately and three more each game turn thereafter. If Russia surrenders, the Central Powers must keep at least 4 corps-sized units on the E. Front as defined above.

2. Technology: trench and field status ; assault, attrition and tank/infiltration attacks (Allies four and Central Powers seven T/I attacks per game turn); unrestricted economic warfare.

3. NRC Spending Ceiling: 20 percent of each major power's starting NRC per game turn.

4. US NRC Growth Rate: On the Jan game turn the U S receives 10 NRC; thereafter 11; 12; 13; 14; 15 and 16.

5. Special Historical Options.

A. Russia: Assume Russia left the war in late 1917. The Central Powers may increase their NRC at the start of the game by 18 and may remove all but four corps-sized units from the Eastern Front for use on other fronts.

B. No US Role: assume the US did not enter the war in 1917 and leave it out of the game.

8 SITUATION 7: THE ALLIED GRAND OFFENSIVE

8.1 LENGTH: five game turns (Aug-Dec 1918)

8.2 FRONTS

Western: Flanders, Artois, Picardie, Paris, Champagne, Verdun and Alsace.

Italian: Tyrol and Venetia.

Salonika: Albania, South Macedonia, and Epirus .

Eastern: Estonia, Livonia, Kovno, Vilna, Minsk, Kiev, Kherson, Taurida and Crimea.

8.3 STARTING FORCES

ALLIES (Move First)

Britain:

France:

5 x 6-4 Western
 1 x 3-4 Italian
 1 x 3-4 Salonika
 1 x 6-4 Jerusalem
 1 x 3-4 Mosul
 4 x 8-10 Nav Scotland
 1 x 8-10 Nav Alexandria

Italy:

3 x 6-4 & 2 x 3-4 Italian
 1 x 3-4 Salonika
 2 x 4-10 Nav Puglia

Belgium:

2 x 3-4 Flanders

Greece:

1 x 3-4 Salonika.

CENTRAL POWERS (Set-up First)

Germany:

9 x 8-4 & 1 x 4 - 4 Western
 3 x 4-4 Eastern
 2 x 4-4 Hanover
 3 x 8-10 Nav Oldenburg
 1 x 2-10 Nav Constantinople

Turkey:

2 x 3-4 Jerusalem
 1 x 3-4 Mosul
 1 x 3-4 Batum
 1 x 3-4 Constantinople

NEUTRALS

Russia:

3 x 6-4

8.4 MOBILIZATION POOLS

Germany: 5 x 4-4; 1 x 8-10 Nav; 1 x 1-2 Mar .

Austria: 1 x 4-10 Nav.

Turkey: None.

Bulgaria: None.

Britain: 1 x 3-4; 1 x 1-2 Mar.

France: 1 x 4-10 Nav ; 1 x 1-2 Mar.

Italy: 1 x 3-4; 1 x 4-10 Nav.

USA: 5 x 6-4; 3 x 3-4.

Belgium: 1 x 3-4.

Serbia: 1 x 3-4.

Greece: 2 x 3-4.

Russia: 3 x 6-4 & 3 x 3-4.

Holland: None.

8.5 NATIONAL RESOURCE CREDITS

Germany 89

Austria 42

Turkey 14

Bulgaria 5

Britain 85

6 x 6-4 & 1 x 3-4 Western
 1 x 3-4 Salonika
 2 x 4-10 Nav Puglia

USA:

3 x 6-4 & 1 x 3-4 Western
 1 x 8-10 Nav Scotland

Serbia:

1 x 3-4 Salonika

Austria:

1 x 3-4 Eastern
 1 x 6-4 & 3 x 3-4 Italian
 1 x 3-4 Budapest
 1 x 4-10 Nav Dalmatia

Bulgaria:

4 x 3-4 Salonika

Holland:

2 x 3-4

France 52
Italy 37

Holland 5

1 x 8-10 Nav Scotland

8.6 NOTES

1. **Special Historical Option (applies only to the Campaign Game) Russia:** the Allies may bring Russia into the war on their side through a transfer of NRC. Each game turn beginning with the Sept 1918 Game turn the Allies may transfer NRC to Russia's NRC Index. Thereafter, for each eight NRC in Russia's NRC Index, the Allied player may roll a single die. A result of one makes Russia one of the Allies again. A Russian player may frustrate the Allies' intentions by expending the NRC left over from the previous turn. Option: Germany does the same to bring Russia in on its side. **Either side may try to bring Russia in after Russia is eliminated from play.**

2. Technology: trench and field units; assault, attrition and tank/infiltration attacks (each side may make seven T/I attacks per game turn); unrestricted economic warfare.

3. NRC Spending Ceiling: 25 percent of each major power starting NRC per game turn.

4. Territorial Notes: Romania and all Russia west of the Eastern Front are under Central Powers control. Russian Armenia is under Turkish Control. Persia is neutral.

5. USA NRC: US NRC for the Aug 1918 game turn is 18. Thereafter it is 19; 21; 23 and 25.

9 SITUATION GAME 8: PLAN 1919

9.1 LENGTH: six game turns (June - Nov 1919)

9.2 FRONTS

Western: Brabant, Picardie, Verdun, and Alsace.

Italian: Trieste and Tyrol.

Salonika: Albania, West Macedonia, South Macedonia. Eastern: Estonia, Livonia, Kovno, Vilna, Minsk, Kiev, Kherson, Taurida and Crimea.

9.3 STARTING FORCES

ALLIES (Move First)

Allied:
3 x 5-4 Motorized Western

Britain:
4 x 6-4 Western
1 x 6-4 Alexandretta
1 x 3-4 Aleppo
1 x 3-4 Salonika
5 x 8-10 Nav Scotland

France:
5 x 6-4 Western
1 x 3-4 Paris
2 x 4-10 Nav Puglia

Italy:
2 x 6-4 & 2 x 3-4 Italian and Venetia
1 x 3-4 Salonika
2 x 4-10 Nav Puglia.

USA:
7 x 6-4 & 2 x 3-4 Western
2 x 3-4 Italian

Belgium:
2 x 3-4 Brabant

Serbia:
1 x 3-4 Salonika

Greece:
3 x 3-4 Salonika

CENTRAL POWERS (Set-up First)

Germany:
8 x 8-4 & 2 x 4-4 Western
1 x 8-4 Italian
1 x 8-4 Hanover
1 x 2-10 Nav Constantinople
4 x 8-10 Nav Oldenburg

Turkey:
1 x 3-4 Adalia
1 x 3-4 Kara
1 x 3-4 Malyata
1 x 3-4 Thrace.

Austria:
2 x 6-4 & 1 x 3-4 Italian and Carinthia
1 x 3-4 Salonika
1 x 4-10 Nav Dalmatia

Bulgaria:
3 x 3-4 Salonika

NEUTRALS

Russia:
4 x 6-4

Holland:
2 x 3-4

9.4 MOBILIZATION POOLS

Germany: 3 x 4-4; 1 x 8-10 Nav; 1 x 1-2 Mar.

Austria: 1 x 4-10 Nav.

Turkey: None.

Bulgaria: None.

Britain: 1 x 1-2 Mar.

France: 1 x 4-10 Nav; 1 x 1-2 Mar.

Italy: 1 x 4-10 Nav .

USA: 1 x 6-4.

Belgium: None.

Serbia: 1 x 3-4.

Greece: None.

Russia: 2 x 6-4; 4 x 3-4.

Holland: none.

9.5 NATIONAL RESOURCE CREDITS

Germany 80

Austria 38

Turkey 12

Bulgaria 4

Britain 85

France 45

Italy 32

USA **

Belgium 0

Serbia 0

Greece 3

Russia 12

Holland 5

9.6 NOTES

1. Russia: all portions of Russia east of the Eastern Front, exclusive of Batum, Russian Armenia and Baku, are part of Russia proper. Russia may not be brought into the war unless invaded.

2. Technology: trench and field status; assault, attrition, tank/infiltration attacks (Allies seven and Central Powers 5 T/I attacks per game turn), and motorized attacks (Allies only) ; unrestricted economic warfare.

3. NRC Spending Ceiling: 25 percent of each major power's initial NRC allotment per game turn.

4. Territorial Notes: the Central Powers control all of Russia from the Eastern Front westward, plus Batum, Russian Armenia and Baku. The Central Powers also control Romania and Diabekhir. The Allies control Artois and Flanders.

5. USA NRC Growth: On the Jun 1919 game turn the US receives 39 NRC. Thereafter it receives: 43; 47; 51; 56; 62 and 68.

10 VICTORY CONDITIONS

The victory conditions for each situation game are the same, though occasionally a particular situation will indicate special provisions or modifications of the basic conditions. There are three levels of victory: strategic, operational and marginal.

Strategic Victory: a strategic victory is the elimination of a major power from Play. That usually will occur through elimination of that power's ground units, but it may also occur through the complete occupation of all the areas of that major power's national territory. One's own losses in units or national territory are not considered in calculating strategic victory.

Operational Victory: this level will be the more frequently occurring of the three possible levels of victory. An operational victory might also be called an "attrition victory," since it involves wearing down the opposing side before you yourself are worn down. Operational victory is measured in victory points.

Gaining an area not previously under your control in this situation gives a player one victory point normally, but five for each increase NRC marker and none for starred areas.

Elimination of an unfriendly army gives a player two victory points.

Elimination of an unfriendly corps or marine unit gives a player one victory point.

Elimination of an unfriendly naval unit gives a player four victory points, regardless of size.

Elimination of an unfriendly motorized army gives a player four victory points.

One's own losses in areas and units is deducted from one's own victory point total. The side with the larger victory point total at the end of a game is the winner of an Operational Victory .

Marginal Victory: the side that has expended fewer NRC may claim a marginal victory, but no player may attempt to reduce his NRC expenditure by demobilizing his entire ground and naval forces at the last game turn.

11 OPTIONAL RULES

11.1 MULTI-PLAYER GREAT WAR

Great War is normally played by two persons, one for the Allies and one for the Central Powers; however, it is possible for up to seven to participate in the game , depending on the situation game being played. In multi-player versions the following modifications apply.

Additional Players: starting with two, add additional players as follows.

Player 1: the Allies (Britain, France Italy, Russia and the US)

Player 2 : the Central Powers (Germany and Austria)

Player 3: Russia

Player 4: France

Player 5: Italy

Player 6: US

Player 7 : Austria-Hungary

Sides. Regardless of how many are actually playing, there are still only two sides, the Central Powers and the Allies. A player may never attack units of a country friendly to him and may never refuse to participate in a joint defense of an area with a country friendly to him. A player may refuse to participate in an attack but, should an attack fail, he may be forced to assist in making up combat losses if the attacking player's units or NRC are insufficient. Regardless of the number of players, only one attack may be made in an area on any player turn (which might better be called a "side-turn" in multi-player versions). A player controls all areas of his national territory and all areas of other countries assigned to him by agreement among the players of his side, and he may deny other countries on his side entry to such areas for movement and supply purposes.

Separate Peace: A player may not conclude a separate peace (that is, drop out of the game) unless any one of the following has occurred.

- His mobilization pool has been exhausted.
- His NRC balance has been reduced to zero.
- Half of the areas of his national territory, including the area containing his capital, is controlled by, or in dispute with, an unfriendly P\player.

A player's "friends" may attempt to convince him into remaining in the game through the transfer of NRC to his country, or through the military occupation of areas of his national territory without his consent. This does not constitute an attack on a friendly player (and hence is not in violation of the rules noted above), since it may not occur before the player has announced he intends to make a separate peace.

Minor Power NRC and Units: in a two-player game there is no basic problem in dealing with the NRC, NRC payments and ground units of the minor countries that are friendly to the two sides. In a multi-player game, however, some problems arise. The players on each side must agree among themselves on each of the following.

- Who acquires the minor country's NRC?
- Who pays for the minor country's operational costs in NRC?
- Who Moves the minor country's ground units, makes attacks with them, and decides on whether to retreat before combat?

Normally all three functions should be assigned to one player of the appropriate side, but there is nothing to prevent the players from dividing those functions among themselves.

Sequence-of-Play: since there are always two sides in Great War, all movement and combat occurs within the framework of the two "player turns." All players on each side move and engage in combat simultaneously, with the details to be ironed out among themselves by negotiation.

11.2 T/I Attacks:

The great powers came in descending levels. Even when the technology threshold was crossed for a side, some of its component power would be unable to take advantage of the T/I possibility owing to poor doctrine, organization, equipment, etc. Thus, Austria cannot use T/I attacks in Situations 6, 7, 8; Italy, in Situation 6; Russia, in 5, 6, 7, 8. In Situations 4 & 5, Italy and Austria cannot make T/I attacks unless used in conjunction with German, French, or British units.

12 CAMPAIGN GAME: THE GREAT WAR

12.1 Length: unlimited (begins Aug. 1914) .

12.2 Starting Forces: As for Situation Game 1.

12.3 NRC/Mobilization Pools and Neutrals:

As for Situation Game 1 .

12.4 Notes

As for Situation Game 1 through 8, with changes as noted in the Campaign Game Special Rules.

12.5 CAMPAIGN GAME SPECIAL RULES AND NOTES

NRC Growth Period: at the end of each December and June Game turn, the NRC Growth Period occurs, except for the USA, which continues under the regular game rules.

1. Each major power calculates the number of areas which it has gained control of since the NRC Growth Period. Such areas may include areas of that power's national territory previously in dispute or under unfriendly control, areas of formerly neutral countries, areas formerly under unfriendly control, and even areas part of the national territory of unfriendly countries. Areas indicated on the mapsheet as having no NRC production are not included, while those indicated as having extra NRC production are counted as five for each increased NRC symbol therein.

Technological Innovation/NRC Cost/Prerequisite (game turn of same)

Unrestricted Economic Warfare/5/---

Unrestricted Economic Warfare/10/Restricted Economic Warfare (5)

Trench Status/8/Not Before Dec 1914

Attrition Attacks/5/Trench Status Units (5)

*Tank-Infiltration Attacks/12/Trench Status Units (5)

Mechanized Attacks/18/Tank-Infiltration Attacks (10)

2. Deduct from the total of areas gained, any NRC production areas lost during the period since the last NRC Production Period, at the normal rate for each.

*Payment for tank/infiltration attacks is to permit one such attack per game turn: additional payments are required to increase the allowable number at the same rate, but never increasing by more than one such per game turn.

3. To the resulting adjusted figure of gained areas, each major power adds its current NRC balance, if any.

4. The sum of areas gained/lost and a major power's NRC balance is then added to, or deducted from, that power's last NRC production figure or, in the December 1914 NRC Production Period, to the initial NRC allotment of that power given in Situation 1. The resulting figure is that power's current NRC allotment for the immediately following six-month period. Minor countries add to major power NRC pools on the same calculating basis, depending on the number of NRC formerly held plus areas gained and production centers lost, but a minor whose national territory is completely overrun by an unfriendly country may have no NRC production. Major power neutrals grow at 25 percent per NRC period. US at 10 percent or one, whichever is greater, per game turn.

5. If US enters before 1917, take the US NRC growth month by month so that the first month is 1, the second, 2, etc., until 68 is reached. After that, it is 68 per turn.

13 THE GREAT WAR 1914-1918 SITUATION CHARACTERISTICS

Technological Horizon: the technology portion of each situation is ignored in the Campaign Game. At the beginning of the Campaign Game only field status and assault attacks are permitted. All other types of units, types of attacks, and even the ability to make economic attacks, are determined by the expenditure of NRC to raise the " technological horizon." Any major power or group of major powers may make the required NRC expenditure, and such expenditure may be made in installments until the required sum is attained, at which time the innovative technology may be adopted. Once a new technology has been established, any country on that side may make use of it. NRC payments to raise technological levels are made during the Reinforcement Segment, but the innovation does not go into force until the paying player's next succeeding player turn.

NOTES

NRC ratio is given as of Game Turn 1 of each situation and excludes any increment resulting from the play of that situation, notably the acquisition of NRC through alliances, conquest or liberation, and for the USA, growth indicated by the "+." The Campaign Game is of unlimited length, usually averaging 70 game turns. Note that most innovations require certain preexisting conditions before they may be undertaken and such conditions must have been current for a given number of game turns.

| Situation | Length | NRC Ratio Allies : CP | Initiative | Bias |
|---------------------------|--------|--------------------------|------------|------------|
| 1. Guns of August | 5 | 112 : 78 | CP | Pro-CP |
| 2. Stalemate | 6 | 118 : 113 | Allies | Pro-Allies |
| 3. The Donkeys | 6 | 177 : 131 | Allies | None |
| 4. Attrition | 12 | 428 : 298 | CP | None |
| 5. 1917-The Critical Year | 12 | 464 : 313 | Allies | Pro-CP |
| 6. Kaiserschlacht | 7 | 202+ : 174 | CP | None |
| 7. Allied Grand Offensive | 5 | 195+ : 150 | Allies | Pro-Allies |
| 8. Plan 1919 | 6 | 204+ : 134 | Allies | Pro-Allies |
| 9. Campaign Game | * | 112 : 78 | CP | Pro-CP |

Thus, the earliest game turn on which an attrition attack may be made, upon payment of suitable costs, is the April 1915 game turn.

Sequence of Movement. As indicated in the Situation 1 instructions, the Central Powers move first in the Campaign Game; however, beginning with the January 1915 game turn, the sequence of movement is determined for the next six months by the coalition having the country with the highest total NRC production.

Modifications to Situation Notes: all Situation Game Notes remain in force in the Campaign Game except as modified below.

1. NRC Spending Ceiling: 25 percent of each major power's most recent NRC allotment on any one game turn.

2. British Navy: on the February 1915 game turn the Allied player receives all British naval units committed to reducing the German free restricted economic attacks indicated in the Situation 1 Notes, at any port in Britain.

3. Separate Peace: Any major power whose national territory is completely overrun by unfriendly ground units, or whose ground units have been completely eliminated, or whose NRC balance has been reduced to zero, may conclude a separate peace as outlined in the Multi-Player Rules.

4. Special Historical Options: excepting that which applies to the August 1914 game turn, or to the game turn on which a Campaign Game is started, only one Special Historical Option may be used.

5. Lord Fisher Special Historical Option: once in the game, on any game turn, the British may make an amphibious landing of up to 3 x 3-4 anywhere on the mapsheet within normal movement limits without paying the normal amphibious landing costs.

6. Variant Campaign Games: though the Campaign Game normally begins with the August 1914 game turn, they players may, by agreement, begin one with any Situation Game.

| Technological Innovation | NRC | Prerequisite (Game-Turns of Cost same) |
|-------------------------------|-----|--|
| Restricted Economic Warfare | 5 | – |
| Unrestricted Economic Warfare | 10 | Restricted Economic Warfare (5) |
| Trench Status | 8 | Not before Dec. 1914 Game Turn |
| Attrition Attacks | 5 | Trench Status Units (5) |
| Tank/Infiltration Attacks | 12* | Trench Status Units (5) |
| Mechanized Attacks | 18 | Tank/Infiltration Attacks |

** Payment for Tank/Infiltration Attacks is to permit one such attack per Game-Turn: additional payments are required to increase the allowable number at the same rate, but never increasing by more than one such per Game-Turn.*

14 THE WAR AND THE GAME: ORIGINAL DESIGNER'S NOTES FOR GREAT WAR (1976)

There are some situations that do not easily lend themselves to simulation given the current "state of the art" in the field. The First World War has long been one of these. Although in the past a number of often very interesting designs had been developed on the subject or on various aspects of it, none have really managed to combine the three essential ingredients -realism, playability and moderate complexity—so necessary for a truly successful game. As a result, when The Morningside Game Project undertook to develop Great War for Rand, it was determined to evolve a unique approach to the subject, relying less upon time-worn concepts and tools and more upon synthesizing something tailored to the situation itself. The net result is Great War as it stands before you. And, so that the rationale for the various elements of the design may be more easily explained, we are providing these somewhat longer than usual designer's notes, rather than a mere brief explanation plus a lengthy—usually unnecessary—set of historical notes.

The Area System. Area map grids have several interesting advantages. The most important is that they can be used to more accurately reflect

geographical problems and incorporate them in a game. A hex system, while ideal for a number of game situations, is not necessarily a universal solution to all. In World War I the armies struggled over relatively unimportant pieces of ground. As one author noted, "tens of thousands of men died for changes in a front hardly evident on any map smaller than a billiard table". The area system permits combat to occur inside an area, rather than between two hexes, thereby reflecting the fact that to a great extent both sides were locked in. It also helped rationalize movement.

In a hex system, movement is determined by the number of hexes one passes through, as modified by terrain considerations. Players have to watch out for little holes in their lines which might permit remarkable penetrations not necessarily in keeping with the doctrinal or logistical capacities of the age. Moreover, a hex system cannot really reflect certain of the geographical aspects of the interminable trench lines which existed in World War I, things like mountains, rivers, the curvature of the earth, and so on. On a hex-grid, a salient, when formed, is likely to be highly visible and highly unstable. In an area system all of these problems can be avoided. Movement, while theoretically speedy—the Germans reached the vicinity of Paris in 1914 in 35 days, one day more than their 1940 performance—can be frustrated by relatively sparse forces controlling important areas. Moreover rapid penetrations are much less likely for the reason that "holes" in the front are far less likely to appear. When salients are formed in an area grid, they are not necessarily as highly visible as in a hex-grid, but are likely to be far more stable and far more dangerous. Consider the German salient on the Somme in 1915-1917. In Great War this amounts to the presence of German forces in Picardie, in northwestern France. The Allied Player is forced to defend Picardie, indeed is forced to make attacks whenever possible, because Picardie controls the fate of Allied forces further north, in Artois and Flanders. The Allies cannot even evacuate these forces readily so long as the Germans maintain a presence in Picardie. And should the Germans be able to eject the Allies from Picardie....

A further advantage to an area system is that it makes the rationalization of rivers and mountains easier. They are located approximately where they should be, although occasionally a river or mountain range had to be displaced somewhat to permit sufficient space in an area for the placement of units.

An area system is also particularly useful for determining Victory Conditions. In far too many games victory is determined by the possession of one or two places on the map. As a result, a Player may control everything on the map but these two places, and lose by default. With areas, victory can be measured in terms of the total loss or gain of areas.

Needless to say, there are some disadvantages to the use of areas, just as there are numerous advantages to the use of hexes. Perhaps an ideal solution would have been to combine areas and hexes. But for the moment, we believe whatever drawbacks the area system has—such as the numberless jawbreaking area names—are more than offset by the innumerable advantages.

National Resource Credit. This perhaps is one of the most complex aspects of the game. Superficially, NRC's appear to be nothing more than economic resource points. This is hardly the case. National Resource Credits do include economic production, based principally upon the actual output of heavy industrial products and durable goods for each country during the war, as modified by the exigencies of balancing the Game. But they represent far more than this. Such things as the produc-

tion of foodstuffs are also included, as well as the numbers of men and horses available for military use at any given period. Consider manpower:

World War I stretched over 51 months. Boys of 13 at the outbreak were draftees by late 1918. So the NRC's include two factors: firstly, the available pool of unused eligible manpower and, secondly, the newly eligible classes of manpower each year. This second class was enormous and yet has been ignored in at least one major wargame on the First World War. A comparison of statistics is interesting:

MANPOWER AVAILABILITY, 1914-1918

| Country | 1914 Pool | Total Mobilized |
|---------|-----------|-----------------|
| Germany | 9.75 | 11.00 |
| Austria | 6.10 | 7.80 |
| France | 5.94 | 8.41 |
| Britain | 6.00 | 8.90 |
| Russia | 17.00 | 12.00 |

Notes: All figures are in millions. British Empire figures do not include India, nor do French figures include Africa. Eligibility is as determined by the particular country, in Germany, for example, in 1914 it was ages 17-45. Only Russia of the Great Powers failed to surpass its 1914 manpower pool. Of the minor powers, Belgium failed to do so due to German occupation. Serbia almost doubled its commitment (440,000 in 1914, as against 707,000 mobilized: but they were digging into the 60 and 15-year olds).

Of course there are a few things which the table does not demonstrate. Such as the fact that on Armistice Day, 11 November 1918, France had barely 60,000 replacements left, with no more in sight until the Class of 1902 could be called up, beginning in 1919. (Incidentally, although manpower is included as an element of NRC we also decided to limit the total possible mobilization for each country by restricting the number of armies they may have, so that one could not lose units and replace them and lose them again endlessly. In Great War a lost unit is a lost unit). This is reflected in the gradual peaking of NRC during the "middle" Situations, notably 1916 and 1917, and then in the gradual decline towards the later period, 1918 and 1919. Industrial output was still rising, but manpower was becoming scarcer. Of course industrial output and manpower were not the only things considered in NRC calculation. Horses, mules, and asses were counted in too.

Roughly speaking, for every three soldiers at the front, there was one horse or mule in 1914, and more later even though mechanized transport began to come into its own as time went on. (In fact the British had elements in 1914, but they too had to rely more heavily on horseflesh as time went on for lack of sufficient motor transport). Horses were necessary for everything from pulling field guns, to towing supply wagons, to mounting cavalymen, to giving officers something to sit on. Consider, every infantry company in 1914 had at least one horse for the company commander, plus several teams for its ammunition and supply trains. Even the nasty little French '75 required half-a-dozen horses to pull it, plus another few for its ammunition. And the bigger the guns got the harder it was to pull them, so the teams increased. Anyway, the point is that horseflesh was almost as important to the war as was the human kind. And unquestionably no wargame has ever inquired into the availability of horseflesh, although the European armies spent considerable sums of money, time, and energy in keeping their stables full of healthy animals before the war. Consider the availability of equine stock:

ANIMAL RESOURCES, WORLD WAR I

| Country | Horses | Mules and Asses |
|---------|--------|-----------------|
| Germany | 4.8 | * |
| Austria | 4.8 | 0.05 |
| France | 4.0 | 0.58 |
| Britain | 2.5 | 0.25 |
| Russia | 24.5 | * |

Notes: All figures are approximate in millions, based on a U. S. Department of Agriculture survey for 1910. Asterisked figures indicate unavailable or insignificant numbers. The 1910 world horse population was over 105,000,000 head, of which the Allies controlled over 430m, the Central Powers barely 150m and the Western Hemisphere, less Canada and the British and French colonies roughly 40%. The mule and ass population was around 20,000,000, with the Allies 35% (India, Italy, and Egypt, accounting for most of these), the Central Powers controlling about 25% (mostly in Turkey), and the Americas most of the balance, but with Spain having about 9%.

These figures appear sufficient, but actually the combatants were in a horseflesh squeeze beginning shortly after the war broke out. A horse or a mule is far more difficult to care for than a man. He also tends to become a casualty far more readily (Hollywood notwithstanding). It's usually the horses who get killed, not their riders. Beyond these basic facts, horseflesh is extremely difficult to transport and maintain in the

field. A horse requires about five times the shipping space a man does, and accommodations must be specially tailored for his needs. Horses, unlike men, do not comprehend why they are at sea and dislike the business intensely. And horses eat a lot, which ties up even more shipping space. Indeed, Britain actually shipped more food for horses to France during the war than food for guns, as expressed in absolute tonnage. Britain shipped 500,000 of its precious horses to France at considerable cost to industrial efficiency—most civilian transport was horse powered—and imported a further 600,000 from the U. S. A. for service in France. Anyway, horses and mules and asses are incorporated in the NRC for Great War.

One of the most serious questions in NRC was that of the United States. Using the 1914 NRC indices, the U. S. had roughly a 300! Obviously the weight of such an NRC would immediately tip the game irrevocably in the Allies favor as soon as the U. S. entered. The problem was to control the availability of American NRC. Since the U. S., although an economic and demographic giant, required time to convert itself to military production and still more time to commit its resources to Europe the idea of monthly increments of U.S. NRC was developed. This enabled the highly realistic possibility that Germany could win the war even after the U. S. entered the war, so long as it could do so before America's vast resources could begin to tell. The Germans calculated that this would require over a year. In fact, American troops were on the line in impressive numbers within eight months. And by the Armistice, American resources were really beginning to arrive, both in terms of manpower and material. By the late

COMBAT STRENGTH EVALUATION The Great War Armies and Corps

| Country | 1914 Value | Divisions # Equated | Army Divisions per |
|-------------|------------|---------------------|--------------------|
| Germany | 1.25 | 200 | 8-4 (12) |
| Austria | 0.75 | 70 | 6-4 (16) |
| Turkey | 0.8 | 45 | 6-4 (16) |
| Bulgaria | 1 | 24 | 6-4 (16) |
| France | 1 | 100 | 6-4 (16) |
| Britain | 1.25 | 80 | 6-4 (16) |
| Russia | 0.7 | 160** | 6-4 (16) |
| Italy | 1 | 60 | 6-4 (16) |
| U. S. A. | 2.5 | 56(+20)** | 6-4 (16) |
| Serbia | 1 | 12 | 6-4 (16) |
| Belgium | 2 | 9** | 6-4 (16) |
| Roumania | 1 | 20** | 6-4 (16) |
| Greece | 1 | 12** | 6-4 (16) |
| Holland | 1 | 21 | 6-4 (16) |
| Switzerland | 1 | 12*** | 6-4 (16) |

Notes:

The table is based on the French 1914 Infantry Division, all other units being related to that on the entry of each country into the war. A division valued at 1.25 is approximately 25% more efficient than the 1914 French division. # Equated indicates the total number of divisions raised based on 1914 standard (e.g., France actually raised about 125 divisions, 1914-1918, but based on the 1914 levels these were actually only about 100). Figures are totaled for equated number per army, this figure is then divided by two, and rounded. Minor powers are further divided into corps at two per army.

*Actually greater for the original BEF, or 'Old Contemptibles,' but approximated for less professional elements.

**These countries did not realize their full potential for various reasons; the "+20" for the U. S. represents approximately ten divisions (U. S. sized) training in America on the Armistice.

***Although not actually in the Game, Switzerland was factored in, given the existing Rules concerning Strategic Barriers, no one would be able to invade Switzerland anyway.

Spring of 1919 the Americans intended to have 80 of their double-sized divisions on the line, well supplied with the Mark VII tank, and with swarms of aircraft overhead. It worked out nicely in the game.

So, NRC, far from being a simple calculation of economic power, actually is a highly intricate combination of such considerations as manpower and horseflesh as well as economic power. And even diplomatic factors entered into the question, notable in terms of the Economic Warfare Rules.

Economic Warfare. Economic warfare presented a real problem in the development of Great War. Needless to say the initial rules provided for so effective an approach that the German Player did little else but destroy Allied resources at sea. Now this was a possibility, or at least an optional course, albeit unrealistic, for the Germans to have attempted in the actual conflict. On the other hand, to weaken Economic Warfare too much would remove it as a threat in the Game. In the end a compromise was reached, which gives a fairly weak restricted concept on the one hand, and a moderately strong unrestricted concept on the other, but with a provision for serious diplomatic consequences. Ultimately this is probably the weakest part of the Game, The German Player, at least in the 1917 Situation, is not likely to complicate his life by flirting with American intervention. Nor is he likely to use restricted economic warfare due to its rather poor pay-off possibilities, except when Allied NRC is low.

In a way, the problem with the Economic Warfare Rules is that history is linear, while a wargame is not. We know the consequences of Germany's decision to wage unrestricted submarine warfare, the Kaiser's generals did not. So what wargamer is going to risk involving the U. S. in the war?

Combat Strength. This was one of the trickiest elements in the Game. Although each of the armies save only Germany's has the same Combat Strength for given types of units, in reality most of them represent widely different numbers of men, equipment and support elements. This was done in order to reflect the varying quality of the forces available in the war. The very highest quality was that of the 1914 British. At the other end of the scale were the Russians, particularly by 1917. An elaborate set of calculations was required before everything could be smoothed into one integrated system. The Combat Strength Evaluation table will explain it better than anything else:

The question could be raised, of course, as to the legitimacy of having the Germans stronger in their field army strength than everyone else. This was done deliberately. With the exception of the original BEF of 1914, no one was as skillful or efficient as the Germans throughout the war. The two extra Combat Strength Points per army reflects this efficiency. Of course, the German armies could have been reduced to 6-4 as well, with a contingent increase in the total number of armies permitted them, but that would not have reflected the true relationship as well. The fact is that the Germans got 'more bang for the buck' than anyone else at all times and in virtually all situations. In the final analysis, all of these figures worked out well. In fact, the 1914 Situation proved an ideal 'standard' upon which to base calculations since most armies were plagued by 1914-style thinking throughout most of the war anyway.

Of course, all of the above calculations are for field units. There are also "trench" units in Great War. These were deliberately made at twice the Defensive and one-half the Offensive Combat Strength and one-half the

Movement Allowance of the "field" units to reflect the increasing division of all World War I armies into ordinary and assault formations. By late 1918, in fact, the only army which still considered all of its troops "assault" troops was the American. But the Americans hadn't been through the disasters of 1914-1917. Anyway, a trench formation was usually fairly "lean" in manpower, lavishly supplied with machine guns, and supported by considerable artillery and construction engineers. Since its principal purpose was to defend an entrenched sector of the front, it had little transport beyond that needed to reach nearby railheads. In contrast, an assault formation usually had more, and younger, men. Liberally supplied with machine guns as well, it also had special weapons attached, such as flame throwers, 37mm "company" guns, bangalore torpedoes and so forth. Nevertheless, an assault division taking on a trench division was not exactly taking on a pushover, as the trench formation could deliver fire more efficiently and was more securely "wired-in", than the prevailing attack methods permitted. Which brings up the question of the combat system used in Great War.

The Combat System. There are four possible types of attack in Great War, depending upon the Situation being Played and the nature and number of units available. These four are Assaults, Attritions, Tank/Infiltrations, and Motorized. The first type, the Assault, was all that was available to the combatants at the start of the war. The others evolved as the Assault proved incapable of achieving decisive results, of course Motorized Attacks were never really tried.

Assault Attacks. Assault Attacks had a very simple premise: one packed as many men, and as much firepower one could against the enemy and hoped he would break. Too often, it was one's own troops who broke. In the relatively fluid situation prevailing in 1914 results could and were possible with Assaults. But even then they were costly in the face of machine gun and rapid fire light artillery. Indeed, most of the German successes in 1914 were due to the fact that the Germans initially received the enemy's attacks, broke him whilst on the defensive and then went over to the attack in turn. The Germans had a tendency to suffer reverses themselves when attacking an uninjured enemy in this fashion. The volume of fire available from the machinegun, coupled with even rudimentary field works, had made the defensive preponderant. Nevertheless, most generals kept faith with the Assault. After all, it had worked for Napoleon. So assaults grew bigger and bigger and bigger, as generals, particularly Allied generals, tried to pack still more men and still more fire power against the enemy. The result was horrors like Passchendale, where perhaps 700,000 Britons became casualties for a gain of ground smaller than Central Park. The problem could not be solved by more of the same. Different techniques had to be developed.

Attrition Attack. Attrition Attacks were among the alternative solutions to the problem of how to win. Of course attrition is essentially a passive way of winning. So it was first evolved by the Germans, who, after all, were more or less "winning" for most of the war. The idea was to force the enemy to commit troops to defend "vital" sectors, thereby exposing them to hails of shell fire and limited ground attacks, permitting you to cut his manpower down without too great a risk to your own. Unfortunately, it didn't work out quite that way. In order to make an attrition attack one was forced to commit oneself. And, although the enemy might suffer greater total losses than you, the difference might not be particularly significant, though the Germans were usually better off than the Allies in this respect. So a solution was still needed.

Tank/Infiltration Attacks. Actually what we have here are two types of attack -Tank Attacks and Infiltration Attacks -which were similar in their net effects, although considerably different in nature. A better term for them might be "Technological Attacks", for in each case a new technology was applied to making attacks, in the first a "hard" or mechanical technology and in the second a "soft" or doctrinal technology. Both concepts had their origins in the deadlock of the trenches during 1915. The Allies, all of them, began thinking in terms of some mechanical means of shielding the troops from the deadly machinegun and also helping ease the passage of friendly machine guns and artillery across the lunar landscape of "No Man's Land." In the end the idea was to combine armor plate, machineguns or light cannon, and agricultural "endless belt" tractors. This became the tank. It was capable of doing everything the Allied officers thought it could do. And it might well have helped end the war in 1917 but for the fact that the Allies frittered away their chances by employing insignificant numbers during their 1916 operations. This gave the Germans time to develop anti-tank techniques. Nevertheless, by late -1917 tanks were available in sufficient numbers to permit successful large-scale employment, such as at Cambrai, where a tank assault, with only the briefest of artillery preparation, completely surprised the Germans and made the greatest gains on the Western Front in years. In the end, the British were repulsed at Cambrai, largely due to lack of adequate infantry support; tens of thousands of British infantrymen were dead in the mud of Flanders by this time. But in 1918 the tank, although not irresistible, would to prove its worth.

The German technological approach was in the form of "Infiltration Attacks". In many ways an Infiltration Attack was the opposite of an Assault Attack. The attacking forces were kept small and agile. The supporting artillery barrages were kept short and heavily laced with poison gas, so as to disorganize the defense, rather than smash it flat, which usually prevented one's own attacking infantry from moving through the shell-pocked ground. And keeping the assaulting forces lean permitted them to pass around and behind enemy strong points, to strike at his rear area lines of communication, supply and retreat. Where you attacked, you hit hard and fast and with overwhelming strength, but you kept your fronts narrow and ignored your flanks. The idea was to keep going and gain ground. In a sense this was what the tank was to do. After all, the tank was a self-contained mobile fortress. But the differences were interesting. Tanks could not really be used defensively, while the basic idea of infiltration tactics could. So the Germans thinned out their defensive lines, spreading their troops over several successive lines, rather than keeping them close to the Front. As a result, their "technological" solution to the problem of trench warfare was superior, since it also helped them figure out a way of coping with their own solution! Lots of Allied infantrymen would die in 1918 as a result.

As an integral part of the Tank/Infiltration Attack, incidentally, several other technological concepts were incorporated, most notably the use of aircraft. In both tank and infiltration operations aircraft played a considerable role, perhaps their most important role aside from that of reconnaissance.

Motorized Attack. Motorized Attacks are, of course, only possible in the 1919 Situation, or in the Campaign Game, should the Players manage to meet the necessary technological horizon costs. Basically, the Motorized Attack is a combination of actual practice with Tank and Infiltration Attacks in late-1918 and the probable impact of Allied motorization of greater and greater portions of their armies by the Spring of 1919.

Armored personnel carriers and self-propelled artillery of sorts were already in production on Armistice Day. It would have been interesting.

Combat Results. Fundamentally there is little which is unusual about the Combat Results system in Great War. It is a straight numerical ratio table, with results modified by the type of attack and the size of the forces present. By modifying the results by the size of the forces one gets a result which is more realistic than a pure ratio between the strength of the forces or a simple plus-value system. (Consider: 2:1 and 50:49 are both "+1" in a plus-value CRT). The one aspect of the CRT which is unusual is that the attacker's losses tend to be more severe than those of the defender, particularly when attacking with what might be termed overwhelming force. This, of course, is realistic. In World War One far too many attacks were made with excessive force, resulting in unnecessary casualties and fewer gains than might actually resulted from a more economical use of force. It is a CRT which becomes easier to use with familiarity, but which is always less -predictable than one would prefer.

Naval Considerations. Surprisingly, one of the most difficult parts of Great War insofar as development problems were concerned was the Naval Rules. The First World War was essentially a land war, with naval operations playing an important but peripheral role. There were huge fleets on all sides, but also a distinct disinclination to make use of them. Aside from actions between light forces there were no real "knockdown, drag out" naval actions in the entire war, including the glorified skirmish at Jutland. The ships were just too valuable and too vulnerable for their admirals to risk them in combat. As originally designed the Naval Rules attempted to reflect this lack of combativeness by having naval combat results costly, but generally inconclusive. Unfortunately, far too many play testers wanted to play Nelson. So several distinct changes were made in the naval provisions before the present system was worked out. It is somewhat costlier than the original concept, but there is a greater likely hood of decisive results.

Political Considerations. In most of the Situations in Great War provision has been made for political acts which profoundly altered the course of the war: things like the entry of Italy or the United States; the collapse of Russia. An attempt has been made to make these events less than automatic, but also likely to be more serious in their implications at the same time, thereby adding an element of chance. This was done to prevent predictability; a Player cannot count on certain things actually happening on schedule. At best he must estimate the chances and act accordingly. The same general idea prevails in the various historical options provided with certain situations.

Conclusion. Great War is a complex, but highly playable and realistic wargame. It is the end result of a complex system of testing and evaluation. The Players, however, should feel free to modify the rules in situations which they believe merit such change. It's your game as much as Morningside's and Rand's [and One Small Step's]. We hope you will enjoy it.