CONSERVATIVE TACTICS

by Joe Angiolillo

Joe Angiolillo might be described as a "cake-icer" when it comes to style of play. That is to say, he swirls his units around and carefully pats them into place so that everything is covered with just the right amount of force and then executes his attacks with all the precision of a pastry chef applying rosettes. This article is his tactical "philosophy."

Many articles have been written approaching wargames from the military point of view, trying to fit numerous military terms into wargame theory. Notably, the handling of unit counters in battle situations is called "tactics" and the movement of units to prepare for or threaten battles is called "strategy." Although these terms will aid gamers in understanding war, they can only go so far in understanding *wargames*. The controversy whether expertise in wargames can be taught or not stems from these articles on tactics and strategy. "Perfect plans" have been proposed in many articles and criticized in many others. Many players believe there is no such thing as a "perfect plan." This group of gamers is living in an illusion. Wargames are games, not war! The majority of wargames stress perfect intelligence, predictability of the outcome of battles, and a time limit for the battle.

The almost endless possible moves makes wargames much like chess. Skill is stressed, as in chess, but here is where the similarity ends. Unlike chess, the armies are different in size. The terrain is not symmetrical. Wargames have a Game-Turn limit. Chess involves no luck, while many wargames involve die-rolls or second guessing using a matrix system. In effect, chess is a totally balanced situation equalized by static design.

Wargames, unlike chess, go through thorough playtesting (or at least they should). Since the sides do not have static balance, wargames are balanced by "ironing out the bugs." This involves playing, evaluating, replaying and re-evaluating the game until it is approximately balanced. Thus, a sort of dynamic balance is built into a wargame based on the percentage of wins for each side. Unfortunately, dynamic balance can never be as accurate as static balance and very few games should be used in tournaments. Obviously, deliberate playtesting has its limits and the public will usually "playtest" a game much better than the company. We must assume, then, that a wargame is balanced up to a point and it is up to the players to find that point. Thus, only experience can tell how balanced a game is.

The object of this article, then, will be to try to understand some principles involved in the play of wargames. This includes how to learn a wargame, how to win at wargames and how players often lose wargames. In general, examples will come from the *Blue & Gray* games, since they are simple, new, numerous, well-liked and well-known, and representative of many games now on the market.

LEARNING A GAME:

There are two things a player should look for as soon as he gets a new game: 1) How and where to *move* units, and 2) What odds or superiority one should attain in *combat*.

The Terrain Effects Chart is the key to unit movement. It should be studied before even attempting the rules. Since most wargames use the same jargon, it is not too difficult to understand its meaning. By studying the Terrain Effects Chart first, you will also be able to relate the game being examined to others that are familiar. Those points that are not readily observable can be studied when reading the rules. The second clue on how and where to move units is the Victory Conditions and unit movement sections of the rules. They should be studied with map in hand to locate certain objectives. Finally, the Combat Results Table in conjunction with the map will aid the offensive player in planning where *not* to move, and the defensive player in where to channel the attacker.

Combat is based almost totally on the Combat Results Table. This table should be studied and restudied before playing. The probability and possibility of certain events will govern much of the game. How to interpret the Combat Results Table will be brought up later in this article. Most expert players know the relative probabilities of every outcome on the entire table. The intermediate player need not go through all that work. He can simply analyze probabilities vs. possibilities. The second hint on combat is back on the Terrain Effects Chart. The best defensive and offensive terrain can be readily recognized by studying this chart. Next the rules are consulted to determine "tricks" that can be employed in combat. In the *Blue & Gray Quads* this includes: artillery bombarding at low odds in order to retreat (actually moving an extra hex) without losing attack effectiveness; attacking enemy units at low odds so that if you retreat, your units will either cut enemy retreat routes for next Turn, or be on better terrain than they were before; etc. Only by reading the rules thoroughly can a lost-game be changed into a won-game by tricking your opponent. Very few "holes" will be left in the line in tournament play. Furthermore, every player

should be a "rules lawyer"—not to cheat your opponent, but in order to make the game as demanding as possible for one's opponent.

As one can see, the rules in total are consulted *last*. This method is contrary to the way most players look at a game. Rules are often the first components studied. What a different perspective the game player gets by reading the rules last. He can read them with a slow, relaxed attitude, absorbing routine of play instead of trying to memorize as many facts as he can in one sitting. Since the initial studying was finished by perusing the Terrain Effects Chart, Victory Conditions, map, Combat Results Table and various players' aids, reading the entire rules folder can be relaxing and very pleasant.

PRACTICE-BALANCE THEORY

The next step is to develop a "feel for the game." This step involves playing, replaying and reviewing the game. The best procedure is to play solitaire and against various opponents. By recording the win-loss record, you can easily determine the relative dynamic balance of the game. This study is critical before entering into tournament play.

In general, the less balanced a game is, the more one side must take risks to equalize the situation. Furthermore, *early* risk-taking is preferable to *late* risk-taking in very unbalanced games. This point will be reinforced by the Unit Game-Turn theory presented later in this article.

If a player has the side that is favored (the better win-loss record) he usually can win by reacting to the misplacement of enemy units. He simply reacts with the "best" move within the realm of probable moves. In the *Blue & Gray* game system, this means that the favored side (if the player whose units must take objectives from his opponent) can usually win by attacking at "3-1" or better odds turn after turn. If the favored side is the defender, he can avoid "3-1's" by properly positioning his units.

Thus the player having the favored side can usually win the game by *conservative play*. It is up to his opponent to change the balance of the game by taking selective risky attacks or risky counter-attacks while on defense. In effect, he must go against the laws of probability to equalize the situation. In the case where one player is superior to the other (has more experience with the game in question and is better versed in the "tactics" of the game system), and has the favored side, he may wish to take more risks than necessary to win the game quicker than he needs to. This method is the best way to lose a won-game, but many seasoned veteran

wargamers get overconfident if they feel they outclass their opponent.

A good example comes from one of my tournament games. I was executing the usual planned withdrawal with the Union forces in *Chickamauga*, on my way to a Union victory with (what I consider) the slightly favored side. By conservative play, I had slowed down my opponent's advance and channeled his attacks. Then, an opportunity presented itself to surround and eliminate two units embarking on a Confederate flanking movement against the Union left flank. Feeling I had the game in hand I went for a quicker victory, crushing the Confederate units. The event was the longest in the convention and I was exhausted. Not following my own advise I almost lost the game. Three turns later, the Confederates had penetrated my position. I had to pull off a risky "1-1" surrounded to crush the Confederate maneuver. Granted the Union units involved in the battle could have formed another defensive position if they had retreated. However, I would have needed to take a riskier attack on a subsequent turn to recover the situation. Needless to say, I reverted to conservative play after winning the attack, restoring the advantage to the Union side. My opponent was no dummy and utilized that small error and subsequent overconfidence to best advantage.

ELEMENTS OF CONSERVATIVE PLAY: ODDS TO WATCH FOR

Conservative play revolves around the combat system, in most cases the Combat Results Table. Directly adhering to conservative play and the laws of probability, most experts analyze the Combat Results Table on a probability basis. Graphing outcomes versus probability often helps, but most of the analysis is done "in the head."

However, the intermediate player should worry about the *types* of outcomes involved, not the exact probability: assured results, probable results, and possible results. Chart Nr. 1 is useful in this regard.

Chart #1: ASSURED, PROBABLE AND POSSIBLE OUTCOMES IN THE *BLUE & GRAY SYSTEM*

Assured Advance: 3-1 or better

Probable Advance: 2-1

Possible Advance: 1-3 or 1-1

Probable "De": 6-1

Possible "De": 3-1 or 5-1

Possible "Ex": 3-1 or 6-1

Probable "Ar": 1-4 or 1-2

Possible Ar: 1-5; 1-1 to 1-2

Possible "Ae": 1-5 or 1-2.

Thus, the defensive player should create those positions where his units *cannot* be eliminated. If possible, he could even try to create positions that the enemy cannot penetrate. In the *Blue & Gray* system, preventing "3-1's" usually prevents loss of units. In the *Blue & Gray* system, preventing "1-1's" usually prevents loss of position. Thus, in any system the intermediate player

must understand which odds will eliminate units and which odds will take positions. In the *Blue & Gray* system, they are not synonomous.

ELEMENTS OF CONSERVATIVE PLAY: UNIT ANALYSIS

A handy way to develop defensive positions or find weaknesses in your opponent's position is to count Combat Strength Points. To do this, determine the strongest offensive combination available against the strongest *average* defensive combination. Obviously, the defender cannot be *strongest* everywhere. Not only will this analysis help in creating or penetrating defensive positions, but it will also give a feel for the relative balance of the game. Applying the desired odds to the counter mix in the *Blue & Gray* games, results in Chart Nr. 2.

Note that theoretical versus practical analysis is also included, based on the map and artillery available for bombardment. A similar chart could be presented for the *Napoleonic Quad*, the *Island War Quad*, the *Modern Quad, Kursk* system, etc. However, only in the *Blue & Gray* system is attacker effectiveness used in tournament play. This optional rule makes skillful maneuvering all the more necessary. In effect, it separates tacticians from the wood-pushers.

ELEMENTS OF CONSERVATIVE PLAY: COMBAT SEQUENCE

A third element in conservative play is the sequence of resolving battles. In most games, there are three basic results to look for:

surround units, eliminate units and take positions. These three results are accomplished by conducting the "best" attacks in the proper order. Basic tactics have been described in other articles (see *MOVES #22* and *#23*), so they will only be included in diagrams here. However, here are a few hints that apply to all games:

1. In general, execute attacks on surrounded enemy units *first*. The odds, of course, must have at least a possibility of Defender Retreat. (In the *Blue & Gray* system, bombard with artillery if the attacks are below "3-1").

2. In general, execute attacks to surround enemy units by advancing, next. (Again, in the *Blue & Gray* system, if the attacks are less than "3-1," bombard with most, but not all in this case, artillery).

3. Execute low odds attacks next, after surrounded attacks and after surrounding attacks, but before high-odds attacks, in which you are not sure whether you want to advance or not. The exception occurs when the low-odds attacking units are surrounded. This attack should be conducted last. Also use artillery units to bombard at low odds, since they are not eliminated and get a bonus movement with an attacker retreat result.

4. Change the sequence to prepare for any *possible* adverse die rolls at all times. This technique involves conducting the proper attacks in the proper order to remove any possible chance of a hole in your line or units that can be surrounded either directly

	actual defensive stack	theoretical (maximum) offensive stack	two hex attack	three hex attack	additional artillery
Game and Side					
Shiloh					
Union	12	16	28	40	26
Confederate	14	18	36	50	14
Antietam					
Union	10	14	26	38	(13)
Confederate	8	26	34	42	14
Cemetery Hill					
Union	12	38	70	97	27
Confederate	12	28	52	76	19
Chickamauga					
Union	10	14	24	34	18
Confederate	8	13	25	37	12
Fredericksburg					
Union	10	28	48	64	3(24)
Confederate	10	33	50	62	12
Hooker & Lee					
Union	12	19	38	55	24
Confederate	10	10	20	30	23
Chattanooga					
Union	12x3	18	30	42	1(23)
Confederate	10x3	10	20	30	13
Wilderness					
Union	14	25	49	69	22
Confederate	14	17	33	49	9

Chart #2: UNIT OFFENSIVE AND DEFENSIVE COMBINATIONS FOR THE *BLUE & GRAY QUADS*

or by attack on the enemy turn. A direct result of this rule may be your need to lower the odds of high attacks to "1-1's" in order to retreat the units and preserve a good defensive position.

5. Avoid or save "trick" attacks until they are really needed—in desperate situations. Usually conservative, calculated attacks do a better job.

Admittedly, the use of these rules takes practice, patience and self-discipline. In a tournament, your opponent is playing to the best of his ability. If you want to win, you will have to be cautious, but apply constant pressure at all times.

CHANGE-YOUR-METHOD THEORY

Once you have mastered conservative play, it is easy to learn most games one after another. However, you may find yourself getting crushed when you first play a game or always losing with the same side. As soon as you lose abominably, but feel you have done your best, do not blame the luck, change methods.

There are six basic methods used in wargames—three offensive and three defensive. The offensive methods involve taking the victory positions away from your opponent. The defensive methods involve keeping your opponent away from the victory positions that you already have. From most useful to least useful, they are: Hit and Run (offensive), Prepared Withdrawal (defensive), Selective Offense (offensive), Nip and Run (defensive), General Assault (offensive), and Crust Defense (defensive). Let us study these methods one at a time.

Hit and Run is the most powerful way to win the game. If it is applicable, it almost never

can be beaten. The method involves a decisive blow, crushing the initial enemy defensive positions and building up a superiority in Victory Points above and beyond those that the enemy can attain by both eliminating offensive units and taking all of the victory positions on the map. The offensive player (one with the stronger army) retreats to a defensive position for the rest of the game. Admittedly, he will only attain a marginal victory, but in tournament play, a win is a win. Levels of victory are so much chopped liver.

In the *Blue & Gray Quads* two games have the potential of the hit and run method, in both games to be used by the Confederate Player: *Shiloh* and *Wilderness*. The Confederates will need to eliminate (not exchange) for enemy units in *Shiloh*, but can take a few exchanges along with the defender eliminated results in *Wilderness* and still use the hit and run method. The difference between the two games is the ratio of points for eliminated units used in each game. In *Shiloh*, the Confederate can hit and run because of the limited Union movement and good defensive terrain on his side of the map. In *Wilderness*, the Confederate can hit and run because of the initial unit movement limitations and subsequent availability of only a few "3-1's" to the Union side. Since exchanges help the Confederate more than the Union Player, allowing a few "3-1's" during the second day is not as critical as in many other games.

There is only one way to defeat the hit and run method and that is to appeal to the worst part of human personality: your opponent's greed and overconfidence. Once you see that

your opponent has an overwhelming superiority and starts to withdraw, tempt him with a unit or two that he can surround at "2-1." The only hope you have is that you can get him to come out of hiding. Obviously, this technique should only be tried when you are losing and it will never work against a self-disciplined opponent. If your opponent does not fall for the bait—nothing ventured, nothing gained.

The best defensive method is the *Prepared Withdrawal*. The player who controls most of the mapboard can usually "give up" enough territorial objectives to his opponent and still have enough to win the game. In effect, he is trading space for time. Giving up a few objectives is preferable to losing units in most cases, as will be seen in the Unit Game-Turn theory. Remember that you must eliminate the possibility of "3-1's" along your whole line and any possibility for units being surrounded. You can give up a few hexes when the going gets rough.

Chickamauga is a good example where the Union can win with prepared withdrawal. Since he gets Victory Points for exiting the map, the Union Player can give up most of the territorial objectives (if not all) and still win the game.

Selective Attack offers the next best offensive possibility. This procedure involves constant pressure with "3-1" (or better) attacks and/or a few low odds attacks ("1-1's"), using one unit and the rest composed of artillery bombardment. In other games, the "1-1's" would be replaced with low odds attacks where the attacking units have no possibility of an attacker eliminated result.
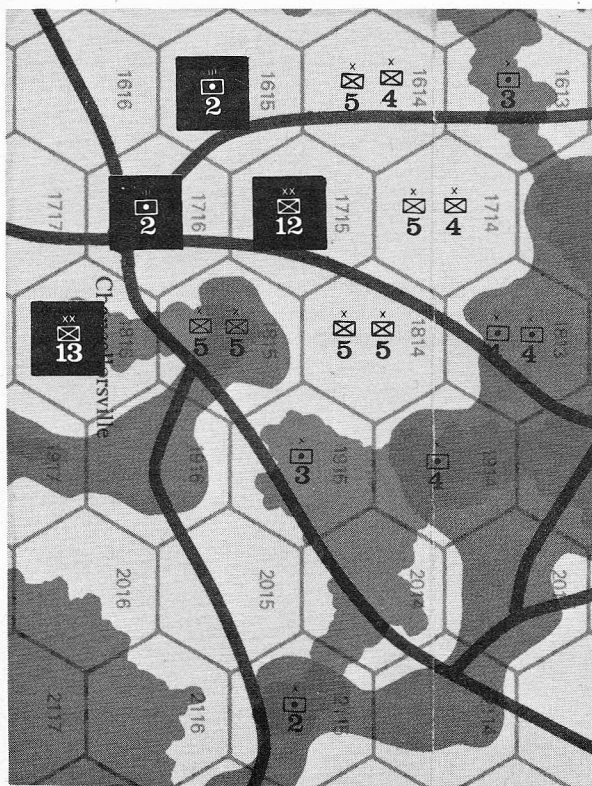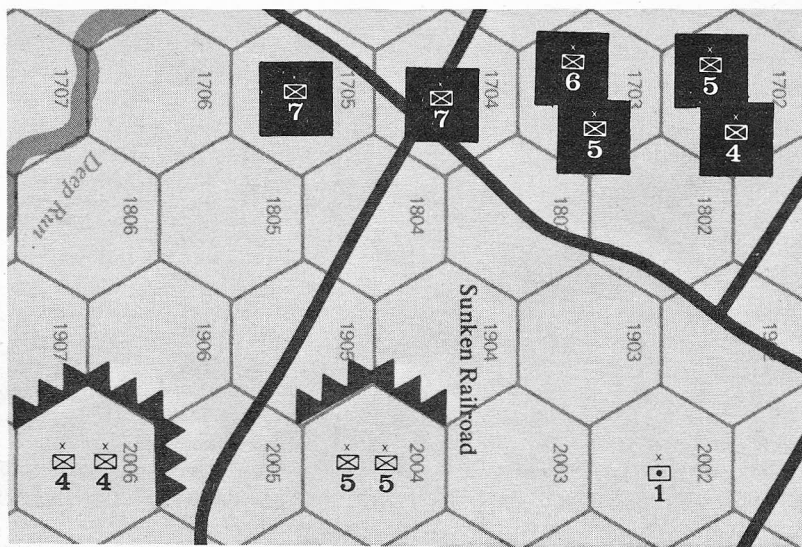
Diagram 1A

Diagram 1B

1A. HOOKER AND LEE
FIRST TURN ATTACKS
1. 3-1 Odds (Surrounded).
Defender in 1715; attackers in 1714, 1814, 1815, 1915, 1916.
2. 4-1 Odds. Defender in 1716; attackers in 1813.

3. 6-1 Odds. Defender in 1615, attackers in 1614 and 1613.
4. 1-5 Odds. Defender in 1816; attackers in 2115.

1B. FREDERICKSBURG
FIRST TURN DEFENSE
Two 4's in 2006; two 5's in 2004; one artillery in 2002.

Union units are shown in white on dark background.

Diagram 2

**2. WILDERNESS
FIRST TURN ATTACKS**
1. 3-1 Odds. Defender in 0616; attackers in 0615, 0516, 0517.
2. (Optional) 1-1 Odds. Defender in 0717; attacker in 0617.
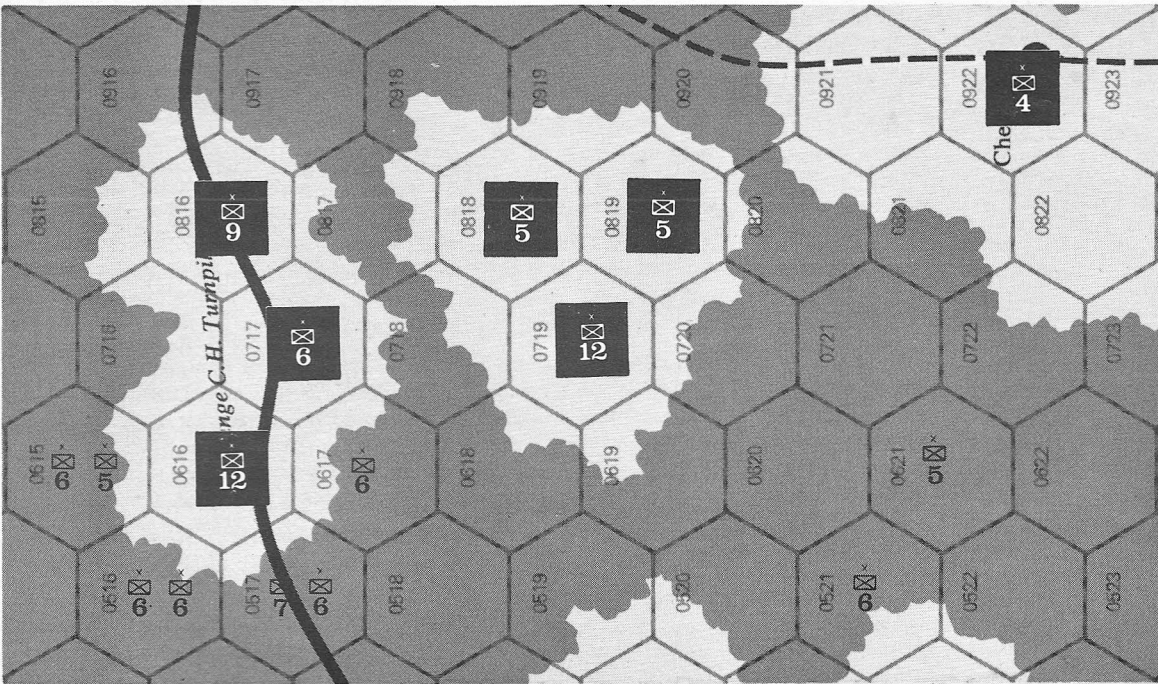
This method involves strengthening select positions and attacking in those areas. The selective attack method is preferable to an all-out attack, since there is a possibility of too many attacking units becoming eliminated or too many units losing attack effectiveness (in the *Blue & Gray* system). However, there is one disadvantage: if you can strengthen one area for attack, the defender can strengthen that same area for defense.

Nip and Run is a defense that many wargamers believe in. This method involves retreating and counter-attacking whenever a "3-1" becomes available. It is more fun than a prepared withdrawal (very few players like to be attacked and not counter-attack) and simulates real battles and real warfare. Unfortunately, nipping at the attacker's units can often bring on a general engagement in areas of the mapboard that are unfavorable to the weaker, defending player. Furthermore, the nip and run defense is a very tricky defense to pull off, especially because the defender's units are usually not as strong as the attacker's units. The defender is usually trying to defend everywhere and attack at the same time. Still, the nip and run method is a viable method for eliminating enemy units, which is often the only hope that the defending player has.

The worst type of attack (according to the laws of probability) is the *General Assault*: attacking along the whole line with whatever odds you can get. By trying to attack everywhere, the offensive player is weaker in each attack than if he were making selective attacks. Granted, a lucky turn with a general assault will improve the chances for the offensive player. But he will most often need two or more "good" turns in a row to reverse a losing situation. This rule is especially true when using attack effectiveness. However,

there is one exception. When using the *Blue & Gray* system, the turn before the Night Game-Turn almost requires a general assault. Loss of attack effectiveness is meaningless and the subsequent fluidity that results usually benefits the offensive player much more than the defensive player.

The worst defense is the *Crust Defense*: putting every unit on the line in a defensive position. Only enough units should be used to force low odds attacks. The rest should be kept as a general reserve for counter-attack purposes. Unfortunately, there are times when *only* a crust defense will work—when you have lost a great number of units and are awaiting reinforcements; when most of both armies are engaged in combat; or on the last turn of the game, when you are trying to withdraw as many units as possible, but stop the enemy from getting off the board.

UNIT GAME-TURN THEORY

The last section of this article deals with the Unit Game-Turn theory, a quantification of the fact that a unit eliminated at the beginning of the game is much more critical than one eliminated later on in the game. A corollary of the Unit Game-Turn Theory is that risky attacks that have a possibility of eliminating many units are preferable at the beginning of the game when the loss to your opponent would be more difficult to take than at the later stages of the game when the position is almost hopeless.

There are only so many turns to a wargame. There are also a limited number of units. Real war has no time limit and the breakdown of an army is up to the commander. Thus, the number of Game-Turns times the number of units available for those Game-Turns is the potential game strength for each side. Eliminating a unit on the First Turn of the game removes that unit from play for the

entire game. Many would argue that eliminating one unit on Turn 1 of a ten-turn game is not the same as eliminating ten units on the last turn of the game. For Victory Point purposes in many games this is a valid criticism. But for potential gaining of mapboard space the theory is valid. Thus, the Unit Game-Turn Theory evaluates the potential ground gaining and ground protecting ability of each side. To evaluate the unit Game-Turn potential for each army, simply multiply the number of units times the number of Turns they are on the map. When a unit is eliminated (or loses attack effectiveness in the *Blue & Gray* system for the offensive player) or strategically removed from the picture, deduct from the total that unit times the number of Game-Turns it will be removed from play. Comparing the total for each side will give a Turn-by-Turn account of how the game is going. Chart Nr. 3 lists the total unit Game-Turn potential of each side using the *Blue & Gray Quads*. It gives insight into the balance of each game and which side must take risks early.

Chart #3: UNIT GAME-TURNS FOR THE *BLUE & GRAY QUADS*
(Night Game-Turns not included)

Game	Union	Confederate
Shiloh	428*	300
Antietam	502*	404
Cemetery Hill	284	281
Chickamauga	494	594
Fredericksburg	571*	386
Hooker & Lee	196*	264
Chattanooga	366*	324
Wilderness	541*	582

* This side has movement restrictions.

Conservative Tactics

The Unit Game-Turn Theory should influence your thinking about at least one game in the *Blue & Gray* system. This game is *Hooker & Lee*. The Confederates have the option to send units on Jackson's Flank March. What does the flank march accomplish: How many units are needed?

To be sure, the Unit Game-Turn Theory stresses sending as little as possible. For each unit sent of the mapboard, that's a loss of three unit-game-turns! If all twenty units are removed, that's a loss of 60 unit-game-turns. Surely so many units removed will weaken the Confederates on the map to such a degree that they can neither attack nor hold ground. Experience has shown the Unit Game-Turn Theory to be right. Only four or five Confederate units are needed to threaten the Union right flank and Ely's Ford. The rest of the Confederate Army can attack the Union left, usually decimating it.

In *The Wilderness*, the Unit Game-Turn Theory also pops up. A subtle application is found on the first Turn of the game. By attacking the Union "12" on hex 0616 (see Diagram Nr.2) from four sides, it can be surrounded and eliminated from play—a loss to the Union of sixteen unit Game-Turns. However, a Confederate diversionary attack must be taken on the "6" on hex 0717, which has a 50-50 chance of losing attack effectiveness (potential loss to the Confederates: seven unit Game-Turns). Furthermore, the Union Player may be able to counter-attack out of the Hagers opening, releasing two units that would otherwise be strategically out of the picture for seven unit Game-Turns. In effect, a "3-1" against the "12" is just about as good as a "3-1" surrounded. Whichever attack you make on the "12" is a matter of taste.

Probably the most important application of the Unit Game-Turn Theory in *The Wilderness* is the direction Confederate first Turn reinforcements take when they reach Parker's Store. By taking the Orange Plank Road, the reinforcements are strategically useless for four or five Turns. If they pivot left, however, toward Wilderness Tavern, they can catch the Union withdrawal or Union left flank on Turn Three, usually smashing the position.

As anyone might guess, there are exceptions to the Unit Game-Turn Theory. It is up to the good player to find them.

Playback
READER REVIEWS

Playback ratings are reader evaluations of games that are acquired through S&T and MOVES Feedback responses. Readers have been asked to rate each aspect of the games on a scale of "1" (poor) to "9" (excellent). For the actual text of the questions, see Section B of Feedback on page 31. Publisher Abbreviations: **AH** = Avalon Hill, Baltimore Md.; **GDW** = Game Designer's Workshop, Normal, Ill.; **RGA** = Rand Games Associates, Liberty Corners, N.J.; **SDC** = Simulations Design Corp., San Diego, Ca.; **SPI** = Simulations Publications, Inc., New York.

GAME TITLE	World War I	Napoleon at War	Fast Carriers	Wooden Ships	Fall of Tobruk	Hitler's Last Gamble	Typical Rating Range
Publisher	SPI	SPI	SPI	AH	CGC	RGA	
Publication Date	8/75	8/75	8/75	7/74	7/75	7/75	
Price per copy	5.00	12.00	10.00	10.00	8.98	7.00	
Nr. of Players Reviewing	422	167	134	139	52	54	
Date Reviewed	5/76	5/76	5/76	5/76	5/76	5/76	
A. Map, Physical Quality	6.03	7.27	6.49	6.69	6.04	5.75	6.1-6.7
B. Rules, Physical Quality	6.48	7.19	6.93	6.92	5.88	5.13	6.3-6.9
C. Counters, Physical	6.64	6.67	7.33	7.43	7.54	6.46	6.7-7.4
D. Ease of Play	6.95	7.78	5.84	6.83	6.27	5.57	6.4-7.0
E. Rules Completeness	6.93	7.40	6.73	6.94	5.79	4.35	6.3-6.9
F. Play Balance	6.53	7.10	6.80	7.26	6.73	5.67	6.2-6.8
G. Game Length Suitability	6.79	7.50	6.09	6.85	5.98	6.13	6.3-6.9
H. Set-Up Time Suitability	6.92	6.41	5.97	6.84	5.98	6.14	6.2-6.8
J. Complexity Suitability	6.06	6.28	7.28	7.22	6.77	5.96	6.0-6.6
K. Realism	6.25	5.98	7.54	7.37	7.04	5.73	5.8-6.4
L. Overall Rating	6.44	6.99	7.00	7.11	6.51	5.51	6.2-6.8
M. % Who'd still buy	68%	85%	82%	84%	84%	56%	75%
N. % Rec'd money's worth	79%	85%	86%	87%	83%	67%	79%
S&T SURVEY DATA:							
% Who've played game	55%	11%	23%	21%	3%	5%	
Acceptability Rating	6.2	7.5	6.4	7.1	6.4	5.8	
Complexity Rating	3.0	3.9	8.0	5.8	—	—	
Game Length [hours]	2.5	2.5	5.5	1.0	—	—	
Solitaire Playability	4.0	6.6	4.5	4.0	—	—	

WORLD WAR I
Design: **James F. Dunnigan**
Development: **Christopher Allen**
Art: **Redmond A. Simonsen**
Comments: Corps-level recreation of the European theatre of WWI, with a geographical emphasis on the East. Unusual combat system uses Resource Points to allow players to leave the actual counters on the map while taking losses.

NAPOLEON AT WAR
Design: **Walczyk, Curran, Isby, Hardy**
Development: **Frank Davis**
Art: **Redmond A. Simonsen**
Comments: Four Napoleonic battle games, Leipzig, Jena-Auerstadt, Wagram, Marengo, in standard Quad-game format. Standard sequential movement then combat sequence, odds/ratio combat. Variable special rules for each individual battle over demoralization, strategic movement, etc.

FAST CARRIERS
Design: **James F. Dunnigan**
Development: **Irad B. Hardy, Fred Georgian**
Art: **Redmond A. Simonsen**
Comments: Multi-Level, strategic/operational/ tactical, recreation of air/sea warfare from WWII to the present, Complex play sequence integrates all levels of play. Tactical charts, wave flying, operational planning. Individual ships and plane squadrons. Many scenarios.

WOODEN SHIPS & IRON MEN
Design: **S. Craig Taylor and Steve Peek**
Comments: Individual ship-to-ship action in the Age of Sail. Simultaneous movement; multi-level CRT's covering fire combat as well as hand-to-hand. From two-ship scenarios up to Trafalgar. Crew ratings, combat effects on hull, rigging, etc.

THE FALL OF TOBRUK
Design: **Frank Chadwick**
Art: **Rich Banner**
Comments: Battalion/company (armor) level simulation of the Axis attack on Tobruk in Winter '42. Sequential movement system uses a continual movement/combat idea to recreate desert warfare fluidity. Odds/ratio CRT. Minefields, engineers, anti-tank units.

HITLER'S LAST GAMBLE
Design: **Rand Games Staff**
Comments: Battalion/division level simulation of Battle of the Bulge. Sequential movement/ combat with second movement phase for mechanized units. Standard odds/ratio CRT. Variable scenarios.