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# Good Game Designs

*by DIA Mack*

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Having previously written mostly about particular games, covering them in profiles or in operational analyses, with the occasional diversion into tactical and general principles I am entering a new field in this article, a field rather close to the perilous labyrinths and hidden pitfalls of game design. My reason for this is because I want to write about design points and mechanics in a number of games known to me; points and mechanics which I consider to be good examples of the way in which the designer or developer has emphasized certain facets of the conflict which he seeks to simulate, or has used a simple mechanic to represent a complex concept - or in which he has failed to do so and has thus thrust ahistorical gambits upon the player. There will be no dissertations on entire game systems but rather the examination of certain aspects; if such examination is of some help to embryo designers, well and good, but this is not the main object of the article. Rather do I seek to highlight certain features of certain games; if this helps gamers to look more closely into the mechanics of other games, especially of games yet to be published. and to evaluate them as good (or, alas, not-so-good) simulations of that which they purpose to represent then I think that I will have achieved what I set out to do.

## **The Contemporary Situation**

Any wargame should make each player sense at least some of the constraints under which the original commanders labored or, in the case of hypothetical campaigns, under which they might reasonably be expected to labor. Thus a simulation of a campaign in which one side was hampered by the irregular shipment of supplies should bring this out even if not a drop of sea appears on the map - 'Africa Korps' deals with just such a situation by making the Axis player throw for his replacement supply units.

## **Tactics of the Time**

Obviously more applicable to tactical games than to strategic but may affect operational-level games; the 'combined arms' rule in NLB (favorable odds- shift when infantry, cavalry and artillery attack the same hex) is an example of a simple method of emphasizing the tactical advantage to the attacker. In using cavalry to force enemy infantry into square, artillery to pound those squares and infantry to exploit the openings thus obtained. At a more tactical level the musketeers and arquebusiers of *The Thirty Years War* should not be able to deliver the crashing volleys of the Waterloo period; and if they do then there is a fault in the game-mechanics.

## **Chain of Command**

This is something lacking from many wargames, when it could have been built in quite easily, but which is now receiving more emphasis. Games in which each army is simply an aggregate of units, each able to move and fight quite independently of others, do not reflect military reality. If the four battalions of the Nth Brigade enter the field and immediately disperse in four different directions, this may be convenient for the 'owning player' but it is not a reflection of reality. I shall be discussing some examples of good handling of this facet of simulation.

## Supply

Again, an aspect of varying importance according to the game scale and type: a Roman cohort in a four-hour battle will need no supply, a modern division in a six-month campaign will. The obvious example is any North African campaign game at operational or strategic level: if the game mechanics do not reflect the difficulties of supply in a theatre in which everything had to be hauled forward on wheels, then even the veriest tyro will sense that something is lacking. Nor will the well-known convention whereby any old line of hexes to the map-edge will constitute a L of C suffice. The distances, the total barrenness of so much of the terrain, the threat from enemy raids will have to be brought out and mechanics devised to do this.

There, then, are some of the main aspects of simulation I look for in a game. What games in particular? There follows my list of selected games, very much a personal selection: observe that no Russian Front game is included (there are a few games on subjects other than 'Panzerkrauts nach Moskau', you know) and indeed the Second World War in general is mentioned only once. There is also a game called '**Fulda Gap**', which you may recollect my having referred to once or twice before ...

## **Armada (SPI)**

Buddy, can you spare a dime? This strategic-level game of sea and land combat in Western Europe in 1587-88 has one dominant feature which particularly affects the English player: finance. Both sides have a 'national' income expressed in ducats and both must pay to maintain mobilized fleets and armies and to munition, provision and, if necessary, repair or replace naval units.

Spain is rich, as she was historically, and England is, if not actually poor, certainly rather short of the ready: exact levels of income depend on a die-roll for each side at the opening of each of the two years 1587 and 1588 but that of Spain will average just over 2500 ducats annually whereas that of England is little more than 1200. As a result the English player will be running the war on a shoe-string, maintaining a balance between national security on the one hand and national bankruptcy on the other. In himself he will be aware of the struggle between Elizabeth I and her sense of economy and Lord Howard of Effingham and his desire to maintain a strong, well-appointed and battle-ready fleet ("considering the time and the service that is ready to fall out, and what danger it might breed if our want of victual be at the time of service").

He will probably find himself being more Elizabeth than Howard, keeping the minimum number of ships ready for immediate action, and these with just enough munition and victuals to meet the Spaniards in the Channel or in Biscay, but if he emulates Drake, whose plan was to fall on the Armada before it set sail, this could prove a war winner ... provided that it comes off.

With all its faults, due entirely to its botched rules (a new edition has just been published by SPI, however) '**Armada**' is a realistic simulation, particularly strong on the Contemporary Situation aspect, and the key to this success is the simple and simply operated financial side of the game. In addition, the inclusion of the European mainland, and thus the Dutch war, will make the Spanish player understand why Parma stressed the need for decisive victory in the Netherlands before invasion of England.

## ***Musket and Pike (SPI)***

**Take care, you gallant musketeers  
And shoot you round about.  
Stand to it, noble pikeman  
And we will keep them out.**

A multi-scenario game of tactical land combat in the period 1550-1680, i.e. from the time the med-iaeval host had given way to something more like the regular army until the advent of the bayonet and the decline of the pikemen. A combination of regimental-type organization, drill, a cadre of professional soldiers and the use of balanced units of musketeers and pikemen once more made infantry the dominant arm and this arm now consisted, as has been implied, of the pikeman, able to with-stand cavalry and to assault 'at push of pike' but vulnerable to shot from beyond his reach, and the musketeer, able to disrupt enemy horse and foot, forcing them to remain at a respectful distance, but very vulnerable to assault unless protected by the pikes. Much military thought went into the optimum mixture of pikemen and musketeers in a regiment, battalion, tercio or whatever, some favouring a 50-50 balance, others a mix of 2/3 'shot' and 1 /3 pikes.

By providing the players with a counter-mix of small units of pure muskets and others of pikes, and permitting stacking, '***Musket and Pike***' reflects the need to combine the two weapons for best effect: there is no absolute requirement to do this but the player who does not will find his pike units disrupted by fire and his unprotected muskets overwhelmed by pikemen or swept away by cavalry; thus he will move (or be kicked) towards Tactics of the Time. Another simple mechanic is the stacking of three units to reflect the better-organized and drilled armies; although the bottom unit takes no part in combat it acts as a reserve, and permitted changes in stacking-Order during the movement phase of the player-turn can be used to simulate, for example, the falling-back of the musketeers after firing (turn sequence is fire-move-melee) prior to the charge of the pikes with the muskets safe in their midst.

The absence of zones of control and the provision of a combat bonus to the attacker when a stack is attacked from opposite sides simultaneously is a powerful incentive to players to keep their respective armies in orderly lines of adjacent stacks of infantry, with cavalry on the flanks to fend off attempts at flanking movements by enemy cavalry, thus well representing the battle-formation of an army of the period.

Thus the counter mix, the stacking rules and the lack of ZOC, all simple enough concepts and easily remembered, do the trick nicely in this tactical game although what comes out is the principle rather than a detailed simulation of tactics; as I have said elsewhere, the actual formation of a Swedish brigade or of a Spanish tercio cannot be readily adopted. But the general success of the game system and its retention of simplicity make it a success within the limits set by the designer.

## ***Eylau (SPI)***

"And are you sure you shall outlive this day?" This and the next game to be described were published with S&T No. 75 as a two-part package. '***Eylau***' (SPI) is a simple, colourful game which is both interesting and fun; it is also playable in about four hours. Like its WWI predecessor it is based on the NAW system

but has a different approach, both sides being organized into divisions although the brigade remains the Individual unit. Command Control features here too, although it's rules are not so strict: a combat bonus is given when two or three units of the same division participate in the same attack, a particularly good bonus in the latter instance. Thus, although there is no compulsion to keep divisions together there is quite a strong inducement to do so, and the player who bears this in mind will be more likely to win than one who doesn't; and, once again, all is done without fuss or elaboration. I thoroughly approve of the idea of formation integrity; more, please.

Two other game mechanics are unique (I think). The first applies to certain divisions on either side and allows for a once-only combat bonus for divisions deemed to be fresh at the battle's opening. An extra CF may be added to a designated unit once in one combat, whether in attack or in defense, and recording is simply done by having on one side a set of counters bearing the divisions' names and the bonus-figure; on the bonus being used the appropriate counter is just removed or turned blank side up. It is, I must say, a rather odd simulation of freshness as only one brigade may benefit but it does bring in a touch of Clausewitz' dictum the war is the province of uncertainty: you never know when the other fellow is going to pull his bonus out of the bag!

The second of the unique mechanics is the Weather Rule, *Eylau* was fought in a snowstorm, the blinding flurries and squalls sometimes making visibility as poor as though it were dark. The result was periodic confusion and miscarriage of plans - at one stage a French division swung off course and marched into the line of fire of its own side's artillery. This potential confusion is reflected by having a die-roll for weather effect every time that combat takes place: 1 to 4 and the normal CAT applies but on a 5 all retreats become eliminations. And on 6 the result is reversed, e.g. Defender Retreat become Attacker Retreat and Defender Eliminated becomes, well, bye-bye Attacker! These possibilities make things marvelously uncertain, although there is a 2/3 chance of nothing untoward happening. Once again Clausewitz has his say, and at the game's end both players may well echo Ney and say, "Oue massacre!" - though not necessarily with the addition, "Et sans resultat!" And all done by a die-roll and an easily remembered rule.

## ***Dresden (SPI)***

### **"Nothing .... half so melancholy as a battle won"**

The other half of the S&T 75 game-package also contains an example of a fairly simple rule which has a marked effect. This time however it is, I regret to say, an example of a game-mechanic which induces ahistorical and militarily senseless play, in other words an example of mechanics acting to the detriment of simulation.

Briefly, the Allied player has three armies, Austrian, Russian, and Prussian. Each of these has a number of units designated as reserves which may not come into play unless certain conditions have been achieved and even then only one or two units at a time are likely to be activated. But one rule says that all reserve units are automatically activated if the army to which they belong becomes demoralized.

Loss of morale carries penalties, needless to say, but during each of the two night game-turns (the battle covers three days) morale is restored to its starting level, less one point per permanently eliminated

unit. The result: as nightfall of Day 1 approaches the Allied player proceeds to make a series of attacks at odds carefully selected to ensure that all of his units are forced to retreat; for every unit so retreated the morale of its army goes down one point and on the last game-turn of Day 1 the clever Allied player has each of his three armies reach Demoralization level. All reserves are activated there and then, night restores morale and on the morning of Day 2 the French, by then in surrounded Dresden, are faced with an Allied army at full (or near full) strength. And all as the reward of deliberately sought failure!

Interlude; "Victory. Herr Marshall, victory! The French from the Dippoldswalde Schlag driven have been!" "Victory, du Dummkopf? Victory, du Narre? Have you not my orders carried out? Scher' dich zum Teufel, Scheisskerll Provost Marshal, to a fortress with this, this criminal half-wit!!"

No, it sounds a bit unreal, don't it? But it's in the game, a fine example of the game mechanic which allows the cunning player to play the system and not the wargame. Such mechanics, and games which include them to excess are to be shunned by true wargamers; they 're shunned by this one I assure you.

## ***Vera Cruz (SPI)***

### **Along o' my old Brown Mule**

Yet another S&T game, this one came from No 63 (July/Aug 77) and is a simulation of General Winfield Scott's advance from Vera Cruz to Mexico City in 1847, the closing act of the US-Mexican War. The theme of the campaign was the unopposed landing of an army in nonetheless hostile country and its march inland through less than hospitable terrain, from time to time encountering sundry Mexican gentlemen determined that this visit to their country should be unsuccessful. The theme of the game is just this too, and turns on two factors, morale and supply.

The question of morale is closely linked with the game's combat system, a system that is almost outside the scope of this article in that it is based not on one or two clever dodges but on a somewhat involved-seeming series of rules and tables. Nevertheless it accurately reflects the historical situation; the better-organized but largely untried US forces newly-landed in America's first major overseas expedition must win an early victory to help boost their morale and deflate that of their opponents: the system will raise the morale of the side which wins a battle and erode that of the loser and should the Americans lose the crucial first encounter they will face increasing problems. Needless to say, a suitable concentration of force will give the Americans the necessary win, probably at Cerro Gordo, but usually at the cost of having to defer the taking of Vera Cruz and thus the seaward end of their L of C.

This brings us to the supply aspect of the game; a simple system which leads to a most historical state of affairs. Basically, the US forces must have supply units (expended when used) in order to move and to fight at best advantage, supply units which are available only at the coastal base and which are transportable only by locally Impressed pack-trains. Once the US have reached a certain distance inland the increasing length of the L of C will make itself felt, the more so because of the simple but clever guerrilla rules. The Mexican player is able to place two guerrilla units virtually anywhere and to redeploy them virtually anywhere else on each turn, reflecting the ubiquity of local guerrilla bands able to interfere with the L of C. Impossible to eradicate, they can be negated by providing adequate escorts for the pack-trains, but only at the cost of draining off CF from the field army; moreover if the effect of the

guerrillas is augmented by one or two cavalry columns of Mexican regulars the US player can be faced with a serious threat to his supplies.



The answer is to halt on the road to Mexico City, accumulate an adequate supply-train and bring it up to the main force, and then turn one's back on the sea and march inland as a flying column, i.e. a force complete with adequate supplies on the hoof and no longer dependent on a L of C. This is exactly what Scott did, and for the same reasons. The game brings it out excellently: there is no 'straitjacket' requirement to cut loose in this manner but the US player will find himself in Scott's situation and will find also that Scott's solution must be his. Like Scott he will be taking a risk and will have to crack on to take Mexico City without

further dalliance by the way. Altogether an excellent simulation of historical conditions which lead the US player to a historical answer, all achieved by supply rules. What's that you said? Don't have Vera Cruz? Well then, you're missing something.

### ***The Crimean Quad (SPI)***

**A la guerre, les trois quarts sont**

**des affaires morales.**

The problem in the set of four battalion-level games was to simulate conflicts in which single Allied (and especially British) battalions, often under strength, more than held their own against Russian columns of two or four battalions (four battalions to the Russian regiment). Historically this was due to superior weapons, weapon-handling and morale: how, then, to depict these factors simply and without fantasticating unit combat factors?

The simple answer was to add morale to the combat factors, the three digits on each counter reading fire-melee-morale, and to make morale the factor by which the effects of fire combat are assessed. from which the appropriate line on the melee CAT is selected. for the attacker and by which ability to recover from disruption is measured. Thus the British, with morale-levels of 4 or 5 are not easily disrupted by fire, melee with elan, even at poor odds, and are very likely to recover from disruption within the game turn; the Russians, on the other hand, tied to morale levels of 2 or 3, are liable to disrupt under fire, must attack at high odds to succeed in melee (and may lose part of the attack to fire combat first) and are slower to rally.

Added to this is the fact that British fire-CF works out at 1 per 85-100 rifles whereas the musket-armed Russians, in dense columns, can muster only 1 per 350 barrels; melee CF is about 1 CF per 200 bayonets for all. The outcome is that the CFs are an accurate reflection of opposing tactical procedures and unit strengths, no distortion being necessary, thanks to the addition of morale factors to counters. Very accurate simulations of infantry-to-infantry combat come about as a result, especially in '*Inkerman*', with Russian mass opposed to the 'thin red line tipped with steel'.

Despite its ingenuities the quad has a 'silly' in one of its four simulations, that of Alma. By making it necessary for the Russian player to exit a certain number of units off-map down the Sevastopol road once his casualties reach a certain level, a marked and Quite ahistorical inducement to turn the Russian flank and head for the exit-hex regardless is given to the Allied player, an inducement made more easy to yield to because of the absence of the massed Russian cavalry about which Lord Raglan was so sensitive. As a result the Russian finds it advisable to quit his strong position early and start falling back slowly in order to secure his exit hexes against ahistoric Allied adventurism. And all because of ill-considered victory conditions!

## ***Red Sun Rising (SPI)***

### **Cities entered, oceans crossed**

A strategic-level game of the Russo-Japanese War of 1904-5 which is particularly good on the Contemporary Situation aspect through use of supply and command control as the two dominant features of its system. To be out of supply means instant reduction by one step (turns represent one month) and to be attacked while out of supply means annihilation. The Russians draw unlimited supply down the railway linking Harbin, Mukden and Port Arthur: the Japanese are dependent on merchant fleets on the coast hexes of the land map, each fleet able to maintain two divisions or an equivalent force. This ties the main Russian force to the line of the railway and makes the Russian player very sensitive to any threat of a flanking thrust at his L of C, whereas the Japanese player fears for his merchant fleets as long as a Russian fleet lies in untaken Port Arthur, the actual situation to a T. The maritime Contemporary Situation is further enhanced by making fleet combat tactical (on a special battle display) in the context of a strategic game, with each ship from light cruiser upwards given her own counter: the Japanese player is very conscious of the fact that he has only six modern battleships to the Russian seven, despite a slight superiority in quality, the more so as he is liable to lose two of these on blockade, as actually happened, and he will be very careful to offer battle on the terms most advantageous to himself.

Command Control turns on the ability of the various army commanders to activate and then to pass on that activation to the divisions and brigades under his command, the medium being simply a die-roll equal to or less than each commanders' Command Value; the sluggishness of the Russians is achieved by giving their commanders lower ratings, on average, than those of their more efficient opponents -but the Japanese are not immune to poor communications, misunderstood orders or incompletely executed measures either. "Between the idea/ And the reality/ Between the motion/ And the act/ Falls the Shadow", as it fell more than once in Manchuria seventy-six years ago. Simple mechanics, subtle effects.

Another excellent concept is in the Victory Conditions. At certain stages in the game the Japanese player has to have reached a certain increasing total of cities captured: once the point is reached when he falls short the game stops there and then, regardless of the strategic situation. Four cities are the minimum for Japanese victory and thus the Japanese player must crack on, push ahead, win early and be seen to be winning in order to be able to remain in business, as was the reality. It is unlikely that he will take more than four, with the result that the game often ends with the Japanese ahead on points despite the strong Russian reinforcements now ready in Manchuria -too late, too late, for in European Russia the war is a 'Bad Thing' and the paving-stones are flying and thank God for Teddy Roosevelt and the Treaty

of Portsmouth. But let the Japanese fail to capture Liao-Yang in the summer of 1904 and nobody will want to know him! Thus are off-board forces and factors simulated by an easily-comprehended timetable of objectives.

And the whole effect is achieved with game mechanics simpler than those of some quadrigames! Broad-brush painting gives a first-rate likeness in this clever, easy, subtle game.

## ***Arnhem (SPI)***

**There is no expeditious road.**



A game which is, rightly, popular because of the good simulation of Operation Market Garden it presents without resorting to complexity to do so. By the use of simple supply rules it emphasizes two features affecting the operation, namely the limitations imposed on an airborne force, once dropped, and the need for the ground-force advance (Op Garden) not merely to get to Arnhem but to open up and keep open a "Highway to the Reich".

Each of the three airborne divisions in the game 'drops' into a given area and the center of the drop zone is indicated by a marker. Any unit which moves more than seven hexes from that marker is deemed to be out of supply: no penalty is

incurred as regards movement and combat but the Allied player loses two victory points per out-of-supply unit per turn, a loss-rate which is acceptable from time to time but which cannot be sustained on any large scale. Thus the Allied player is induced, rather than forced, to use his airborne divisions in their historical roles, namely to drop into, seize and hold any area ahead of ground forces; their lack of heavy weapons and transport and their dependence on re-supply by air precluded their acting in a mobile role once on the ground.

The supply rules, by requiring the units of XXX Corps to trace the L of C of a limited number of hexes to a road and thence only by road to the corps' entry-hex, make the main road to Arnhem via Nijmegen the supply line for the spearhead. Again, units of XXX Corps unable to trace a L of C incur a VP loss, emphasizing the need to hold the route open behind the spearhead and giving the German player a strong incentive to carry out strikes at XXX Corps' L of C, as was actually done.

A final touch is a special defensive bonus given to units, especially airborne units, in urban hexes which makes it difficult but not impossible to eject them. This little rule brings about a re-enactment of the stand of 2nd Bn, the Parachute Regiment at Arnhem Bridge and its crippling effect on German reinforcements, but keeps the situation delightfully uncertain for both players as 2 Para may hold out all week or may be eliminated in a turn if the German player gets the right die-roll.

In a nutshell, a first-rate simulation of the contemporary situation brought about by a supply rule and a favorable alteration to the CRT for units in urban hexes, all in a game system so simple that it is now being used as an introductory game for beginners.

## ***Oil War (SPI)***

### **Nine Points of the Law**

An under-rated game (now rather dated by recent events in Iran) simulating a short, sharp operation by US, Israeli and Franco-British forces to seize and hold a sizeable chunk of the Persian Gulf oilfields, following a deterioration in Arab/Western relations and an attempted oil embargo. The Allied player will, unless he muffs his initial deployment, have little difficulty in defeating the mixed bag of Arab/Iranian ground and air forces opposed to him but this will not gain him any victory at all: this can be achieved only by capturing and holding a sufficient mix of oil and port hexes, end that in the limited time imposed by a comparatively short game.

To do this he will have to move quickly, eliminate the scattered Arab forces immediately opposed to him, push back and then hold off the Iranian army and finally, redeploy behind a secure front to control the necessary resource hexes before the game's end. In other words, get in there, strike, take, and then hold before the outside world can draw breath to say, 'Naughty, Naughty'. It is this that can be more difficult to achieve and is a lesson in military victory not always being enough, taught through measuring victory in purely economic terms after a swift military operation.

## ***Fulda Gap (SPI)***

### **Go West, young man.**

Quite frankly, this game is full of the sort of simple but ingenious game-mechanics which I am trying to identify, which is why it is such a good game and so easily playable. Probably the best single example is the Soviet Doctrine rule, which lays down that Warsaw Pact units may move only westwards in the second WP movement phase of each turn (each player-turn is move-combat-move). It does not intend to imply that forces can drive only westwards after 12 noon; it is a simplification of the effects of the Soviet system of rigid command control and operational doctrine, a system which discourages deviation from the set plan, which gives commanders -especially forward commanders -little opportunity to exercise initiative and which indeed positively discourages initiative. A more 'contrived' ruling than some which have been illustrated, it nonetheless gives a feel of rigidity to the strong WP force, a rigidity which does something to offset its strength and which gives the NATO player the opportunity to strike at over-exposed enemy units. And it is achieved simply by an easily-hoisted-in restriction on movement in the exploitation phase of the player turn.

A good Divisional Integrity rule gives double CF to units of the same division working together in attack or defense, with a requirement for greater concentration in the former; unlike the Doctrine rule there is no 'straitjacket' element, simply an inducement which neither player will wish to ignore very often and which will bring about a realistic deployment of forces.