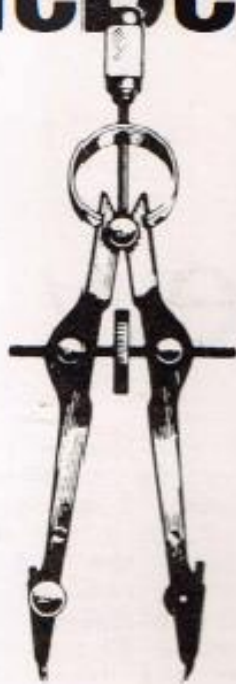


GameDesign

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Designer's Notes

Let us be blunt. GAME DESIGN is a spin-off from Strategy & Tactics magazine. For the past year or so we have seen a consistent 50% of S&T's readership register an active interest in designing games. Rather than let all of this interest and enthusiasm go unnoticed we finally got around to doing what we had first thought of doing. That is, do a special magazine just on game design. The chief reason for doing it this way, and not incorporating the game design material directly into S&T, was primarily due to the rather esoteric nature of most material devoted to game design. Rather than put material in S&T that would (eventually, anyway) become rather obscure to most of S&T's readers, we are going to put it all in GAME DESIGN. That way we can go anywhere we want to, without having to worry about losing a lot of people who really aren't interested in purely game design material.

The DESIGNER'S NOTES column will be primarily an editorial sort of thing. The main function here will be to give general material on the other sections of the newsletter as well as certain specific material which really doesn't fit in anywhere else. The latter includes current news and views on game design. We will deal primarily with current and future games. Other sections of the newsletter (DESIGN NOTES, TSG REVIEW and AVALON HILL REVIEW) will deal primarily with existing games.

Within the next six months a number of interesting games will be published. From Avalon Hill there will be LUFTWAFFE (by Lou Zocchi) and ORIGINS OF WORLD WAR II (by J F Dunnigan). From S&T there will be COMPANY COMMANDER (by John Kramer), 1940: THE BATTLE FOR FRANCE (by J F Dunnigan), CENTURION (or Tac 13, by Al Nofi), VICTORY AT SEA (by J F Dunnigan). From TSG there will be the long delayed STRATEGY I (by Dunnigan, Simonsen, Young, Patrick and a cast of dozens) and WAR IN THE EAST (or Stalingrad II, by J F Dunnigan and whoever else gets involved). Nine games, not bad for a six month period. Starting at the top we have AH's LUFTWAFFE, which was originally published as 12 O CLOCK HIGH by TSG. AH originally got themselves into hot water with a lot of people by asking two people (Dunnigan and Zocchi) to design a World War II air game back in early '69. What they failed to do was tell either designer what the other had been asked to do. AH signed contracts with both designers to the effect that they would have their game published. That bit of double dealing was one of the reasons why Dunnigan instigated the TSG line. He also told AH where they could go and did no further work for them until they fully understood that one more stunt like that and he would have nothing more to do with Avalon Hill. Dunnigan also solved the two contract problem by withdrawing his air game (published as FLYING FORTRESS by TSG) from the "competition" thus assuring Zocchi's game's publication should AH decide to publish an air game. So much for dirty wash. As to which of the games is better, we are currently doing GAGE reviews of both in an attempt to find out. The ORIGINS OF WORLD WAR II game was originally done as a school teaching aid. AH saw a copy and liked it so much (it's actually quite an exciting game) that they finally got around to designing it. The original version was THE ORIGINS OF WORLD WAR I, but AH wanted a World War II version and this was completed in early '69. They wanted to publish it in the Fall of '70 but were persuaded to do TSG's TACTICAL GAME 3 (as PANZERBLITZ) instead. One of the S&T games

(to be published in issue 27 of S&T) will probably also be AH's Fall '71 game. This is 1940: THE BATTLE FOR FRANCE. The subject has been known for years as being "ungameable". This, of course, is ridiculous. In the "regular" version of the game (French set up first, any way they wish) the Germans usually do win, but not with the smashing "decisive" victory they obtained in the original campaign. One variant of the game (there will be about six different "scenarios") forces the Allied player to follow the "Plan D" which originally handed the Germans their famous victory. Other scenarios give the Allied player some of the advantages they passed up (and the Germans didn't). For example, there was the use of a sound "Mobile Warfare" doctrine as well as reorganization of French mobile forces and air forces. Air power is included in the game. Prototype versions of the game move quite well (2-3 hours per game). We'll have more on 1940 in later issues. The CENTURION game (on the Roman military system) is very similar to Tac 14 (S&T #22). In fact, the rules for CENTURION can be considered revised rules for Tac 14. A similar game on the Greek military system (about 300 BC) called Tac 18 may be published by TSG this year. In fact, we hope to complete the Tac series within the next few years, and then go onto even more Tac games and revisions of existing ones. Currently being worked on are Tac 16 (1000 AD, the "Dark Ages") and Tac 1 (France, 1944, a "sister" game to PANZERBLITZ with a new set of game rules and mechanics to be used with both games). Another game that has been in the mill for quite a while is VICTORY AT SEA, a strategy level game of the 1941-45 Pacific Campaign. This one will probably be in S&T #28 and is not expected to be at the prototype stage until early Spring. Most of you, of course, probably know about STRATEGY I. An interesting thing happened there. After about a year of work it was decided to change the entire concept of the game. Originally, STRATEGY I was a spin off from the BLITZKRIEG MODULE SYSTEM (S&T #19) which was in turn a spin off from AH's own BLITZKRIEG game (published in '65). As data was collected, developed and worked into the game it became clear that unless a radically different approach was taken, it would be impossible to get everything into the game and still have a coherent game. The game is now nothing like BLITZKRIEG (except that STRATEGY I is flexible enough to be identical to BLITZKRIEG if that's what you want). The game, actually a collection of "modularized" rules, has 18 different scenarios which cover historical situations ranging all the way from the campaigns of Alexander the Great to World War III (sic). If nothing else, the game LOOKS like its been over a year in the works. Lastly, we have an old albatross of ours, Stalingrad II, which has now become WAR IN THE EAST. S&T inherited the promise (and little else) to do this game from the previous publisher. Attempts to contact the people who started the project were futile. So we're practically starting from scratch. The only thing WAR IN THE EAST will have in common with Stalingrad II will be a map-board and the use of division size units. Actually, only the SIZE of the mapboard is the same. We have researched the thing from scratch and come up with a new map. Not new, really, but did you know that much of central Russia (west of the Urals) was forest? Or that the Germans rarely had more than 200 division size units in the east (including their allies)? WAR IN THE EAST will probably be available in June, STRATEGY I should be in buyer's hands by late February/early March (the boards and counters have already been manufactured).

In future issues of DESIGNER'S NOTES we will cover many of the above games in more detail, as well as sundry other subjects that bear upon game design. We need your help and cooperation, however. We can't afford to send out a feedback questionnaire with each issue of GAME DESIGN so we will be more dependant on correspondance we receive from our readers. Rather than become involved in lengthy exchanges with individuals we will air all relevant points raised in letters received by replying in GAME DESIGN.

Anyone who has subscribed to GAME DESIGN is, quite naturally, interested in designing games. For this you need certain materials. Like blank hex sheets. At present we use four different sizes; 16mm short grain (standard AH sheet), 16mm long grain (the rows of hexes run the long length of the sheet), 19mm (first used in Tac 14, then PANZERBLITZ), and 25mm (first used in BARBAROSSA, FLYING FORTRESS and then KRIEGSPIEL). Just to see if it's worth the effort, we are going to offer blank, 16mm short grain sheets at eight dollars a dozen (considerably less than Avalon Hill charges). They will be sent, first class, in a mailing tube. If these move well enough we'll offer the other sizes for sale also, as well as other "tools of the trade" we have developed.

OK, you design a game. What are you going to do with it? Most folks just do it for their own amusement. They're the smart ones. Others send us their games, suggesting that we publish them. Most people miss the point. For some strange reason they feel that we can take some disorganized mess and turn it into what you see in the magazine. A conveniently forgotten point is "Who is going to do the dirty work?" Who indeed! Somebody here has to do it, and the less finished the game is the more work has to be done. What it all boils down to is, unless a game is COMPLETE it is actually easier to design one here rather than try to salvage someone else's attempt at game design. There really should be no problem with sending a game to us. All you have to do is insure that the game is complete. You do this by taking a good look at one of the games in S&T. They are usually (but not always) complete. Of course your artwork doesn't have to be up to our standards. But it must be legible and ready to play. It must also be playtested. This includes both stages of playtesting. The first stage is for debugging the game mechanics. The second stage is to inject as much realism and playability as possible into the game. The first stage is drudgery, the second is more like "fine tuning" and is a hell of a lot more interesting. Should you send us a game (assuming, by now, you even WANT to) that looks like it's finished but isn't your name will be mud and you'll have one strike against you should you submit another game. But there are rewards for doing the job right, and here we don't talk of financial rewards. Learning how to design good games is like learning any other skill. Once acquired you do have a feeling of accomplishment, as well as an ability you can put to good use. The problem is, you got to do it right. What with the above problems we have decided to take only "in house" designed games (games designed by people with whom we can meet personally) in order to avoid the confusion of a game submitted half done. This does not mean we won't even consider games submitted, it's just that they must meet the above criteria in order to be published. Work at it hard enough and you'll probably make it.

NEW GAMES IN THE WORKS: A number of new games are being worked on for which there is as yet no firm publication date. Most of these will probably be put out as a part of the TSG line. The TSG games, incidentally, are currently undergoing a thorough revision. New mapboards are being prepared which will bring the TSG up to the same standard as the S&T games. In addition, most of the TSG will have die-cut counters. The exceptions will be the games with backed up counters (ITALY and FLYING FORTRESS II). The rules will be set to type and a folder will replace the present jumble of papers. This conversion should be complete by the end of the year. The biggest bottleneck is in the writing of the new game rules, mainly because 75% of the TSG were designed by one person. He must supervise the revision of all the games. This bottleneck looks like it can also be overcome. Whatever happens, you'll read it here first.

Getting back to new and projected games. One game we've had lying about for over a year is SARATOGA. The main thing holding up this revolutionary war game was STRATEGY I (plus TSG's 13-16, which were ahead of SARATOGA also). When we finally got around to playtesting it we found that it still had a number of flaws, the chief one being that the British, using the proper strategy, couldn't lose. So back to the drawing board.

There are also two more games in our TACTICAL GAME series which we simply won't be able to publish in the magazine (which we reserve for the really new and unusual titles). The one closest to completion is ALEXANDER THE GREAT (Tac 18) which, naturally enough, covers warfare in and among the Greeks from 300BC onward (until the Romans, or Tac 13). In addition we have a companion game for Tac 14, Tac 16 THE DARK AGES. This number includes "knighthood" at its peak as well as Vikings, Huns, Byzantines and sundry other local nasties. As soon as we can get the great green pleasure machine moving a little faster we'll get these out.

We have another unique concept in the works. For want of any better name we'll call it TWIN MINI GAMES. That is, two complete games for the price of one. In other words, for six bucks, you get one 23 by 29 inch map sheet with two separate maps on it. Plus separate rules and counters for each of the two "mini-games". We have two twin packages in the works already. The first will probably be PAPUA (Pacific: 1943)/SICILY (Europe: 1943). That should prove interesting. But the second should be even more so. That one will be St Mihiel (US in France: 1918)/NORTH AFRICA (1940-3). The St Mihiel game will be somewhat like 1918, only smaller. The NORTH AFRICA game is the final result of our digesting Al Nofi's North Africa Campaign Analysis. It will be an unusual game, no doubt about it. For example, it will even include the action in Crete. And more. All in a "mini-game". We hope to get at least one of these twin games out this year.

And then there's the BATTLE OF STALINGRAD. As if you haven't had enough of the Russian Front. This looks to be quite a good game, however. It only covers the encirclement of the German 6th army and the subsequent attempts to relieve it (assuming the German player's dispositions do not halt the tremendous Russian attack on 11 November 1942). It will be division/regimental scale. Hopefully we can get it out this year.

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There's another interesting game that's been lying about here since the Summer of '68. It's a tactical (plane to plane) game of World War I air warfare called (at the moment) THE FLYING CIRCUS. Included in the game are the 21 major aircraft types used on the Western Front by both sides. The game includes some unique rules and mechanics to take care of the three dimensional aspect of air warfare. Unfortunately, the game's designer developed more than one method of handling the altitude problem and the current problem with the game is to decide which method would be best. The votes aren't in yet. Undaunted, we have gone ahead and developed an entire line of air games based on the basic mechanics developed for FLYING CIRCUS. The other titles include SPITFIRE (covering plane to plane combat during the Battle of Britain), SEDAN (the Battle for France), B-17 (the air war over Germany), STUKA (covering the Russian front), MIG ALLEY (covering the Korean war), ZERO (covering the Pacific war) and MIRAGE (covering the Middle East actions). Some day.....

Another popular title which we finally got around to covering is "1812" (Napoleon's campaign in Russia). This also prompted some work on some other Napoleonic battles such as AUSTERLITZ and FRIEDLAND. The "1812" game is actually a strategic approach while the other two are tactical, based on our NAPOLEON AT WATERLOO game.

Another unusual subject we have on the drawing board is SEALION: THE 1940 GERMAN INVASION OF BRITAIN. A veritable "What If?" if there ever was one. This one includes air, land and naval forces and is probably a more realistic approach to the Battle of Britain than a purely air game.

Another revolutionary war game in the works (even a prototype already done) is BUNKER (or Breed's, if you're a nit-picker) HILL, a tactical game. The biggest problem is re-creating the "Idiocy Factor" for the British. A more balanced game in the same vein is 1066, which is on a somewhat smaller and more detailed scale than Tac 14.

Speaking of unusual games covering "What If?" type situations we have developed almost to the prototype stage a game called ANSCHLUSS which covers, of all things, the situations that would have arisen if the Austrians had decided to resist the German takeover during the 1930's. Why not? This got us to thinking (and little else) about a game we could call SUDETENLAND based on the assumption that the Czech's also chose to resist. They are generally considered to have had a better chance against the Germans. Who knows?

Finally, we have some more items on the Russian front. First there is the first of the "Century Series" Tac games. In this case Tac 103, which

covers much the same ground as Tac 3 (and PANZERBLITZ) only on a regimental/battalion scale. This, of course, means artillery gets into the act, one of the more potent items on the Eastern Front. We are also developing a Tac 101 game (France, 1944) and may either do both

in S&T (squeezing it in ahead of VICTORY AT SEA) or do one as a TSG. There is also a BATTLE OF LENINGRAD game in the works. But enoughs enough.

TSG review



We were going to start off this column by wading right in and revising (cleaning up might be a better word) one of the clumsier Test Series Games. However, there's always that nagging feeling that we might miss something. So rather than have to do it over again (just to catch all those things we might have missed) we will outline the major problems with each of the published TSG games and inveigh upon concerned readers to send us their list of favorite gripes with each of the TSG they might be familiar with. That approach, we feel, should insure that the subsequent articles on the TSG will be as complete as possible in clearing up the rules and other snafus which crept into the games.

First of all, we ought to remark a bit upon the conditions under which the TSG were designed and produced. Eleven of the TSG (numbers 2 thru 12) were designed and produced in a 12 month period between the Spring of 1969 and the Spring of 1970. Jim Dunnigan designed all of these, plus ITALY. Dunnigan also did the "artwork" (such as it was) for most and wrote the final rules for about half (Ed Birsan wrote the rest). Birsan and Bob Champer also did the playtesting on most of these games. Nine of these games were actually initiated in a seven month period starting in March 1969 and ending in September 1969. The point of all this is to explain why some of the TSG have a somewhat "thrown together" look. After the first "wave" of TSG (numbers 1-9) were published the same crew found themselves also stuck with the publication of S&T. By the end of the year Birsan and Champer had to drop out because the enormous work load conflicted with schoolwork and it took over six months to collect a new playtest and "production" crew (which now includes John Young and Steve Patrick). Basically, the choice was between publishing new games

or revising the old ones. Mortals that we were, we opted for new games and let the old ones fend for themselves. It was a heady experience, as previously Avalon Hill took from three months to a year to "produce" a game. The Poultron Press Gang turned out an average of one a month (at one point one a week, for three weeks). Performance improved with experience, as is shown with the production of PANZERELITZ (which took three months from the time the ink dried on the contracts and the delivery of the finished artwork to Baltimore). PANZERELITZ was, basically,

a new game, a thorough revision of Tac 3. In the meantime, we also turn out a new game every two months for S&T. Add these games to the TSG line, plus the ones done for Avalon Hill, and you have 27 games produced in 21 months. End of explanation.

ITALY was designed out of spite, in order to show Avalon Hill how the Italian campaign should be handled. Among the TSG it has sold the least number of copies thus feedback has also been minimal. Actually, we felt there were few problems with this one and a revision of it would basically do little more than re-organize the rules for greater clarity.

FLYING FORTRESS came in two flavors, with a step down attrition system (FLYING FORTRESS 2) and without (FLYING FORTRESS). Otherwise, both games were quite similar although the game with out the step system was simpler and easier to play. There were a few kinks in the rules, particularly in the Campaign Game with regard to the Germans converting their production to advanced types of aircraft (tracing changeovers from the FW 190A to the Ta 152C wasn't as difficult as it appeared). But beyond all that we have since completely redesigned the game, which will be the topic of one of these columns.

TACTICAL GAME 3 probably won't be covered as it was completely revamped PANZERBLITZ. That transformation is a good example of what we mean when we say we will "redesign" a game. PANZERBLITZ isn't sacred either. Tactical Game 1 (France, 1944) will be published in S&T this year and will include a complete redesign of the PANZERBLITZ game mechanics. For the moment we will just leave Tac 3 alone, although we may answer questions if we get enough of them.

BARABROSSA is without a doubt our best seller. It is also, in the designer's opinion, the best game he ever did. A real labor of love (of course, that applies to all the TSG, but BARBAROSSA did so much better and you-know-how-it-goes). The game does have flaws, however. The most glaring one is the kink in the rules whereby the Russians may hole up in a city with a supply unit and never be dislodged. This, and other flaws, will be put right. This game also served as the basis for a game called WORLD WAR II (using smaller hexes we were able to put all of Europe on the map and fight out the entire war). AH wanted this game for the Spring of 1971 but we simply didn't have sufficient time to finish it. We're only human after all.

DEPLOYMENT was done in great haste, almost as an afterthought. The designer had, over the years, acquired an enormous store of data on that period. Unfortunately the opportunity to design this game came at a time when "the clean game" was in vogue. DEPLOYMENT is indeed clean, but a dirtier version is in the works. Also in the works are revisions to clear up some of the flaws in the movement rules. Keep in mind that many of the apparent "inacouracies" result from the desire to have simple mechanics.

NORMANDY is another game that didn't quite click mechanically. This was one of the games that was designed in a week (although the playtesting and "finishing" took many more weeks). The rules were written by Ed Birsan, at a time when it wasn't realized how difficult it is to have one person design the game and have someone else write the rules. We have since learned our lesson. But in the meantime the game is a casualty. The rules need to be re-organized considerably. Numerous points need clarification.

LEIPZIG, ah LEIPZIG! The poor relation, the neglected child. This game was also designed in a week. Unfortunately, it wasn't finished. A project is actually underway to produce a second version. The original game was a great idea. A pity we didn't finish it the first time around. Lots of new ideas which were never really worked out to a conclusion.

TANNENBERG is another game with rules by Birsan, actually, there was as much work done on writing the rules for this one by Dunnigan. It still comes out like shit. This game had been in the works (in one form or another) since '68. The final version was a last minute brainstorm which did not have sufficient time allotted to it for proper development. In other words, the rules have to be re-written.

1914 REVISION is basically the same rules system as TANNENBERG although the REVISION was better tested and developed. To be quite honest about it, the 1914 REVISION rules were simply grafted onto TANNENBERG in order to make the two games compatible. Still needs some work.

1918 is actually a part of the "second wave" of TSG (along with FLYING FORTRESS 2 and KOREA). These second wave games were done almost single handedly by Dunnigan after Champer and Birsan had split. At the same time the designer was also editing issues 19 and 20 of S&T. 1918 was the better effort. There are a few snags in the rules, but nothing serious.

KOREA was finished under the worst possible conditions. The game required some highly innovative rules and in a case like this rushing the operation can be disastrous. It was. The rules are a mess, particularly the critical supply rules. We expect a considerable number of questions on this one. KOREA will probably be covered in the next issue.

FLYING TIGERS was designed by Lou Zocchi. It contained a few minor omissions. When we cover this one it will probably include a few revisions.

BATTLE OF BRITAIN REVISION has been a very good seller, which perhaps leads one to believe that a revision was needed. Little negative feedback has been received on this one up till now.

STALINGRAD III is more of a game than a historical game. The designer's (Fred Schachter) avowed purpose was to produce the most enjoyable game possible. A revision sheet for the rules was included before the games were even ready for shipment. As it was the game underwent testing and refinement for over a year and this probably accounts for the lack of problems with the rules.

TWELVE O'CLOCK HIGH was being altered right down to the time it was published. Designed by Lou Zocchi, it is being re-published by Avalon Hill as LUFTWAFFE in the Spring of '71 and will then no longer be sold by us. So far the game's sales have been very disappointing. The per-centage of feedback questionnaires returned has also been very bad (the rate at which these questionnaires are returned is a good indicator of the success of the game). Whatever problems there are with the game are now Avalon Hill's.

Design Notes on

TAC 14

BY AL NOFI

I became a game designer rather suddenly one afternoon in 1970 when I suggested that Poultron Press try to design a game on the Thirty Years War (1618-1648). Upon my uttering the words, "Why don't we . . ." Jim Dunnigan responded with an enthusiastic, "Yes, why don't you!" Needless to say I was somewhat taken aback by this sudden turn of events. My particular forte was straight military history, with a strong interest in organization, sociology, and psychology. As such I had made a number of contributions to STRATEGY AND TACTICS, such as my CAMPAIGN ANALYSIS: NORTH AFRICA series and the as yet unpublished WATERLOO study.

I had never designed a game, nor had I ever had any real desire to do so. Nevertheless, after reflecting a bit, I realized that I had a considerable head start on the average fan who sets out to design a game. For one thing, I had long been associated with one or another of Dunnigan's many projects, being the sole survivor of the group which used to meet regularly at his luxurious Brooklyn pad back in the halcyon days of 1966, when JUTLAND was being playtested and KAMPF was the latest thing in military history. As a result of this I had been around during the design and testing of most of Dunnigan's games and had even made small contributions to some of them myself.

To make a long story short, I agreed to undertake the design of a tactical level wargame if the topic was moved around a bit to Renaissance Italy in the period 1300-1500.

There were several reasons for making this shift in period and locale. For one thing: I have a reasonable command of Italian, Spanish, and even Latin, all of which figured vitally in Italian history during this period. For another, I had already read rather extensively in the period and had made some tentative conclusions about warfare as it was then waged. Last, and by no means least I had a romantic attachment to the period inasmuch as several of my ancestors had engaged in the art of ~~mercenary~~ mercenary soldiering at the time.

On the other side of the coin, I commanded virtually no German or French and even less Swedish, all of which are vitally important to the Thirty Years War. Then, I particularly disliked the idea of immersing myself in the intricacies of Northern European religious-military politics (though I would not have minded seeing Dunnigan do so). Lastly, I felt little sense of identity with the conflict nor particularly well prepared to begin work.

Having settled upon the topic I began to do some research. As a trained historian--a trait which I found rather rare among game designers, which may account for the plethora of lousy games on the market--I did this in the most professional way I could, by attacking the stacks at the New York Public Library's main reference collection. Several college book boards were used to supplement my research among the fleashpots of 42d street, but basically the library was the place.

Not long after getting into the libraries I discovered that there was a relative dearth of good materials on the subject in English. And what material as did exist kept referring back to two works by Charles Oman, THE ART OF WAR IN THE MIDDLE AGES and THE ART OF WAR IN THE SIXTEENTH CENTURY. I was fortunate in being able to obtain xerox copies of these volumes, totaling well over 1500 pages, so that I could work with them at my leisure. Here was all that I was after: relatively little was devoted to shit like the chevalier sans puer et sans reproche but pages and pages were given over to things like hardware, organization, conditions of service, tactics, supply, strategy, recruitment, orders of battle, and what have you.

As I worked, however, it soon became obvious that my topic was rather narrow. Warfare in Renaissance Italy was merely one aspect of warfare in Western Europe at the time. Indeed, significant developments were occurring in far off places like Scotland and Wales which frequently influenced the way war was fought in the Italian city-state cosmos. The true situation in Italy, where the most significant military encounters of the Sixteenth Century occurred as a result of the great Hapsburg-Valois struggle for the control of the Peninsula, was influenced by trends in Britain, Switzerland, Castille, Normandy, Granada and elsewhere. Thus, almost imperceptibly, the topic began to expand: Swiss pikemen and feudal heavy cavalry both made themselves felt in Sixteenth Century Italy so why not delve into the origins and characteristics of these systems? And so it went.

Meanwhile, it became increasingly apparent that Sixteenth Century warfare represented the fruition of a trend which had begun way back in the mid-Twelfth Century: the re-appearance of infantry on the battlefield after nearly half a millennium of mounted warfare. With a few new adjustments to my basic design there emerged TAC 14, THE RENAISSANCE OF INFANTRY as the basic project.

While all of this process was going on, my training as an historian was keeping me from making the error common to most game designers. Oman was good, indeed great. But he was not infallible, as events were to prove. Reliance upon one source is the cardinal sin in historiography and game design both. At the very beginning of the TAC 14 project I had committed myself to the use of non-English sources. So I began to dig.

One source did not require much digging, Machiavelli's DELL'ARTE DELLA GUERRA. I knew exactly where to get a copy of this work--in which the great mind's evaluation of the military situation of his day was damnably accurate while all his predictions were incredibly lousy. I had a copy of the Italian text and the NYPL had a "recent" English version, done about 1812 which proved next to useless as things turned out. Ploughing through 500 year old Italian prose was difficult but yielded up some valuable gems of information. Altogether a rewarding experience but by no means to be recommended. Machiavelli's friend, Guicciardini, had put together a very well recommended STORIA D'ITALIA covering precisely the period of the Hapsburg-Valois conflict and this was available in a modern translation, which proved nearly worthless since the translator had ignored most of the significant and well described battle pieces for the juicier diplomatic and familial conflicts. Again I was forced to use the Italian source and worked with a copy at NYPL.

By this time I was fully into Italian materials: things like Ricotti's STORIA DELLE CAMPAGNIE DI VENTURA. This proved an invaluable source in that it covered virtually every military campaign in Italy through the Renaissance in considerable detail (interesting items like the condottiero Antonio Nofi, who failed to survive a battle around 1525 did not by any means diminish my enthusiasm for the topic.). Like Oman's work, this goes into detail on: orders of battle, numbers, tactical developments, and what have you. Indeed one suspects that Oman cribbed a bit from Ricotti, though the latter often falls down on things like conditions of service, recruitment, supply, and what not.

Another particularly useful work, though one of very uneven quality was LAS BATTALLAS DE ESPAÑA, which sets forth in summary fashion the details of every battle ever fought in Spain by Spaniards, or in Spain's name from somewhere before Christ through the Second World War. From this came the details of a number of battles listed in the order of battle chart.

Many other works were rummaged through, and not a few yielded up useful little items. Thus the note in S&T no. 22 on the pay of soldiers during the Fifteenth Century turned up while I was browsing through a dictionary of useless facts while waiting for someone in a library. To help set up a proper "mood" for the whole thing I re-read Deiss' CAPTAINS OF FORTUNE and Shellabarger's BAYARD, dug up Piper's excellent science fiction novel LORD KALVAN OF OTHERWHEN, and delved into a few other odd places. The CONAN SWORDBOOK, provided a host of scholarly articles on weaponry and the general problems of staying alive in an unfriendly sword armed society, all of which had some influence on Tac 14's final form.

Now, while doing all this rummaging around I was already into the design of a prototype version. No matter how much research you do, you have not really accomplished very much until you do get a working prototype in hand. As one of the Tactical Series Games, TAC 14 bears a direct relationship with Poultron Press' TAC 3--which evolved into PANZERBLITZ-- and TAC 10, more commonly known as DEPLOYMENT. The Tactical Series Games are devoted to the simulation of warfare on the most basic level of the period in question. Thus, in TAC 3 the action is platoon and company, while for TAC 10 it is battalion and battery. All action assumes that strategic maneuver has brought the combatants to the battlefield and that the only thing left to do is to have at it. As one of this series TAC 14 was naturally expected to fit into this mold. Thus, there exists a high degree of interchangeability among the several published and unpublished Tactical Series Games.

The first thing developed for TAC 14 was the board, and great care was taken so that there would be a good "mix" of terrain features on it. Thus roughly one-third the board is "clear" terrain, one-third very rough, and the remaining third intermediate. Since the historical scenarios provided with the game gave considerable latitude in deployment it was hoped that the players would deploy in terrain most suitable to the tactical system favored by their forces.

While the board was in process, the actual work on the troop counters began. The first decision involved the question of how many men would each counter represent and the figure of 500 was taken as the standard, though in some scenarios each counter represents as few as 100 men while certain others have as many as 2,000 per counter: the proportions among the armies

and the arms being actually more important than the actual numbers involved. Combat factors were a rather thorny problem until I hit upon the idea of assigning one type of troops a factor rather arbitrarily and then doing the combat factors of all other types on the basis of how they actually related to these in the period. Thus, regular pikemen became 4-4s.

Now, the historical evidence culled from the Renaissance experiences and from ancient times as well, indicated that, given relative equality in numbers, sword-and-buckler armed infantrymen could chop up pike armed infantrymen more often than not, particularly if the latter were receiving the attack. To reflect this in the game, the weight of sword-and-buckler men when attacking pikemen was doubled so that their chances of doing in the latter would be increased. However, if pikemen were vulnerable to swordsmen, swordsmen were vulnerable to cavalry, while pikemen were usually quite safe on this score. Both these types of troops were suckers for missile armed troops, but missile armed troops were chumps in a melee with anybody. And so it went, as the relationships were noted and dealt with. Finally, all the factors settled down to more or less where they are in TAC 14, though players of TAC 13 will note some changes developed in seemingly comparable troops between the two games. The process of refinement continued even after the final published form of the game was finished.

Movement factors were relatively easy, once we settled upon the scale of 50 bractie--roughly 100 meters--per hex. The actual tactical rate of march was divided by three to get the rate for twenty minutes. with a bit chopped off to reflect the fact that close order drill and cadence had not yet been invented and most armies manoevered in columns of hordes in this period. Red Simonsen's beautiful unit counters went a long way towards simplifying identification problems for the game and the departure from the "standard" military symbology proved one of the more refreshing aspects of the game.

Then came the big day. Playtesting*!! Roughly a month after I sat down to work on the project we settled down to the first real playtest of the game. And several reams of notes were taken. As someone new to the game design business I heartily recommend that all game designers pick the snottiest, rulebook lawyers they can find for playtest purposes--as long as you can keep yourself from strangling them. Each loophole they turn up will mean a tighter game for you. The limited zone of control given to units defending behind rivers was the result of someone taking the letter of the rules rather than the spirit and it was a most important development too (specifically, this person tried to march a unit across a river, around the defending unit's flank, and then attack said defender in the rear!). Some of the rules in TAC 13 reflect experience with TAC 14 and nit pickers.

Playtesting ironed out some of the bugs in the game, but by no means all. Not even the full, year long playtest 1914 went through was enough to keep out the bugs, and TAC 14 proved rather free of serious bloopers, though some misinformed people thought there were some which were not--like that the crossbow was more accurate than the English longbow. One big error was in not providing more detailed deployment instructions for the scenarios, as many players overdid their deployments a bit. More specific instructions, such as have been provided in TAC 13, would have added the "idiocy" factor rather nicely: after all, no intelligent French general would have done what the French did do at Crécy. The Feudal Rule had been designed to add the "idiocy" factor but proved inadequate to the task. TAC 13 remedied this.

A major source of problems was typographical errors and last minute oversights on our part. Thus the Spanish may find it a bit difficult to win in the Garigliano scenario without the six arquebus units which they are supposed to have and Hostigos may find it has problems in Fitra unless it deploys second and moves first.

All in all, when TAC 14 was completed I felt a considerable sense of accomplishment, mingled with a little awe at what I had wrought. At the same time I realized that there were a number of valuable lessons which I had learned, though I was soon to discover that I hadn't learned them all by any means.

To recapitulate,

- A. To design a good game you must be able to do your own historical research--investing a \$ and something in Wood Gray's HISTORIAN'S HANDBOOK is a wise move for anyone.
- B. If you can't read the literature, forget it. Unless you are dealing with World War II or the War of Secession all English sources are bound to be limited.
- C. No single source is ever totally valid--neither George Wallace's opinion of Martin Luther King, nor Paul Carrell's ideas about the Russian front are particularly objective but both sources may have some validity.
- D. Certain things never change--information useful in one project may be equally valuable in another, or it may not be.
- E. Don't become overly attached to any part of your project. If there is something wrong with some part of your work toss it out, don't try to repair a bad job.
- F. Change your topic if you get in trouble. A game on Hong Kong in 1941 is about as sensible as pearl diving in pirhana infested waters.

Keep your eyes open for odd facts and bits of data and your ears ready for advice--you need a good memory for this one. ~~Something~~ something historians get as standard issue.

- . Don't quit when things get rough, take a day off, have a drink, look up your girl's roommate or something.
- . Remember that the thing will not get itself done. A good game can be designed in a few days if you treat it as serious business.
- . Find someone who knows how to kick ass selectively, like Jim Dunnigan or Red Simonsen. This helps when the advice in item H fails.

Data Module

BY STEPHEN PATRICK

Armor is subject to more of the frictions of war than other arms, by its very nature. The elements which are available to cause a tank to "go down" are many and with some reliability may be counted on to fulfill Murphy's Law that anything that can go wrong will.

A tank crew must concern itself with the tank's armaments, which generally comprise a main, large caliber gun, and several smaller weapons, usually machine guns or some other rapid fire weapons. The latter are normally at least two in number, one being coaxially mounted and one operated by the tank commander. Where a five man crew exists, there is often a bow gun. For the small caliber weapons maintenance is not an extensive problem. The key parts, including the barrel, are generally replaced by the crew. But the main gun is another matter. The large caliber weapons, as with all rifled barrel weapons, become less accurate with wear. The larger the caliber, the less wear it takes to drop accuracy markedly. For a modern tank, the number of rounds of tube life is only in the low hundreds. Moreover, the higher the velocity of the round fired, the greater the wear. Such rounds as the modern APDS cut tube life radically. As the tube nears the end of its life, accuracy becomes impossible to achieve, as the round will drift without any predictable pattern. This means pulling the barrel, and that, in effect, is a major maintenance job, generally beyond the capability of battalion or regimental maintenance. Thus, a tank which has to fight hard faces, sooner or later, the need to change tubes and that forces it to be removed from combat. When spread over a unit of company or greater size, heavy fighting can force a relatively rapid changeover as elements are rotated out of the line to receive new tubes. Unlike many deficiencies, main gun accuracy is not a luxury and without it, a tank is dead.

Closely related to the main gun is the fire control systems. In modern tanks, this can be a major item, what with the laser range finder of an MBT-70. Even the most elementary telescope is crucial to a tank's performance. While fire control systems are not generally subject to being worn out, they are neither invulnerable to the enemy nor to their crew. A dropped sight, a not uncommon problem, puts the fire controls out of operation as surely as if a round had been taken in the end boxes. In this case, one can still "eyeball" the range and apply correction by "burst on target". Nevertheless, while artillery can afford to "walk" in on a target, tanks often do not have the luxury of a second round, and having to fight while, in effect, giving away the first shot, puts a tank in a less satisfactory situation. Again, fire control repairs are, for the most

part, maintenance. In the end, however, all motor vehicles need overhauls and major maintenance. The larger the vehicle, the shorter the interval between these repairs. A light truck can go months. A heavy tank may not be able to go weeks if it has been involved in a lot of manoeuvring. The problem, again, is that the major overhaul is beyond the regimental capabilities and often takes several days, particularly if one is not first in line. For a tank this type of maintenance is necessary every two or three thousand miles in normal situations. The demands of combat can cut this even lower.

The result, as the Germans found out in 1941, is that, in a long campaign, the need for maintenance can arise when it can least be accepted. The choice then becomes a major dilemma: stop for maintenance and be ready to roll in several weeks, or run the tanks into the ground, hoping to end the campaign quickly, but risking the loss of the tanks for several months, rather than weeks.

Another problem which is peculiar to tanks is the suspension system, including not only the tracks but also the road wheels and related apparatus. Much of this is crew-level repair but it is probably, physically, the most difficult activity a crew can perform. The most common problem is throwing the track, which is nothing more than having the track jump off the drive sprocket. If it has jumped off only a little, it can sometimes be worked back on without breaking the track. More often than not the track must be broken. It is easy to point out that with proper track tension and reasonable care in operating the tank, the track won't be thrown. Recent developments make throwing track more difficult than ever. Nonetheless, it does happen, and even with a good crew it is the better part of an hour's work to put it back on. To change track, which must be done whether the track is rubber padded or steel, is a half-day operation at best. Modern tank track can weigh in the vicinity of a ton. Moreover, once the track is off, a tank is immobilized. It can only turn in a circle on the operable track. In general, to replace track requires two vehicles: the tank involved and another tank or a tank retriever to move the "down" tank about. Similarly, when a tank hits a mine and blows off track and road wheels, if internal damage is not too great, this can be repaired by the crew. Most tanks carry spare track blocks and road wheels, and battalion or regimental maintenance generally has other parts. Nonetheless, time is consumed and, if the track is damaged in combat, the tank is no better than a fixed pillbox until it can be made mobile again. Of the things which plague tanks, suspension problems can most often be repaired quickly but, unlike armament or engine problems, they more often occur when they least can be afforded and cannot be planned for.

The final element which is of concern to every tanker is fuel. The Second World War often seems a history of one side or another running out of fuel at a critical time, whether it be Rommel in Africa or Patton in France. Particularly with gasoline driven tanks, one deals in terms of gallons per mile. The first main battle tank to even approach a ratio of one mile per gallon is the M60. This fuel consumption problem was even more severe during the Second World War when the average radius of operation, on level terrain, was between 100 and 150 miles. Obviously, the lighter the vehicle, the greater the range, though generally, the smaller the fuel capacity. The heaviest tanks seemed to inhale fuel, which was one reason for the German inability to make good use of those it had (among many other reasons). The problem of fuel consumption cannot be understated since it is so easy to underestimate. Even in our modern, mechanized armies, infantry units tend to have no concept of the demands made on fuel supplies by tanks. This is simply due to the poor ratio of fuel consumption.

After having run through the catalogue of failures to which a tank is susceptible, it should be noted that these are all phenomena of the mechanized era of warfare. The man on the ground is not subject to them, of course, but a tank's weaknesses are the weaknesses of motor vehicles as a whole.

but a tank's weaknesses are the weaknesses of motor vehicles as a whole and of tracked vehicles in particular. The other side of the coin is the awesome power which they deliver. The ability to sight a target and deliver accurate, deadly fire in 15 seconds, as is the current American doctrine, at ranges up to 4400 meters, is something to be reckoned with and it is for that reason, if for none other, that tanks earn their keep. Tanks will not replace infantry, but they do make the foot soldier's lot a bit easier.



Review

BY OMAR DE WITT

In the design of a game, there is probably nothing as important as writing the rules. The best game is worthless if no two people can agree on how to play it. After many years of playing games, I am convinced that it is impossible to write a comprehensive set of rules for a conflict-simulation game. It is possible for abstract games (play the red nine on the black ten), but when the attempt is made to simulate reality, a very important factor enters into rule understanding: the experience of the new player. The experience may be by direct observation or it may be through reading or other second-hand media. Of whatever type, the experience of the new player will color his reading and understanding of the rules.

As games come to simulate reality more and more exactly, the rules get longer and more detailed in an attempt to cover all of the possible interpretations. Because of the infinite varieties of individual experience, however, the rules can never be completely comprehensive. (At the other extreme, some players will try to follow the letter of the rule so strictly that they will attempt to perform feats in the game in obvious contradiction to what could possibly occur in reality.)

The designer, of course, still has to do the best he can in writing rules.

What follows is an analysis of the rules to a simple game: AFRIKA KORPS. It will point up the areas in which players have found ambiguities, and perhaps it will indicate what type of things to look out for when designing a game. If nothing else, it will tell you the official Avalon Hill position on these points.

AFRIKA KORPS introduced two rules not previously used in Avalon Hill games: automatic victory and supply wagons. These by themselves were explained well enough, but, taken together, posed several problems. Two important parts of the rules were: under an automatic victory, as soon as 7-1 odds (or 5-1 surrounded) were achieved, the ZOC of the defending units were immediately ignored. The second, was that a supply unit need be five squares from an attacking unit only at the end of the movement portion of the turn. The results of these two rules taken together are not immediately obvious. One is: if a straight line of 11 squares is considered, with British units on squares 2 and 10, and if German units on squares 1 and 3 get 5-1 odds, as do German units on squares 9 and 11, then one supply unit can later be moved to square 6 and supply all attacking Germans.

A second result of these two rules is that if a 7-7-10 is surrounded by 1-1-6's, the 7-7-10 can attack any one of the surrounding units for an automatic victory. The 1-1-6's ZOC is immediately ignored, letting the supply line in to sustain the attack.

One point that caused arguments not only among players but among the AH staff as well was: can an automatic victory be achieved against a unit so that another attacker can move through the defender's neutralized ZOC and capture a supply unit that would then sustain the automatic victory? ~~that he did not have in order to capture ammunition and gasoline that he had already used up and no longer needed.~~ Chris Wagner, who was then in overall charge of letter answering, said "Yes!" Because the above two rules allowed it. Under a strict interpretation of the two rules such an attack is allowed. However, there are exceptions and conditions to almost all rules; and I thought that the chain of cause and effect was stronger than strictly following the rules in this instance. Strict interpretation of rules can lead to some strange results. In BLITZKRIEG, for instance, strict interpretation allows aircraft to get road bonus (the rule refers to "units", not specifically "ground units"), but an appeal to common sense would not. However, Chris was the boss, and his opinion stood. For the sake of consistency, I have not changed this ruling since taking over sole responsibility for answering the letters.

A good deal of altercation has arisen on the subject of isolation. Many players contend that once a unit is isolated, that is it. However, it is possible for a unit to start a turn isolated and end up supplied during the movement part of the turn. One instance was given above, with the 7-7-10 surrounded by the 1-1-6s. Another is any situation where one unit is surrounded by only three units and their ZOC. In all cases, the surrounded unit can move adjacent to one of the surrounding units: from that position, the attacker can be supplied from the outside: it is then possible for a supply line to be traced from the attacker to an outside supply unit, where it could not have been traced at the start of the turn. This is not a case of an isolated unit breaking its own isolation: at the end of its movement it is no longer isolated. A unit, then, can become unisolated during the movement portion of the turn. The position of the combat unit and its supply unit at the end of movement determines if it can then attack (if it is adjacent to an enemy and cannot attack because of lack of supply, it is eliminated before any other combat).

The capture of supply units during movement was well covered in the rules. But capture after combat was not. Capture after combat can only be effected if the attacker moves on top of an enemy supply unit after the attack.

Movement in relation to the road-plus-escarpment was not completely explained. Units are allowed to move across open terrain and enter a road-escarpment square from any side and then use the road: opposite movement is also allowed.

A question that comes up quite often in any Avalon Hill game with ZOC is: can two units move adjacent to an enemy unit and have only one attack? The result is that the defender would have to counter-attack or withdraw from a good defensive position. The answer is no. All of the attacker's units in enemy ZOC must attack some enemy unit.

Even the most "obvious" points raise questions in some player's minds. One of the most frequent questions about AK is: can units move from E-1 to R-19? This, in effect, would be a sea movement, since there is no land connection between the two squares. The answer, of course, is no. Similarly, many players would like to leap-frog their infantry units among the islands and over the inlets on the coast of Holland and Belgium in 1914. Nothing is too obvious to include in the rules.