War games are nearly as old as organized warfare itself. Likewise, the process of applying scientific principles and knowledge to practical military problems has ancient precedents. For example, Archimedes was commissioned by the King of Syracuse to break the Roman blockade of the city. Through applied science, Archimedes designed burning devices and war "engines" which, despite their failure, were excellent examples of one aspect of scientific analysis. Wargaming is just another form of analysis and dates back to the pre-Christian era, when it was used by both Chinese and Egyptian military leaders to analyze military situations.

One early practitioner was Sun Tzu, a Chinese general who lived around 500 BC. In his writings, Sun Tzu analyzed war with respect to tactics, weapons, supply, and philosophy. In setting down his rules of war, which included mathematical supply formulae, he allowed his followers to pre-plan their entire campaigns. Their planning was, in essence, wargaming. Over time, Sun Tzu's and other Oriental war games went through an abstraction process that resulted in board games such as Go and the Hindu battle game called Chaturanga. Most sources agree that Chaturanga is the origin of the ancient game of chess, which is the oldest and most popular form of war game in the Western World. This earliest board game was played on a highly conventionalized map board and used various pieces to represent the type of "weapon systems" then in service; namely, elephants, horses, chariots, and foot

SUN TZU, THE SPRING OFFENSIVE & THE HOME HOBBYIST

soldiers. It was played by four persons according to fixed rules, and the effects of the various moves were determined by the throw of dice.

By the 16th century, numerous chess-like games had developed throughout the civilized world. The complexity of some of these games indicates that they were intended to approximate actual military situations.

Modern day chess is thus one of the oldest forms of the formal war game and is the root from which war chess evolved. An outstanding example of military, or war, chess was introduced at Ulm, Germany, in 1664 by Christopher Weikhmann who called it the King's Game. During the reign of Louis XV (1710-1744), two military card games appeared. The first was Le Jeu de la Guerre, the other Le Jeu de la Fortification. The games were played mainly in French military circles and were primarily used as teaching aids to convey basic tactics to military students. In 1780, Helwig,

Over 25 centuries, war games have proven their value for training and operational planning.

Master of the Pages for the Duke of Brunswick, invented a major modification of chess. His game was remarkably similar to the modern commercial war game and was played on a board of 1,666 squares, color coded by terrain type. Players used pieces representing units of various types with different movement rates expressed in terms of squares-per-turn.

The peak of this type of war game was exemplified by the military writer George Vinturinus' New Kriegsspiel (1795) which had 3,600 movement squares and 60 pages of instruction. This game used a map based on an actual piece of ter-

rain between France and Belgium and effectively broke the rigidity of the war chess board and play.

The modern war game may be credited to a civilian, the Prussian War Counselor von Reisswitz and his son, Lieutenant von Reisswitz, Jr., an officer of the Artillery of the Prussian Guard. The original game as designed by the father was to be played in a sandbox with blocks of wood to represent troops. As modified and published by the son in 1824, the game was played on maps; made use of an umpire, probability tables, and detailed rules; and could be used to represent any military situation. It was designed to be used for actual military planning and the operational training of both senior and junior military commanders.

The wargaming concepts invented by the Von Reisswitz' eventually became a generally accepted tool by 1840 in the Prussian army, and when later in the 19th century the Germans won their stunning victory over the French in the Franco-Prussian War of 1870, a great many nations attributed much of the success (rightly or wrongly) to the German's use of wargaming for preparatory training and planning for actual campaigns.

It was during the 19th century that wargaming gained widespread acceptance and popularity, especially in European military circles.

The Germans placed great faith in wargaming (or Kriegsspiel) as a tool for analysis and training in a military environment. Notable results of their use of wargaming from the

late 19th century, during World Wars I and II include:

⊙ The plan of deployment of the Prussian Army against the French during the Franco-Prussian War in 1870.

⊙ The plan for the Spring Offensive of 1918 which correctly indicated that there was only a slim chance for a decisive victory.

Simulation methods have changed, but the basic idea is the same. The computer has long since freed strategists from the drudgery of manual simulation.

(NOTE): War games were used, however, by most of the major powers shortly before and during World War I. Generally, the games suffered from the preconceptions of their users as to what was and was not possible. The use of such biased gaming to test the Schlieffen Plan led to its

M. Seitelman

Model courtesy Strategy and Fantasy World, Falls Church, Va

failure to indicate the likelihood of a stalemated Western front very early in the war.)

O The invasions of Poland and initial campaigns against France during World War II.

O The decision not to invade England in 1940 because of the difficulties that surfaced during wargaming exercises.

Throughout World War II, the Germans made extremely good use of operational-level games to precisely plan major attacks. The swift march through the Ardennes, thereby outflanking the Maginot Line, was thoroughly wargamed in advance. Operation Barbarosa, which led to the German invasion of the Soviet Union was intensely wargamed, and this contributed greatly to the speed and magnitude of the opening German victories.

The Japanese also used wargaming during World War II. During the gaming of the attack of Pearl Harbor, they realized the necessity for a quick stabilizing torpedo which could be delivered by aircraft. The invention of such a stabilizing device greatly enhanced the effectiveness of their attack. Later, Japanese efforts to use wargaming to simulate the Battle of Midway were less successful, primarily because the umpires were not allowed to let the games proceed unhindered.

In this very elaborate game, the Japanese naval officers playing the role of the Americans launched an attack on the Japanese carrier force and inflicted devastating losses on it. When two of the Japanese carriers were sunk, Admiral Ugaki objected to the umpires' ruling,

Firefight

...nating Future-History Simulatio...

...on Tobruk

Hof Gap

...DY BUNA

Separate scenarios c...
a campaign game rec...
different games in all...

Drive on Washingto...

An Authentic Game of Military Action Based on Scenes from SAMUEL FU...

THE BIG RED...

...ar/W...

and the carriers were declared safe. In effect, the two carriers were "refloated." The game then went on to indicate the victory at Midway that the senior Japanese officers felt was inevitable. During the real battle, the Japanese carrier force was struck almost precisely as indicated by the earlier war game, but with even more disastrous results for the Japanese, as all four carriers were lost. This is one of the more remarkable instances of a type of behavior frequently seen when war games are used to predict the outcome of specific campaigns. If the results aren't what senior planners expect or want, the temptation to arbitrarily change the game's ground rules

Commercial war games attract a large, well-educated following of serious hobbyists. At a different level, wargaming has been used to analyze such complex issues as the impact of SALT and MBFR.

(or other conditions) so that results "conform" to expectations can be overwhelming.

Wargaming in America owes its origin to three American Army officers, C.W. Raymond, W.R. Livermore, and C.A.L. Totten. In 1883, Livermore and Totten designed their own versions of the German Kriegsspiel. Totten's Strategos game appealed to civilian gamers as well as military professionals.

During World War II, the United States and its allies relied heavily upon wargaming to plan the Normandy invasion and numerous other campaigns.

Following World War II and the advent of modern, general purpose electronic computers, the military use of war games became increasingly more sophisticated and widespread. The new computers allowed large amounts of data to be

quickly stored and easily manipulated, thereby freeing the human players from the drudgery of highly detailed manual simulations. The ultimate in computerized wargaming came about with the development by John Von Neuman and Oscar Morgenstern of mathematical models of strategic and tactical combat that could be completely simulated by computers without intermediate human intervention.

More recently, the United States has used wargaming for force planning and to analyze, among other things, the impact of SALT and MBFR options, etc.

Although wargaming has a long history of extensive use, it is still a controversial technique. Its proponents point to the historical successes, while its critics emphasize its lack of accuracy and precision; however, both agree that wargaming exposes many of the options available. In
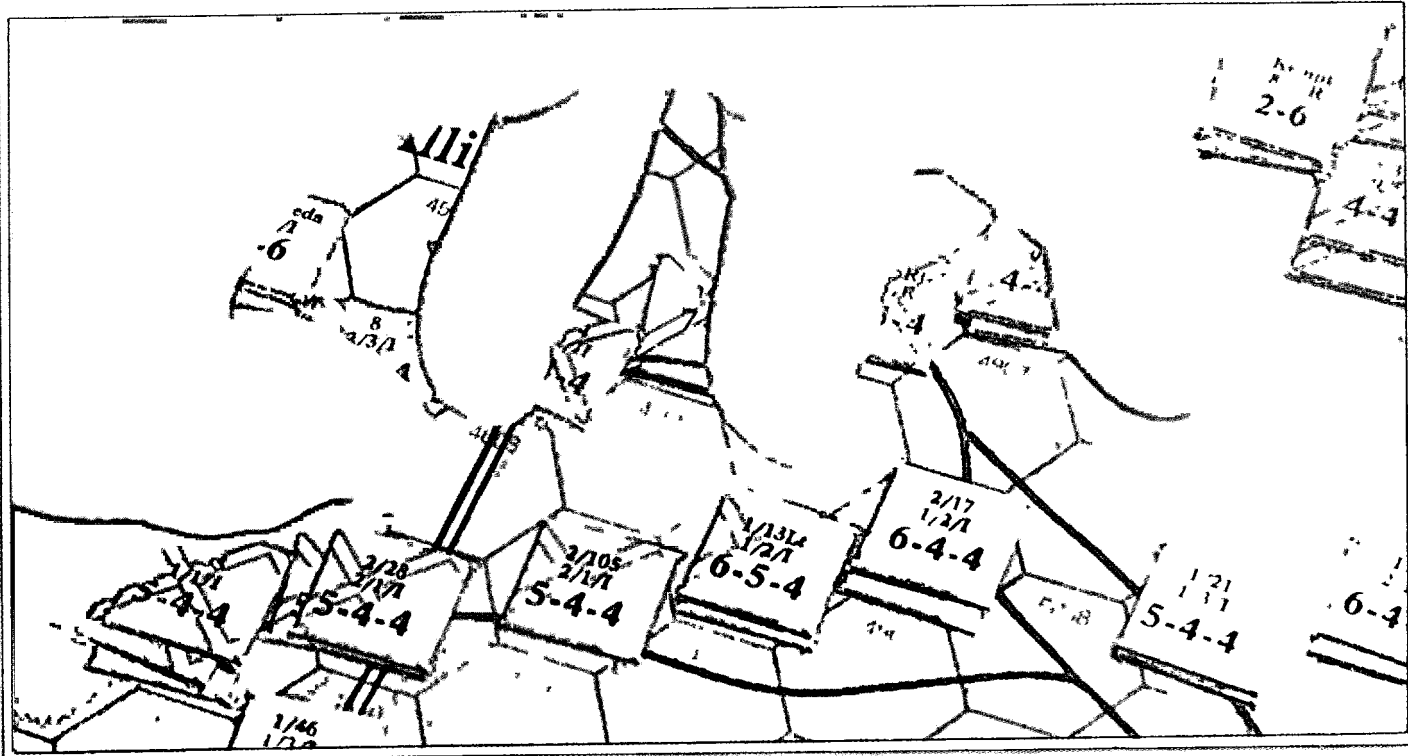
an effort to avoid controversy, wargaming is often referred to as operational simulation.

Down through the ages, men and young boys have always played with toy soldiers and blocks of wood. The men did so to test their tactical concepts; the boys did so for fun and to test their youthful combative skills.

C.A.L. Totten's Strategos game had much appeal to civilian gamers, but it was H.G. Wells who really caught the imagination and interest of the civilian community in playing war games. This occurred shortly before World War I when he published the first widely read rulebook on the use of miniature models in wargaming. Since then, many such rules systems have been published, but all are essentially derivatives of H.G. Wells' original work, *Little Wars*.

It wasn't until 1953 when C.S. Roberts produced his TACTICS that commercial and civilian wargaming as we know it today got started. His war game used a grid map and cardboard counters. It was moderately successful. Thus encouraged, Roberts formed the first commercial enterprise (the Avalon Hill Company) to produce war games for the civilian hobbyist. His first two games were TACTICS—II and Gettysburg. Gettysburg was the first commercial war game on a strictly historical subject. Roberts also published a wargaming magazine called *The General*.

Strategy and Tactics (S&T) Magazine began publication in 1966. The author, Christopher Wagner, gave a new shape and substance to what was quickly becoming the favorite hobby of a goodly number of civilian gamers. Jim Dunnigan took over *S&T* in 1968 in order to have a medium for testing a series of experimental games he and his friends were developing. Dunnigan and Redmond Simonsen transformed the *S&T* magazine into its present format: a military history periodical with a simulation game in it. The somewhat crudely designed games that Dunnigan initially created did, however, bring a new vitality and originality to civilian wargaming. that had been lacking. Almost at once, the Dunnigan-Simonsen team doubled the number of war game titles available to the serious hobbyist. Their team efforts led to an even greater number and type of games being designed and made for an eager public.

R. Simonsen and J. Dunnigan formed Simulation Publication, Inc. (SPI) in late 1970, and by 1972 SPI became a major competitor of the Avalon Hill Company. SPI brought numerous innovations to the hobby, and in the eyes of many viewers, is largely responsible (as a direct result of its high rate of production for new games, its gamers surveys, and its very fine *S&T* magazine) for the hobby's current strength and vigor among both civilian and military gamers.

There is no firm count as to the actual number of war gamers in the United States, much less worldwide. Given the number of games purchased and the gaming organizations existing, it is probably fair to say there are about 150,000 to 300,000 war gamers in this country alone. According to *S&T* surveys, almost all war gamers (99 percent) are men, college-educated, and in their mid to late twenties. This current male-only scene may change in time, however, as women move into new occupations and vary their interests and activities.

The reasons hobbyists give for playing these complicated, time-consuming games cover a broad range. They all agree the games are intellectually challenging and entertaining, and appeal to their competitive nature. Many indicate they enjoy learning the lessons of history in the more personal sense that comes with wargaming.

War games and wargaming have undergone a truly remarkable evolution. From their earliest origins and use in China and Egypt more than 25 centuries ago to their present-day use, war games have repeatedly proven their outstanding value as training and operational planning tools when properly used.

While once the exclusive tool and toy of royalty and the military professional, war games are now used and enjoyed by hundreds of thousands of civilian wargaming hobbyists. At one time only the games of chess, Go, or Chaturanga were played. Now, literally hundreds of different war games are available for the enthusiast to play. No longer must he play a slow or tedious manual board or map game. The enterprising entrepreneur can now play a number of different war games on small personal computers, complete with "light gun" and moving targets. The future prospects are even more exciting. It's probably safe to say that the next several years will be more exciting than even that of the very recent past. ▨

By Francis B. Kapper