

PSYCHOLOGY AND THE BLITZKRIEG

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ON the 9th of August, 378, a Roman army of 60,000 was annihilated at Adrianople by some fifteen thousand Gothic horsemen who had been on relief the year before. And, in the century that followed, the mighty Roman Empire was conquered and broken up by a group of small barbarian tribes having a combined population less than five per cent of that of the Empire. These barbarians set themselves up as a warrior aristocracy, and maintained their privileges through a thousand years of assorted wars. They obviously could not have done it if their style of fighting had been something anybody could learn.

Rome's military strength was based on the legion, which was a compact and disciplined infantry formation. Her cavalry had never amounted to much, but the legion could stop cavalry as long as the horseman rode bareback, or with at most a circingle between himself and the horse. But the Goths who beat the Romans at Adrianople had recently been driven out of the Ukraine by the Huns. The Huns had saddles. The Goths got the idea. They had big horses, somewhat like modern perchérons. And with this weight-carrying capacity they wore body armor, dispensed with the shield, and used long two-handed swords. Their saddles put the weight of the horse behind the rider's spear and made him a projectile the infantry could not stop. And then the legion was down, tangled up in its shields, with the horsemen above them, slashing and trampling.

But why could not the Romans use saddles too? Why could not persecuted peasants in the middle ages steal horses and armor and defend themselves against the nobility? This seems not to have been understood until within the past few years. Meanwhile, all sorts of elaborate explanations have been given to account for the sudden and disastrous downfall of Rome. People at the time were told of vast numbers of barbarians. But if Valens, the Roman Emperor who was killed at Adrianople, had believed the Goths to be numerous, he would have waited for reinforcements he knew were on the way. We have heard much of moral decline. But Rome was a Christian nation at the end, and some of her last emperors were among the best.

Her fall has been blamed on malaria. But Romans had known about malaria for centuries. It was part of their defences of such marsh-built cities as Ravenna.

The answer to this puzzle is found in a psychological characteristic which is known as "mental speed-up" or "mental mobility". My article about it in *The Cavalry Journal* for January-February, 1940, appears to be the first attempt ever made at a comprehensive study of the subject. But the name has been used in the cavalry for years. Tests for it have been in use in most air services since last war. And the Germans, faced with the problem of making their treaty army of 100,000 as efficient as possible, developed mental mobility tests and used them in selecting their officers and tank drivers, in addition to airplane pilots.

The results have been as startling as the barbarian conquest of Rome. Fort Eben-Emael was considered one of the strongest of modern fortifications, and was believed to be almost impregnable. It was taken within thirty hours by parachutists and *Bahnbrecher* or combat engineers. The wooded hill region east of Sedan was considered impassable for a modern army. The Germans came through it as fast as equally heavy civilian traffic would have come. And when the blitzkrieg broke loose behind the Allied lines, it moved too fast for the Allies to keep track of it, much less stop it.

In that blitzkrieg the Germans boldly sent radio messages "in clear." They saved the time of coding and decoding, and before the Allies could use the information it was obsolete. Thus the Allies picked up a radio "All bombers to Cambrai" followed in a few minutes by "All bombers on the way." But by the time they could decide what to do, and take the steps their official procedure required, the German planes were through at Cambrai and had gone elsewhere.

One day they got word that twenty miles of German tanks were moving in close formation along a certain road. But before the necessary procedure could be carried out, the German tanks had got through the hills and had spread out into open country.

Mental mobility, the ability to put the blitz in blitzkrieg, appears to have been Germany's "secret weapon that cannot be used against us." Its nearest rival for that claim is the Allied red tape. But that this characteristic is not peculiar to Germans is shown by the long resistance of Finland, and by the startling success of the Greek mountaineers and the Australia and New Zealand forces in their campaign against the Italians.

Human minds may be divided into three, or possibly four, groups in accordance with their reaction to danger and excitement. The mobile mind seems to work best under pressure, but with a tendency to try to do things all at once, and to wear itself out if the emergency is too prolonged. A dangerous or exciting situation seems to be happening as in "slow" movies, because of the speeding up of the mental processes, so that there is time to make wise decisions even when things are happening very fast.

On the other hand, the "steady" mind seems to work about as well when excited as when calm, while the "scary" mind either fails to act, leading its owner to do foolish things in emergencies, or it creates a strong desire to run away, which is a famous Italian characteristic, displayed at Adowa, Caporetto, and Guadaljara, in addition to its recent exhibitions in Albania and in Africa.

The mobile mind is an adaptation to meeting emergencies, and is commonly found in any community where the ability to meet emergencies counts for more than the ability to work steadily. It is the normal type of mind among savages and barbarians, especially those who are hunters or horsemen. It is normal in Finland, whose chief cash crop is timber, and it is common in those parts of the English speaking nations that have recently emerged from the pioneer stage.

Steady minds, on the other hand, are much better for any kind of work that goes on about the same from day to day. And they are better for any kind of fighting in which the defence can hold, conserving its energies, and can wear the attacker down.

Such a war is known as a "slow" war, whereas the kind of war in which the attack is powerful and the defence weak is known as a "quick" war.

A blitzkrieg is a quick war, for that is the meaning of the word. But you also get a quick war when fighting with repeating rifles and hand grenades in cover which conceals the attacker until he is very close. Such cover was created by the bomb craters at Fort Eben-Emael, and by the wooded hills east of Sedan. And the German tactics, in both cases, appear to have been simply a modernized version of those the white man learned from the Indian, and which the Germans had learned from the Americans last war. Most cavalry fighting is also quick war, especially that of the saddled cavalry that knocked Rome's legions down.

The Roman legion is an outstanding example of slow war, in which endurance counts for more than native ability, and in

which all the motions can be practised in advance. Massed bayonet charges were also a slow war, and so is accurate rifle fire at long ranges. In modern artillery the heavier calibers are usually slow war, and favor the steady mind, whereas the lighter guns favor the mobile mind.

The mobile mind is best for any kind of quick war. The steady mind is best for a slow war. The scary mind is second rate for any war, but with rigid discipline can be used in a slow war where mass formations are practical. At the Battle of Bunker Hill the British soldiers broke and ran when the Americans fired, and had to be rallied and marched into action again, thus giving the Americans time to reload. Yet this was not considered extraordinary in its day. In modern war such soldiers would get "lost" before their lives were seriously endangered. If they could not be taught better, they would be sent home to work as civilians, or else used for labor behind the lines. Only men who can stick to the fight on their own initiative are useful in a modern army.

Mental mobility is hereditary, and behaves as a recessive trait. It does not show unless it is inherited from both parents. But it may be transmitted through many generations of people who do not show it, and can then appear when it comes from both sides. Thus in a warrior aristocracy that favors mental mobility the sort of marriage customs observed in the middle ages will insure that nearly all legitimate children will have mobile minds. These customs required a nobleman's son to prove himself as a warrior before he could marry, yet left the same opportunity open, without prejudice, to the son of a commoner. But a great deal of attention was paid to a girl's genealogy, since there was no ready means of testing her mental mobility. Noblemen's sons who could not make good as warriors had an attractive career open to them in the priesthood, but were forbidden to marry. And one reason for the prejudice against illegitimate children was that, being usually born of a commoner, they were seldom able to make good as warriors. But there were striking exceptions to this rule, such as William the Conqueror. For peasant girls as well as peasant boys might inherit mental mobility from distant ancestors, and such girls were particularly likely to attract a nobleman. But the fighting ability of their offspring was unpredictable.

In Roman times, barbarian tribes among whom mental mobility was common lived just across the river from Roman populations among whom it was rare. But this proximity,

and the interchange of populations that resulted, tended to accentuate the difference instead of lessening it. For a barbarian boy who lacked mental mobility would find Roman civilization more attractive than the hunting and fighting of his own land, and would emigrate if he got the chance. On the other hand, a young Roman who had this characteristic would prefer the barbarian way of life.

As long as cavalry fought bareback, the Romans held their Rhine—Danube frontier easily with an army that seldom exceeded 200,000 men. Not only were the opposing barbarians few in numbers and primitive in culture, but the Romans despised them as fighters, describing them as "strong only in sudden effort." But the change that began with the Battle of Adrianople threw the Romans into a panic. The few men they had who could fight this new way were sacrificed, and then the Romans "suddenly lost the capacity to defend themselves" and they have never got it back.

The question is often asked nowadays if the blitzkrieg will bring about a collapse of civilization similar to that which ended the grandeur that was Rome. And the answer can be given rather definitely that it will not, as long as the blitzkrieg can be either stopped or won by civilized people. After the fall of Rome it took the world a thousand years to develop weapons and tactics that could stop saddled cavalry. But, within six months after the fall of France, tactics have been suggested that are believed competent to stop a blitzkrieg. The weapons were already available. And these tactics may have been tried before this article appears in print.

People may differ as to whether to call Germans civilized. And Finland and Greece are small nations. But the mental mobility resources of the Allied countries seem ample for a bigger and better blitzkrieg than Germany can produce, once these resources are properly developed.

In most European countries mental mobility is still fairly common in the upper classes, and frequently appears in the lower classes as a throwback to noble ancestry. Hitler is such a throwback, and his early maladjustments are typical of what such people suffer when born into families that do not understand them. Because of these maladjustments most of them fail, and this is why mental mobility tends to die out in civilization.

Germany is no better off in her mental mobility resources

than is England. Her only advantage is in her psychological tests, and in the fact that these tests, which have been in use for nearly twenty years, have resulted in a high percentage of mental mobility clear up to the top, with a military organization adapted to it. But the British Empire could better her performance, given time. The principal difficulty is that most of the higher command of the British Army probably could not pass these tests. They may have to be replaced before England can put on a blitzkrieg. And certainly there will have to be an almost total elimination of red tape, and a streamlining of official procedure.

No statistics are available. But it seems likely that America and the Dominions could furnish a vastly greater supply of mental mobility than all of Europe combined. For in the early settlement of these new lands the same kind of selective action that went on between Rome and the barbarian tribes went on for centuries between the settlements and the frontier.

The early settlers of New England and of Canada contained at least as high a percentage of mental mobility as modern Germany does. The steady mind was effective in defence against the Indian style of war, but only the mobile mind could successfully attack the Indians. So there was always a tendency for the boy with a steady mind to stay in the east and become a farmer or a business man, while the boy with mental mobility was going west with an axe and a rifle and a barefoot girl to found a home in the wilderness.

The southern states were settled mainly by sons of the European nobility, with negro slaves instead of the white peasants their fathers had. They did not intermarry with these slaves, as the stay-at-home nobility did with the peasants. Hence there has been much less masking of mental mobility in the South than in Europe. The customs of the nobility are more strongly retained there than elsewhere, and are followed by mountaineers as well as by those who still retain the appearance of aristocracy.

In a presidential poll the question was once asked: "Do you think we should join the Allies, and even send men?" The South voted 36.3% "Yes" to this question. New England 5.6%. The average for the United States as a whole was 15.9%. This is probably a good measure of the distribution of mental mobility in the country, for New England voted 54.4% in favor of sending arms and supplies, which is what New England is good at. So the difference on the question of sending men is

apparently not due to a difference of pro-Ally sentiment, but to the fact that more Southerners than Yankees think they could make good in a blitzkrieg.

The question may also be asked, Suppose the blitzkrieg remains technically supreme, how long may the German power be expected to last? And when we look to history for an answer, we find that the medieval saddled cavalry kept its power for a thousand years, whereas the Mongol power reached its peak under the sons of Genghis Khan, and from then on seemed to die down of itself faster than opposition could push it back. Mongolia is back to-day where it was when Genghis Khan was a boy, although it once owned all of China, all of Russia, and everything in between.

The difference is to be found in their marriage customs. The medieval nobility had customs favorable to the breeding of a recessive trait. But the Mongols had the marriage customs of isolated savages whose chief concern is to prevent inbreeding. They practised the usual semi-polygamy of savages. Children of slave girls were legitimate. And when their conquests brought them large numbers of slave girls, mostly from cities, the result was to mask within a generation the mental mobility their style of fighting required. The grandsons of the world-conquering hordes did not like war, and were content to settle down to enjoyment of what they had.

Germany's social order is developing through war into a sort of state feudalism, with the serfs and the means of production belonging to the State, and the warriors drawing salaries from the State. There are lots of "bugs" in this system, and these may kill it quickly. If they don't, and if the German warriors follow medieval marriage customs, the German power may last for centuries. If they follow Mongol customs, it will die more quickly, for it can be more actively fought. But as a rule, peoples whose conquests were made by quick war have not kept on spreading very long. The sons of the conquerors get rich and lazy, and class distinctions hamper their replacement.

It must also be noticed that Nazi Germany has not invented any of the weapons she is using. All of them are as well known to the Allies as to the Germans. And the English speaking peoples have not only invented most of them, but have brought them to a higher state of perfection than Germany has. Germany's only military advantages are her superior preparation, and a tactical doctrine adapted to mental mobility. And these are advantages the Allies can overcome.

The German Army uses two types of psychological tests for drivers. One is a movie of a road as seen from a fast moving car. The driver sits at controls similar to those of a car or to those of a tank, and is supposed to drive through the movie as he would along the road. His performance is observed and recorded. The other is similar in principle, but instead of automobile controls and movies he has a set of arbitrary controls and signals. This serves to separate the effects of natural ability from the effects of driving experience.

Candidates for officers' commissions are given still a different type of test. The candidate has performed a task, such as building a bridge from improvised materials, under normal conditions. He is then told to repeat it under stress conditions. He is told, for example, that a regiment is waiting to cross on the bridge he is building. A superior enemy force is approaching, its artillery causing losses every minute. Noises and other mimicry help the illusion.

When officers who have passed such a test are put in charge of troops and are told to make their maneuvers as realistic as possible, they have a natural tendency to work into their maneuvers tests that favor the mobile mind. Bomb explosions are simulated, some of them almost dangerous. And the use of blank ammunition in maneuvers is not universal. Even as far back as last war the Germans put a few ball cartridges in with the blanks. And now they talk of "reduced service" ammunition, as if they were using light bullets and light charges, so as to minimize the danger, yet still compel men in maneuvers to take precautions or get shot, the same as in actual war.

Willingness to incur casualties in order to make maneuvers more realistic is particularly advantageous in the sort of modernized Indian fighting that was used to clear the wooded hills east of Sedan so that unarmored troops could follow the tanks through the valleys. The German tactical unit is the *Gruppe*, or section, consisting of a rifle squad and a light machine gun squad under the command of a sergeant. In such hilly wooded country especially, the machine guns, keeping well up with the rifles, are used to keep the enemy pinned to the ground and scattered, while the riflemen advance, taking all possible advantage of cover, and do not go into action until they are very close to the enemy, usually about a hundred yards.

Under such conditions victory goes to the man who shoots first, and this is largely a matter of quick decision and quick action under conditions of high excitement. It is possible for

umpires to simulate the effect of machine gun fire. But the value of the rifle training, and the ability of the men, can be much more accurately judged if actual bullets are used.

Mental mobility lessens the danger in falling from a horse or a bicycle, and gives the rider greater confidence. This alone serves as a valuable test in picking mobile minds for cavalry and for cyclists, provided those who consider themselves misfits can transfer without loss of prestige. There were several occasions in the last war where German cyclists performed feats as remarkable as that of the parachutists at Fort Eben-Emael, simply because they were the kind of men who can hold out against heavy odds for a day or so. And cavalrymen have proved to have the same advantage.

In spite of the German successes, there is considerable doubt as to the wisdom of using mental mobility tests for infantrymen in general. Mental mobility is unquestionably valuable in parachute troops, accompanying troops for the armored force, and for other purely offensive units. But where infantry may have to be used offensively or defensively as opportunity offers, it is feared that men who knew whether their minds were mobile or steady would suffer a loss of confidence when the situation seemed to call for the other kind. Steady minds usually make the best long range rifle shots. Mobile minds are best at rapid fire, and in organizations containing both types they have a tendency to take the lead when the situation is exciting. And it seems probable that unsorted troops, thoroughly trained in rifle fire, would put up a better fight, provided they come from a region where mental mobility is common.

But unsorted troops should not be expected to stop a blitzkrieg in the open. Every possible means should be taken to avoid exposing them as the defenders in the Sedan hills were exposed, and as the defenders of Fort Eben-Emael were exposed when they tried to fight the parachutists in the bomb craters. And this is particularly true when the organization may contain some scary minds.