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War on the Visual Front
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War on the Visual Front

HEINZ SOFFNER

THE further this global war progresses the harder it is for even the generally well informed and earnestly interested citizen to keep track of all its rapidly changing aspects and the more difficult grows the task incumbent upon the various media of information. This is true of military operations, scattered over several continents, in the air, and above, on and below the seas. Even experts are confused by a multitude of new weapons, revolutionary strategies and surprising tactics. The political, economic, social and psychological implications of this war are even more bewildering.

To the totalitarian powers, who want to direct a maximum response from their peoples to the momentary center of the war effort, this puzzling complexity of events and issues has posed merely the problem of concentrating propaganda on one specific issue at a time. And since the totalitarian nations have trained their populations to use words as weapons rather than as "food for thought" they have been successful even in such sudden shifts in the propaganda barrage as that compelled by Hitler's invasion of Russia. The fighting democracies, however, while they are under equal compulsion to use all the techniques of propaganda, of political and psychological warfare at their disposal, are at the same time faced with the no less important task of giving adequate information both to their own citizens and to the people of neutral or enemy-held territories as an indispensable incentive to gearing the forces of democracy for total victory and total peace.

The use of maps, charts and diagrams for purposes of propaganda is not unique to the 20th century. There was, for instance, the "Beatus" map, drawn in 776, which divided the world among the Twelve Apostles. Similarly, as Edna Kenton

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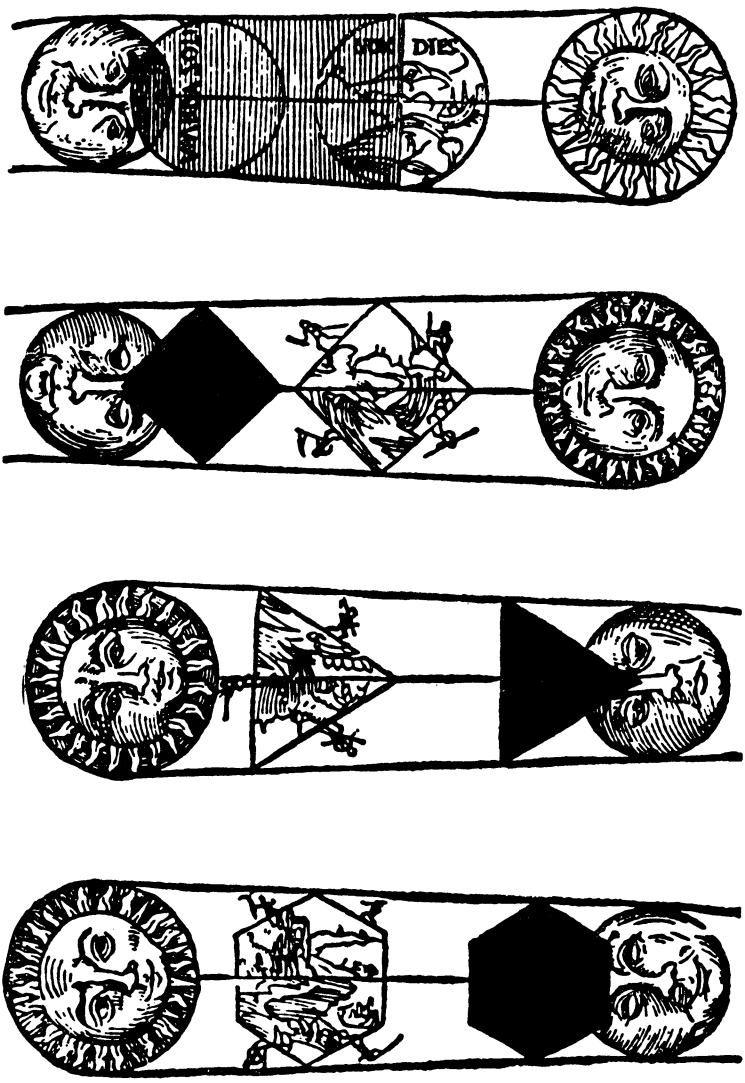

"This device proves the Earth to be a Globe"

(From *Cosmographia;* Petrus Apianus, 1640.)

Reprinted from *The Book of Earths,* by Edna Kenton, Copyright 1928 by Edna Kenton, by permission of William Morrow & Company.

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points out in *The Book of Earths*, "This device proves the Earth to be a Globe" "is an attempt to popularize a difficult theory."

For the purposes of both information and propaganda the illustration of news, of facts and of figures by pictures, maps, graphs and pictorial statistics is imperative. Pictures of this kind reduce the mental process of reading words one after another and of transforming their content into images and ideas, to a simple matter of perceiving, directly and as a whole, one more or less complex message. Even a reader well acquainted with a given terrain welcomes a good map to supplement the war communiqués; even a reader accustomed to peruse statistics will be more strongly impressed by a pictorial graph than by mere rows of figures. In both cases the picture allows a person to perceive at a glance what words and figures communicate only through a series of mental operations.

Consequently maps and pictures play an increasing role in our newspapers and periodicals, on posters and in other media. Prior to one of his fireside talks President Roosevelt expressly recommended the use of a map of the world to his listeners—a remark that provoked a veritable run on map dealers and bookstores despite the fact that most newspapers carried maps on the day of the President's address.

Out of the employment of maps, graphs and pictorial statistics, however, has arisen dangerous misinformation or misinterpretation likely to impair the democratic war effort. I shall not deal here with misinformation originating in the willful distortion of maps and graphs that is created by basing them on falsified data or by using such tricks as contrasting "agreeable" colors (red or blue) against "disagreeable" colors (like a sulphurous yellow), over-enlarging alleged "danger spots" by exaggerated shading, and the like. The Nazis, inspired by Haushofer's geopolitics (see, for instance, Karl Haushofer, *Rückblick und Vorschau auf das geopolitische Kartenwesen*, Berlin, 1932), are past masters in such tricks. Their "victory atlas," *The War in Maps*, published by the German Library of Information in New York, is an outstanding example of the

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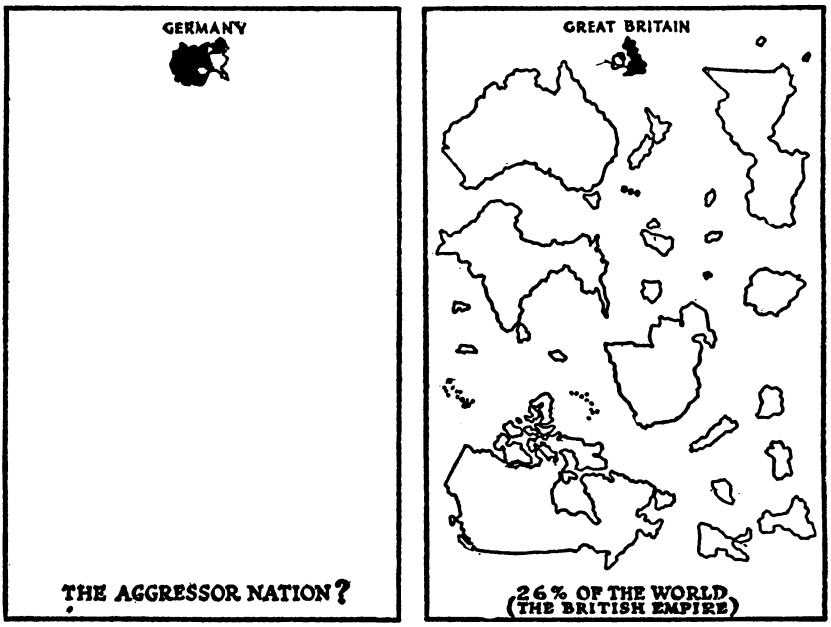
misuse of the average reader's naive confidence in maps—far more uncritical than his trust in printed matter in general. Two recent articles—H. W. Weigert's "Maps are Weapons" (*Survey Graphic*, October, 1941) and Hans Speier's "Magic Geography" (*Social Research*, September, 1941)—describe and analyze the Nazi methods.



"A Study in Empires"

This diagram, which first appeared in *Facts in Review*, Vol. 2, No. 5 (Feb. 5, 1940), published by the German Library of Information, New York, was reproduced in Sept., 1941 by *Social Research* (Vol. 8, No. 3) in conjunction with Hans Speier's "Magic Geography."

This Nazi "victory atlas," incidentally, furnishes an object lesson in how unscrupulous propaganda may backfire: two of its impressive, colored maps compare Germany's encirclement in 1914-18 with Germany's incomparably superior position during the current war, her back protected by her treaty with

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Russia. These maps were of course drawn before June 1941—today one can use them to prove an opposite contention.

But how about the unintentional misinformation or misinterpretation that sneaks into our own publications? During the first months of the war the high point of French propaganda was a huge, very effective world map, posted everywhere, portraying the Allied countries with their colonies in glowing red, spread all over five continents, whereas Germany was drawn as a forlorn, tiny black spot in the center of Europe. The caption read "*Nous vaincrons parce que nous sommes les plus forts*" (We shall win because we are the stronger). After the defeat of France the Nazis in their film *Victory in the West* skilfully exploited this unfortunate document of the "Maginot Line of the Mind" to ridicule the self-conceit and the delusions of the democratic nations.

Although the general misconceptions about defensive warfare and the value of static defense positions have been exposed time and again since the fall of France we still find some maps and graphs designed—perhaps unconsciously?—very much along the lines of that ill-fated French poster. Objective factors tend to aggravate the situation. There is, for instance, the distortion caused by map projection when a large sector of the earth's surface is depicted. In such maps the empty wildernesses of northern Canada or of arctic Siberia seem overwhelmingly bigger than the strategically and industrially all-important areas of the United States, England, European Russia or Germany.

"An Atlas for the U. S. Citizen, U. S.-centric Maps" (*Fortune*, September 1940) provides an instructive example of how thoroughly the outlook is changed if one shifts merely the angle and the mode of presentation. Or remember the many maps on the blockade question which appeared with great frequency during the first phases of the war both from British and from German sources. If, say, 75 per cent of the places of entry into a country appear to be blockaded the spectator naturally concludes that 75 per cent of its imports are shut out,

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whereas through the remaining 25 per cent all the materials vital to that country may be brought in. On the other hand a blockade of merely 25 per cent of a boundary line may prove highly effective if certain irreplaceable materials can be procured only through this portion of the line. The closing of small outlets, inconspicuous on an ordinary map, may become a matter of life and death (Germany's only maritime exit along the Norwegian coast, Britain's lifeline across the Northern Atlantic, the Murmansk supply route, the Burma Road.

Similar "static" misconceptions can be found in graphs and pictorial statistics (for basic information on this type of statistics see Rudolf Modley's *How to Use Pictorial Statistics*, New York, 1937). One still sees, for instance, comparisons between the industrial resources of the Axis and the United Nations which depict the steel-production capacity of the United Nations as three times larger than that of the Axis (this and all subsequent figures are arbitrary examples and wholly fictitious). The average person translates this picture into "we are three times stronger than the Axis." He should instead remember that the course of military operations is determined not by productive capacity but by actual production; and not by the sum total of production but only by war production; and not even by the total war production (for some of it rusts in warehouses or is sunk in transit) but only by that portion that actually reaches the fighting lines. We may well find in the misleading kind of comparison one of the major sources for our much-blamed "complacency" and "over-confidence."

The all-important question of manpower forms another favorite topic for errors. Usually the grand totals of mobilizable men—or even of entire populations—are presented, whereas probably only those who are now with the armed forces or are due to be called to the colors this or next year should actually be figured in. Since the Battle of Britain, moreover, we ought to know that one thousand men, if they are properly trained and equipped pilots, count for more than a hundred thousand infantry.

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Statisticians and writers like to contrast Germany's labor shortages, its importation of foreign labor etc. with the vast human reserves available to the United Nations. Again, the average spectator is likely to translate the unquestionable fact that the United Nations are potentially many times stronger in man power into the simple but misleading "we actually have many times more soldiers and war-production workers."

These and similar statements, to be found regularly in newspapers, newsreels, posters etc., prove conclusively that while we all theoretically agree that "defense will not win this war" there is still much to be done to transform this commonly held but somewhat platonic opinion into actual work—and, vis-a-vis the topic of this discussion, into the right kind of day-to-day information, interpretation and propaganda.

What can be done about it? The matter of visual information is closely related to the broader problem of further development and perfecting the political conduct of the war, a subject that obviously goes far beyond the scope of this article. Assuming, however, adequate political planning we might well consider some practical suggestions.

In keeping with the dynamic, swiftly moving and changing character of this war, pictures of all kinds ought to be dynamic rather than static. They ought, that is, to show trends, actions, movements rather than possessions or stocks or stationary positions (whether military, political or economic). Most newspaper cartographers understand this already insofar as they indicate with arrows and other signs the shift in the disposition of troops and the actual or potential moves of the belligerents. Maps of the "arrow" type could perhaps be improved by distinguishing with arrows of different sizes or shapes the comparative strength of present dispositions and the comparative importance (or probability) of possible future moves.

A clear distinction should be made between maps illustrating the news from the war theaters and other maps communicating more general information. The former, particularly if they are used in daily newspapers, should be restricted to specific

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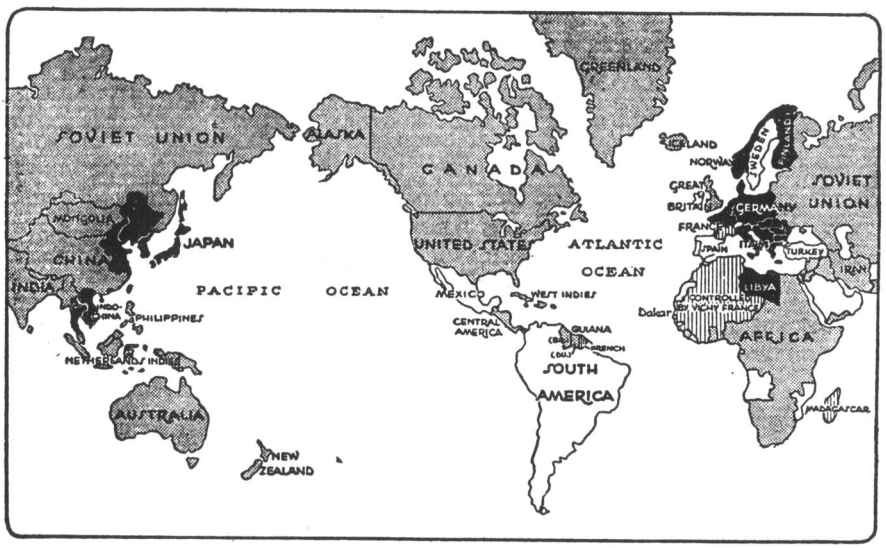
areas in order to avoid the misleading distortion inherent in map projection and to allow quick and accurate orientation. The latter kind of maps, which must cover large sectors of the earth if not the entire globe, ought to select the type of presentation most appropriate to one definite purpose and subordinate or omit all irrelevant geographic detail. We could well abandon



Axis-dominated areas (not including Russian campaign) and Finland
United Nations and protected areas

Reproduced from Headline Books, *War Atlas*, 1942, with the permission of the publisher, the Foreign Policy Association.

The world on Mercator's projection, which unduly aggrandizes the territory of the United Nations while it minimizes that of the Axis powers.

Mercator's projection (based on projecting the surface of the globe on a cylinder which touches the earth along a circle of latitude, thereby stretching the meridians to parallel lines), which confusingly exaggerates arctic and antarctic distances, in favor of any other, less misleading, system.

The most difficult problem in drawing truthful maps today arises from the new values attaching in this war to space and

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distance. In earlier wars, including World War I, large territories, difficult to traverse—such as deserts, mountains, broad expanses of water—uniformly favored the defender and impeded the attacker. This is only partially true in the current war, for such terrain may also compel the defender to split his forces while it conceals surprise moves on the part of the attacking units (as in Libya and Ethiopia). On the other hand the more valuable a given area to the industrial war effort the more vulnerable it is in case of an attack (i.e. the Ruhr valley and the Ukraine). One ought to try, therefore, to symbolize the importance of a given area (in each case with exclusive relation to a specific situation or problem) by showing its industrial capacity, the density of its population, its strategic value as giving access to other, more important, regions and the like. In this effort, map designers should emphasize the relative importance of each place by proper shading, coloring or other easily explainable symbols.

A general world-war map, for instance, could indicate the main strategic and industrial areas or "active" countries—Germany, England, the United States, European Russia, China, Japan—in strong, full colors; important but "passive" territories—the Nazi-occupied countries—in subdued shades; and in white the "empty" spaces which are of scarcely any military or industrial value except as they shut off or provide access to more significant areas—most of Australia, the deserts of Africa and of Asia etc. On another map the approximate potentials of each country might be indicated by symbols—in terms of population, machine output, shipbuilding, production of steel, coal and oil. This type of thing is being done but maps of this sort frequently confuse the reader by employing too many different symbols simultaneously, by overcrowding the picture or by choosing statistical signs that are difficult to compare.

In this connection another matter deserves comment. Many war maps concentrate on problems of transportation and supply, showing railroads, highways, harbors and the like. And this is valuable. But quite a few of them use identical symbols to depict

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the least useful, small-gauge track and the four to six track trunkline capable of carrying a hundred or more times more freight. Harbors of the most divergent sizes and installations —say New York and Tutuila, Samoa—are usually marked by the same anchor or star or whatever it may be. It would seem worth while to distinguish—certainly on maps devoted to transportation—between several sizes of railroad or port capacities.

Pictorial statistics pose two groups of problems: these statistics are either "static" ("in 1938 the United Nations produced 90 per cent of the world output of oil") or their "dynamism" lends itself to misinterpretations. Their use is further complicated inasmuch as many figures are necessarily military secrets.

Graphs that merely show that "we now produce six times more than two years ago," tend to provoke smugness. If their message implies—without a lengthy comment—"two years ago we produced, say, 10 per cent of the Axis output; we now produce as much as the Axis but we must double the Axis output to win" they are obviously much better. The best imaginable graph, however, should lead to some such conclusion as that "two years ago we produced 10 per cent of the Axis output, 20 per cent of our production was war production—and France, Belgium etc. were lost; last year we produced 80 per cent of the Axis output, 50 per cent of our production went into the war—and Mussolini's African empire was destroyed, Hitler was temporarily halted, but Japan won important victories; this year we must double the Axis output, divert 75 per cent of our production to the war—and win an all-out victory."

In the motion picture lies a highly essential but much neglected field for pictorial statistics. Newsreels, war films and such features as "The March of Time," McCrary's "Ringside Seat" or "Kaltenborn Edits the News" occasionally incorporate maps, but usually they are either globes or maps clipped from newspapers and similar sources. But the screen offers the best imaginable opportunities for "dynamic" visual information. On the screen arrows can really move as opposing armies advance or retreat, statistical columns can grow or shrink, frontiers

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can be violated and empires can literally "crumble." The effect created by such "living" maps and graphs can be further heightened by an effective accompaniment of words or music. One could both see and hear a "frontier" "break down," the tramping "men" in the statistical column "join the army," "the whistling ships" slide down the ways and the like.

Why not include such a map feature, dynamically illustrating current war events, in the newsreels? Why not visualize the growth of lend-lease aid, the progress of the war-bonds campaign, in pictorial statistics that move? Why not portray Germany's exploitation of the occupied countries by maps on which the confiscated goods actually march into the Reich? Or depict the effect of air raids, swarms of planes (in symbols) dropping bombs across a map of strategic and key industrial points? Why not dramatize the unrest in Nazi-occupied Europe by flashing on a map those places where hostages have been executed, troop trains have been derailed, underground papers have been secretly edited and printed?

These few suggestions indicate how great can be the improvement in the techniques and therefore in the effectiveness of visual means for conveying information about the war. But visual information can do even more. Beyond illustrating and clarifying current issues it can also help to explain the background of the war, the aims of the democracies and the potentialities of the coming peace. Good examples are to be found in J. F. Horrabin's *Geography of the War* (London, 1940) and in the *Headline Books* of the Foreign Policy Association, New York—e. g. Shepard Stone's *Shadow over Europe*, Henry C. Wolfe's *Human Dynamite* and others.

Why not translate the ideas of the Atlantic Charter into maps and pictorial statistics? If leaflets composed of maps and graphs setting forth the war and the peace aims of the United Nations were dropped from planes over enemy-held territories they might easily do a better job of propaganda than mere word appeals. They would reveal how enormous a fraction of mankind is still without democratic forms of government; how the

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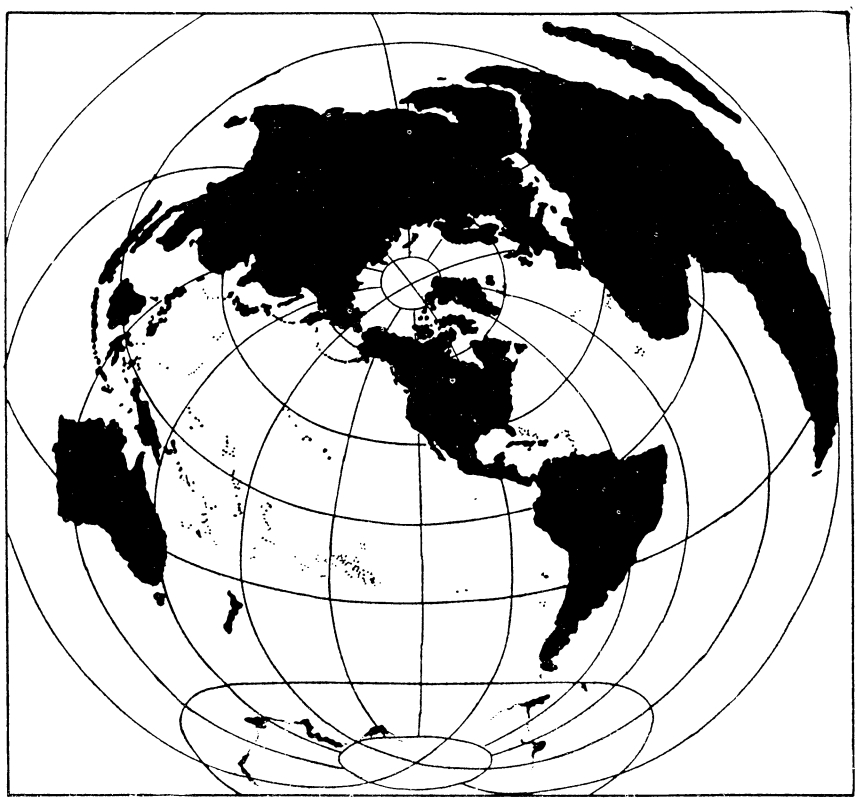
living standard of the German people could have been improved had they used differently the billions that Hitler spent for armaments; how the riches of the world, if intelligently employed for peaceful purposes under the supervision of a world-wide organization, can easily offer fair opportunities for working and living to all peoples.

This total war makes imperative on the part of the democracies a maximum expenditure of will power and intellectual ability. Visual information can make a tangible contribution toward the achievement of that end.



An Azimuthal Equidistant Projection Centered on San Francisco

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