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RAND McNally  
POLAR MAP OF THE WORLD  
The new approach to modern warfare and future air travel

THE current Global War is rapidly forcing us to revise many of our pat, smug concepts inherited from the past and unconsciously accepted as filed and final. Whether we know it or not, when we see something new, we judge it and limit it by the unconscious content of our minds, collected throughout our life from past patterns, experiences, and the accumulated experience of our forefathers. From time to time radically new elements are thrust upon us that require the uprooting and changing of old concepts. Among these ideas destined for the scrap pile is that of a predominantly east and west world, with Europe essentially east of the United States and Asia to the westward, etc.

Our old approach to and thoughts of the earth have been controlled and molded by the graphic picture of the earth most frequently presented to us. This has been in the form of Mercator World Maps spread out predominantly east and west. This projection was designed several hundred years ago as a technical instrument to meet the needs of the marine navigators who followed Columbus in inter-continental marine commerce and then world commerce via the open ocean routes. Polar cold and ice blocked commerce across the Arctic wastes. Since that time practically all world maps have been made on Mercator's projection, spread out predominantly east and west.

With this image before us for generations, the east and west world became a more or less fixed concept. This is further emphasized by the fact that all globes of the earth have heretofore been mounted on a polar axis to rotate east and west.

The advent of the airplane and radio requires a new approach to the earth, one based on the shortest distance and direction between points in question. This means great circle relationships in distance, path and direction. This concept has been gradually spreading among technicians. The present Global war has placed new emphasis on the need of presenting this revised conception of the world to the public. This has now been done in the form of a New World Map, centered on the North Pole and radiating therefrom in true distance and direction.

The new Rand McNally Polar World Map was designed with this in mind. A comparative glance between this and a Mercator World will make one wonder why we remained bound by the old world image so long. A glance at the Polar Map shows that the major part of the land masses of the world clusters around the North Pole, and the shortest, or great circle, routes between North America and Europe or Asia lie near or across the Arctic region.

To the airplane the cold of the Arctic offers no barrier. In fact the best and calmest flying weather is in that area, where there are very few storms such as we know in the temperate latitudes. To aircraft, up, not north is cold. The temperatures of the upper air, especially of the stratosphere, are no colder over the Pole than elsewhere. Furthermore, stratosphere flying offers calm weather, changeless temperatures, less resistance, and greater possible speed; and the stratosphere is much closer to the earth's surface over the Arctic region than it is in warm latitudes.

Thus, for air commerce we eliminate the old Arctic barrier and find rather an inviting avenue of world travel. A glance at the Polar World Map will show how much closer the population centers of the world are by this new centralized and short highway.

Our concepts of basic directions must also be revised. You can see on this map that Asia is closer to the United States by a northerly route than by any other and that Europe lies decidedly northeast of the

United States, rather than to the east, as is usually thought. You can also see that the Aleutian Islands of Alaska are the most direct route and the natural stepping stones from Japan to continental United States, etc., etc.

No one flat map, however, can give an entirely true concept of the earth. An orange peel cannot be spread out flat without having it split and break in several places. When we spread out the earth's surface on a flat map, we fill in these breaks by mathematical adjustments which produce exaggerations of one kind or another. On the New Polar Map the southern continents and oceans are exaggerated in an east and west direction. The Mercator Map exaggerates the Polar Regions in both directions and in fact cannot show the actual poles because of its mathematical limitations.

The only way the earth can be truly represented is on a globe and this has the disadvantage of not being spread out so that we can take it all in at a glance. To meet the demands of current times in understanding relationships in the world of the airplane, we must consult the globe and several world maps of different design. The most important of these maps today is the new Polar presentation of the world.