



Taylor & Francis
Taylor & Francis Group



Richard Edes Harrison and the Challenge to American Cartography

Author(s): Susan Schulten

Source: *Imago Mundi*, 1998, Vol. 50 (1998), pp. 174-188

Published by: Imago Mundi, Ltd.

Stable URL: <https://www.jstor.org/stable/1151400>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

Taylor & Francis, Ltd. and Imago Mundi, Ltd. are collaborating with JSTOR to digitize, preserve and extend access to *Imago Mundi*

Richard Edes Harrison and the Challenge to American Cartography

Susan Schulten

ABSTRACT: Richard Edes Harrison's innovative maps of the 1940s are critical to the history of American cartography. His techniques defied convention and created a new standard for the look and shape of the world on a map. Harrison designed the maps to be both visually appealing and politically charged, reflecting the urgency of the war while also maintaining an elegant artistic dimension. How he produced these maps, and why they so electrified the population, is the subject of this article.

KEYWORDS: Richard Edes Harrison, World War II, American cartography, geographical perception, perspective maps, journalistic cartography, political cartography.

In 1993 the Smithsonian Institution sponsored a brief but popular exhibit designed to raise questions about the nature of mapping as a scientific or objective enterprise. The visitor entered 'The Power of Maps' through a long hallway lined with a series of large, colourful maps of the world drawn from unconventional angles; one placed South America at the top, others centred the world on the North Pole, Africa or Australia (Fig. 1). These maps introduced an exhibit that deconstructed maps of every kind, asking what information they included, what they silenced, and how they framed their subject. But few of the exhibit's visitors would have been able to identify Richard Edes Harrison as the artist behind these odd maps in the hallway, for they have rarely been seen since the Second World War. By contrast, in the 1940s he had found an enthusiastic audience for his work across the country. For in the midst of the first truly global war, fought on the seas, on the ground and in the air, Harrison was able to translate the conflict's new realities into graphic images for the public. When we consider that he produced these maps at a time

when commercial cartography doggedly adhered to traditions of style and content, Harrison's maps must be recognized not just as unique or unconventional but as important cartographically. Technically and stylistically innovative, ideologically potent and enormously popular with the American public, Harrison's maps are pivotal to the history of American cartography.

More Americans came into contact with maps during the Second World War than in any previous period in American history, creating a unique opportunity for cartographic experimentation. Harrison was the person most responsible for sensitizing the public to geography in the 1940s. He drew dozens of maps for *Fortune* magazine, so distinctive that they literally re-created the look of the world and set a standard that others would emulate. A public hungry for information about the war tore his maps out of magazines and snatched them off shelves and, in the process, endowed Harrison himself with the status of a minor celebrity. Despite this popularity, little scholarly attention has been paid to Harrison, and Alan Henrikson's general

► Dr Susan Schulten, Department of History, University of Denver, 2199 S. University Boulevard, Denver, Colorado 80208, USA. Tel: (1) 303 871 2970. Fax: (1) 303 871 2957. E-mail: sschulte@du.edu.

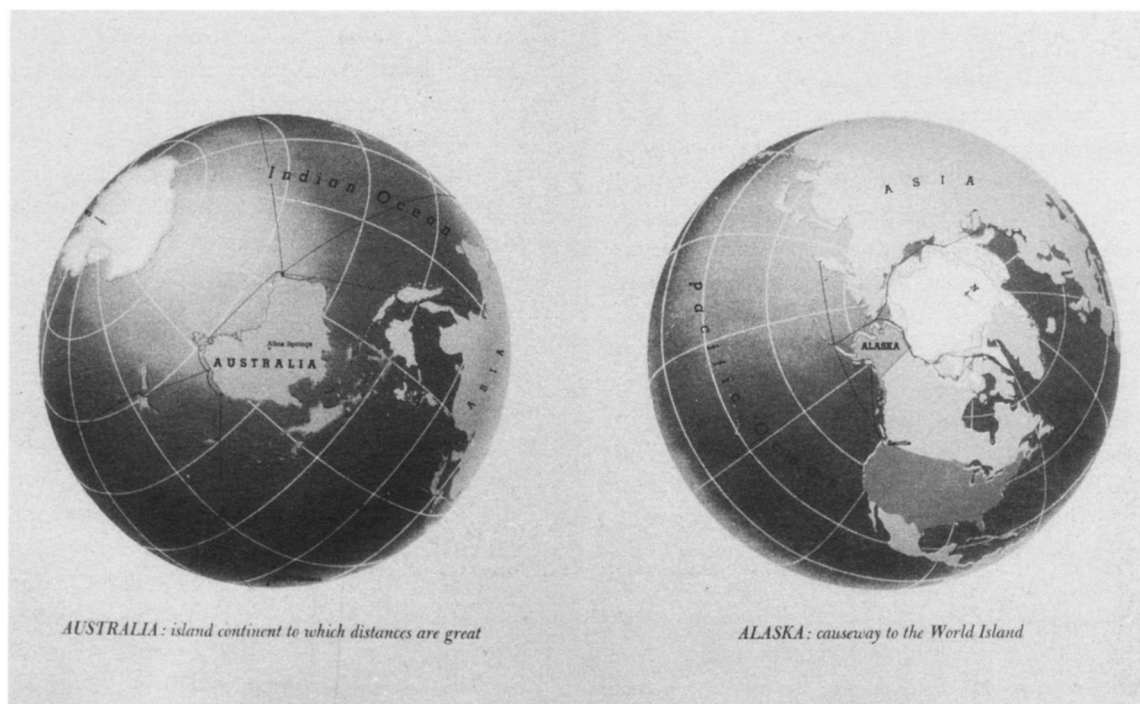


Fig. 1. Two of Harrison's global views, from 'Eight Views of the World', in *Look at the World: The Fortune Atlas for World Strategy*. (© 1944-Time Inc. All rights reserved.)

investigation of the relationship between wartime maps and the development of post-war foreign policy is still the only study available.¹ Henrikson treated Harrison as one of many innovative geographers and cartographers who introduced the modern 'perspective' map and use of polar projections into a culture reared on the Mercator projection. For Henrikson, these new maps contributed to a sense of vulnerability among statesmen that ultimately fuelled tensions of the early cold war. What remains to be understood is how Harrison—among the most important of these cartographic artists—produced these maps and how they were read by the public during the 1940s.

It is significant that some of the most captivating maps of the mid-twentieth century came from an individual who was educated not in cartography but in architecture. Richard Edes Harrison came to New York in the 1930s with training in interior design, and in the early years of the Depression designed everything from houses and bars to ash trays and whiskey bottles. One day in 1935 a friend who was working as a copy editor at *Time* magazine asked him to fill in for an absent cartographer at *Fortune*, and there began a relationship that allowed Harrison to apply his artistic skills to journalistic

cartography. But he grew to disdain the label 'cartographer' and chose instead to see himself as an artist free from the conventions and confines of a profession. Despising what he considered the 'outmoded and utterly antiquated geography' learned by most Americans, Harrison blamed professional geographers and cartographers who were mired in 'a static condition bordering on senility'. The orthodoxy that dominated commercial cartography, Harrison argued, was entrenched further by the long-standing devotion among the military, naval and teaching professions to the Mercator projection.² In a wartime letter to his employers at *Fortune*, Harrison referred to the failure of the profession to maintain a connection to the public understanding of cartography:

Having mastered the mysteries of their craft, they never felt it necessary to explain them in simple language to the layman. Perhaps there is a little of that tendency, common also among doctors and lawyers, to impress the yokels with a mumbo-jumbo terminology . . . the established mapmakers were left at the post, and the burden of explanation was assumed by rank outsiders—the magazines and daily papers.³

It was precisely his lack of formal cartographical experience, Harrison believed, that enabled him to break from convention.⁴

One World, One War

One of Harrison's most important departures from traditional mapping was to reintroduce polar projections centred on the North Pole, ones that although as old as Mercator seldom were used before the twentieth century. Polar maps surfaced occasionally in modern American atlases to chart aviation distances and feats of Arctic exploration, but generally they had not been used to depict political relationships. Harrison challenged this tradition by drawing a map, entitled 'One World, One War', centred on the North Pole for the August 1941 issue of *Fortune*; a modified version of this map, reprinted in March 1942, became a standard wall map in American homes (Fig. 2).⁵ In an issue devoted to the possibility of American entrance into the war, fully four months before the attack on Pearl Harbor, Harrison's 1941 version of the polar map made North America central, rather than peripheral, to the conflict. Furthermore, the text accompanying the map left little room for interpretation, stating that the 'entire conflict pivots

around the U.S.' in terms of ideology, geography, and the policy of Lend Lease. Although the map separated the nations of the world into seven camps, there were actually only two that mattered, 'those who are for us . . . and those who are against us.' The map itself used the azimuthal equidistant projection to chart uninterrupted directional relationships between the belligerents within the northern hemisphere.

Like any map of the world, accuracy in one area came with inaccuracies elsewhere, and in Harrison's map the southern continents were distorted beyond recognition. Yet for many this was a minor limitation in a war staged largely in the northern hemisphere. Coupled with the fact that most of the world's population was located on the northern continents, the north polar projection gained rapid acceptance with the public, and its cartographical limits seemed only slightly objectionable in light of the relational truths it purported to illustrate. Schools were particularly receptive to this new model for a world map in the 1940s, in part fuelled

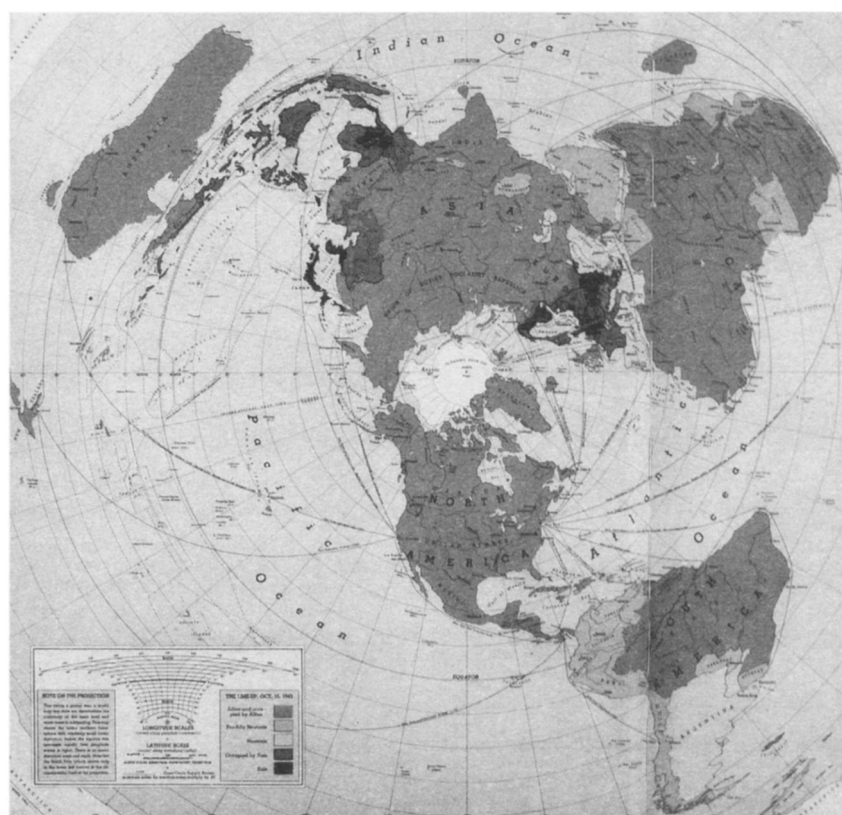


Fig. 2. Richard Edes Harrison, 'One World, One War', in *Look at the World: The Fortune Atlas for World Strategy*. (© 1944-Time Inc. All rights reserved.)



Fig. 3. Frontispiece from a 1944 geography textbook entitled *Our Air-Age World*. (Provided by the Consolidated Vultee Aircraft Corporation.)

by the rapid adoption of a geopolitical curriculum that integrated geography with political strategy and the technological advances of aviation. For example, consider the frontispiece of a contemporary geography textbook, one of many instances where a polar-centred projection is used graphically to illustrate the effects of aviation for world geography (Fig. 3). The polar projection made the world a group of tightly wedged continents, bringing a sense of proximity and immediacy to the forefront which the Mercator projection could not hope to match.⁶

The Look of the World

Just as engaging as the polar projection were Harrison's signature perspective maps, which he used to highlight spatial relationships among cities, nations and continents made relevant by the war. These maps, resembling a photograph of a globe from a distance, brought home the world's sphericity by moving the viewer out to a fixed point above the Earth. In this way, the maps created a new vantage point that Harrison judged to be the 'missing link' between globe and map, valuable for

its ability to translate three-dimensional relationships into a two-dimensional realm. Harrison's editors at *Fortune* quickly realized the popularity of these maps and continued to print them in the magazine throughout the war.⁷ The public's recognition of the maps was furthered by *Fortune's* decision to publish eleven of them as an 'Atlas for the U.S. Citizen' in its September 1940 issue. The aerial view offered by these maps pulled the reader into the actual theatres of conflict, and at a moment of impending American involvement, their vantage point carried an internationalist message.

Harrison did not leave consistent records of his production methods, but a study of his materials, pieced together with some of his written records, indicates his general approach. First, he simply sketched the desired region from a globe to help the magazine editors envisage the illustrative potential of the map. He then photographed that particular angle of vision on a large physical globe, using the photograph to check his proportions and guide the addition of proper terrain in a second sketch. This photograph also served as the model for a third sketch, one that improved the relative configura-

tion and proportional relationships of the land. From here Harrison could have simply traced the final sketch from the photograph of the globe, or used a grid of his own to work from and to derive a more accurate system of measurement. Once the basic map had been drawn, he traced overlays for the addition of place-names and other details and submitted the map to be printed in the same way as any other part of the magazine.⁸

While Harrison's techniques were unremarkable, his real artistry lay in his choice of angle and perspective. The daring appearance of his maps set Harrison's work apart from that of the large map companies, and in many ways his style owes more

to the persuasive look of contemporary advertising than to cartography. Harrison broke with many long-standing American cartographical traditions, one of the most important being the tendency towards densely lettered, visually crowded maps. Instead, Harrison included only those place-names that were necessary to understand a given situation. A comparison of an example of American commercial cartography with any of Harrison's maps highlights marked differences in appearance (Fig 4).⁹

Harrison's position at *Fortune* also afforded him freedom to experiment in other ways, such as focusing on particular regions in a way that large



Fig. 4. Rand McNally's interwar atlas map of Britain. (© 1998 Rand McNally S-98-6.)

THREE APPROACHES TO THE U.S.

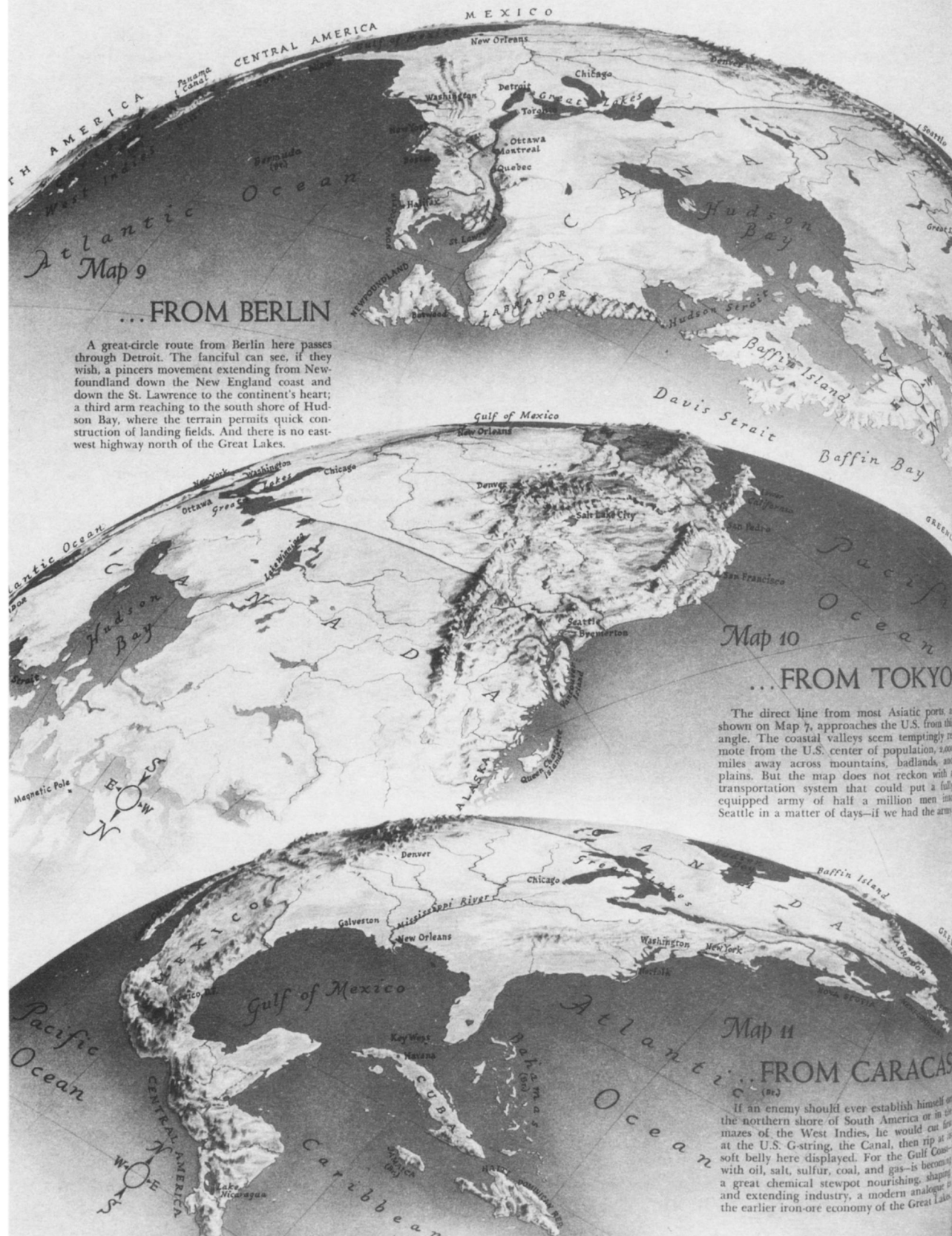


Fig. 5. Richard Edes Harrison, 'Three Approaches to the United States', from the 'Atlas for the U.S. Citizen', *Fortune* (September 1940).
 (© 1944-Time Inc. All rights reserved.)

commercial map companies were unable to do. Harrison had only to deal with the immediate news and was under no obligation to construct maps that would endure after the war as reference sources for other purposes. He was also free to highlight particular directional relationships in his maps, even if this meant distorting surrounding areas in the process. This is brought home vividly in his 'Three Approaches to the United States,' the final image of his 1940 'Atlas for the U.S. Citizen' (Fig. 5). In this map, Harrison brought the distant war to America, not across the Atlantic to New York but inland to cities such as Detroit (from Berlin), to Seattle, Salt Lake City and Denver (from Tokyo), and to the 'soft belly' of the American south (from the northern coast of South America). The text that accompanied the 'Three Approaches' map referred to the German and Japanese presence in Guatemala, Columbia and Mexico, thus heightening the sense of vulnerability in the south. Together, the three maps made it difficult to dismiss the war as an Asian or European affair and nearly impossible to maintain a sense of geographical isolation. Instead, Harrison's work encouraged Americans to embrace an internationalist destiny and prepared them for a total commitment to the Allied cause.

Harrison's popularity peaked in 1944, when the editors at *Fortune* decided to capitalize on the public interest in geography by compiling his maps into a separately published atlas. The heavily promoted *Look at the World* had already sold nearly 25,000 first-edition copies before it even reached the stores and represents the high water mark of Harrison's influence.¹⁰ *Life* magazine called the atlas 'a geographical milestone' for the way it included maps that were 'peculiarly appropriate' to the modern—or anticipated—age of aviation. On seeing the atlas, M. Lincoln Schuster of Simon and Schuster, which had just released a mass-market war atlas of its own, acknowledged Harrison as

one of the pioneers in creative cartography . . . [who has] made a basic contribution to the art and science of cartography in a way which has completely changed—almost revolutionized—newspaper and magazine map making practice and technique.

Consumer Reports in its 1943 Christmas issue judged an advanced copy of the atlas superior to anything else on the market and recommended that gift givers delay buying an atlas that season until *Look at the World* was released in the spring.¹¹

The maps in *Look at the World* forced a re-evaluation of assumptions about the appearance

and shape of the world, about distances and directions between cities and nations, and about America's role abroad. Harrison's use of the oblique orthographic angle instantly reminded the user that the world was round and that aviation had created new realities of travel and movement (Fig. 6). Harrison had turned the viewer into a pilot floating above the horizon and, by portraying mountains instead of relying on the more traditional method of hachuring, he made these maps seem even more like a photograph of the Earth from the air, thus helping Americans recognize the real effects of the air age.

As before, Harrison geared *Look at the World* towards an understanding of the war, using maps to visualize relationships between cities and regions such as the Middle East from Europe, or western Europe from Germany. This ability to create vistas is especially apparent when comparing the most widely distributed pre-war maps of the Pacific—those produced by the Rand McNally and Hammond map companies—with Harrison's wartime view of the same area. The pre-war map contains a region of widely dispersed minuscule islands, far from the shores of either Asia or North America (Fig. 7). In contrast, Harrison's map of Japan as approached from the Solomon Islands suggests a closer relationship of the islands to Asia, while simultaneously emphasizing the magnitude of the Pacific (Fig. 8). The pre-war map, drawn on the Mercator projection, separates the viewer from the geography in question, while Harrison's perspective map brings the impossibly large landscape of the Pacific almost literally into the individual's reach.

Even more startling was Harrison's map of Japan and Alaska, which brought Japan virtually to America's back door, a relationship poorly—if at all—illustrated by the Mercator projection (Fig. 9). The use of a polar route to connect Japan to Alaska effectively transformed the Pacific Ocean from a massive body of water protecting the United States into a smallish lake. The shrunken ocean connects, rather than separates, the American nations to Asia, linking the eastern with the western hemisphere.

Responses

The unique stratospheric perspective of Harrison's maps also made them suitable for military use. The United States Army ordered 18,000 copies of the north polar map. Later, they requested 1000 maps from the 'Atlas for the U.S. Citizen' to help new members of the Air Corps develop an aerial

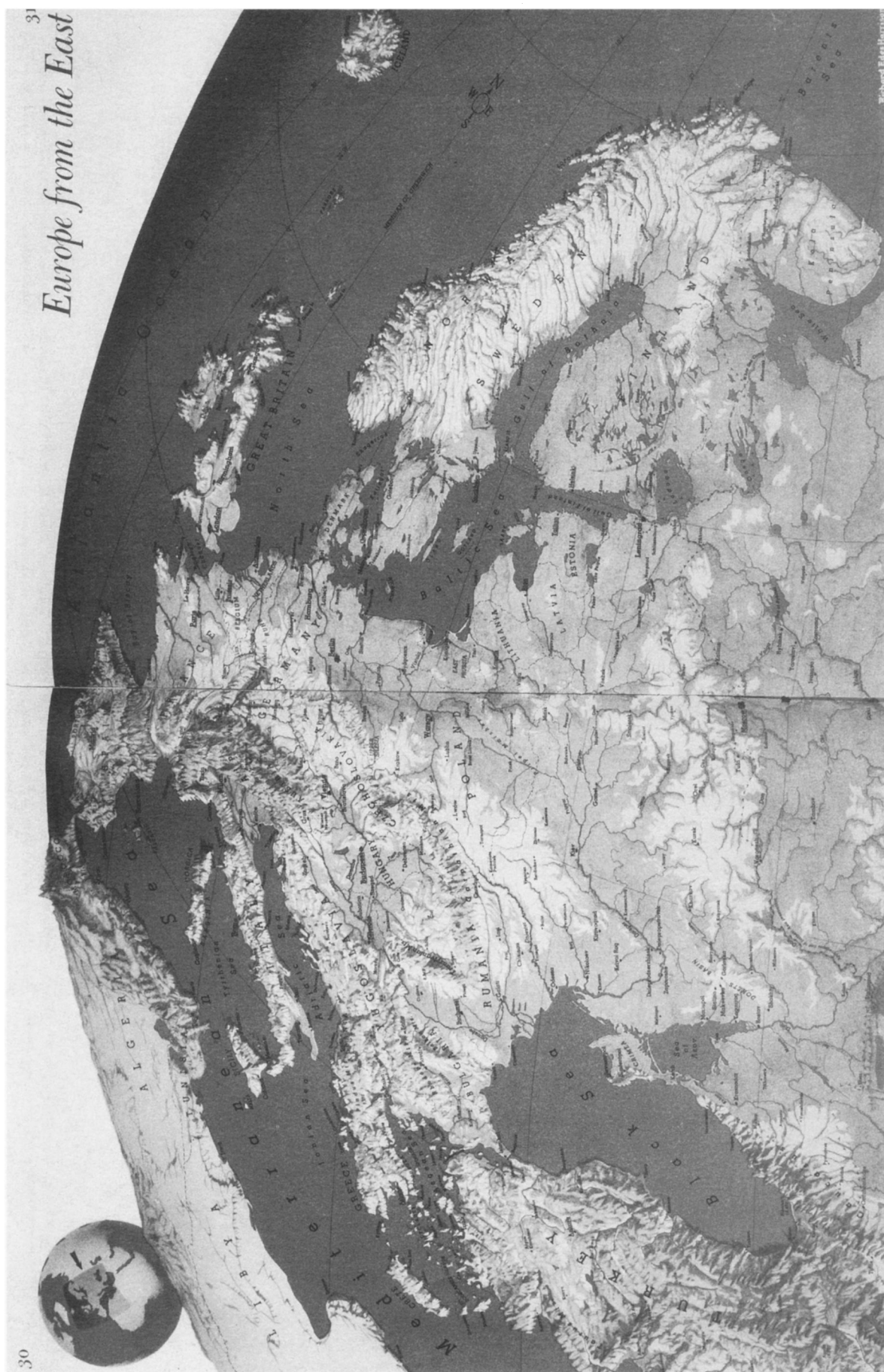


Fig. 6. Detail from Harrison's 'Europe from the East', in *Look at the World: The Fortune Atlas for World Strategy*. (© 1944-Time Inc. All rights reserved.)

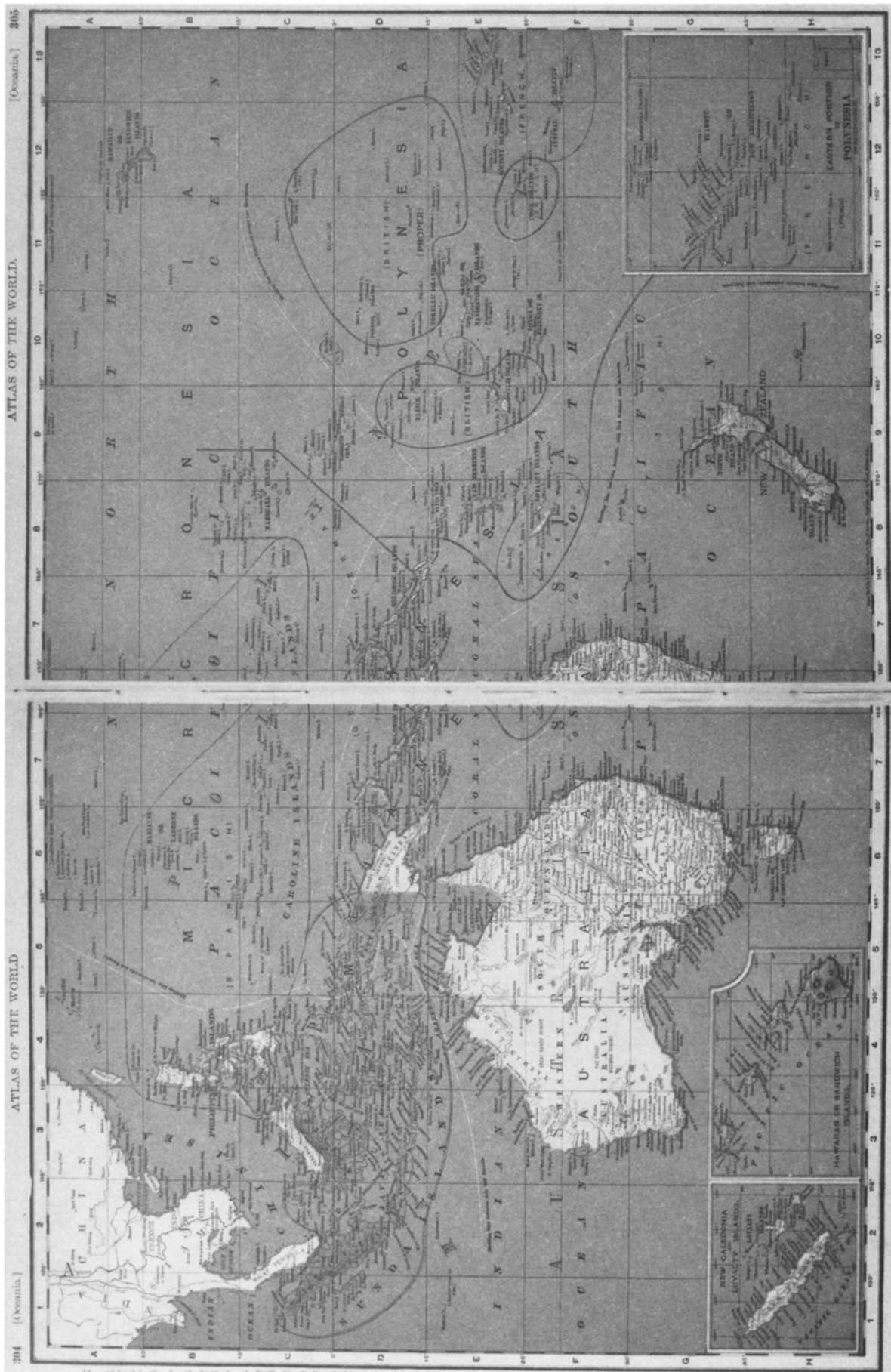


Fig. 7. Rand McNally interwar atlas map of the Pacific Ocean. (© 1998 Rand McNally S-98-6.)

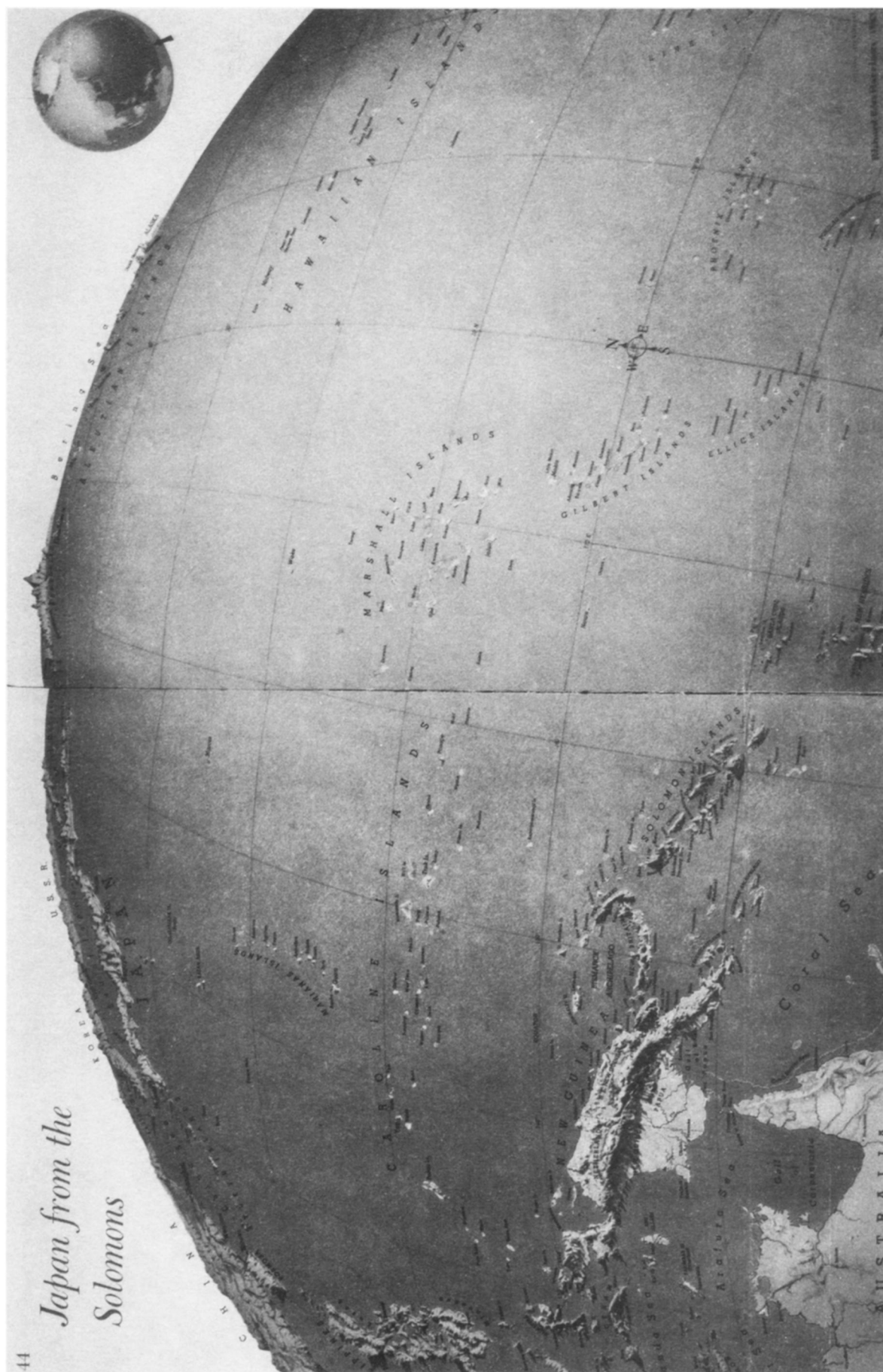


Fig. 8. Detail from Harrison's map of 'Japan from the Solomons', in *Look at the World: The Fortune Atlas for World Strategy*. (© 1944-Time Inc. All rights reserved.)

Japan from Alaska

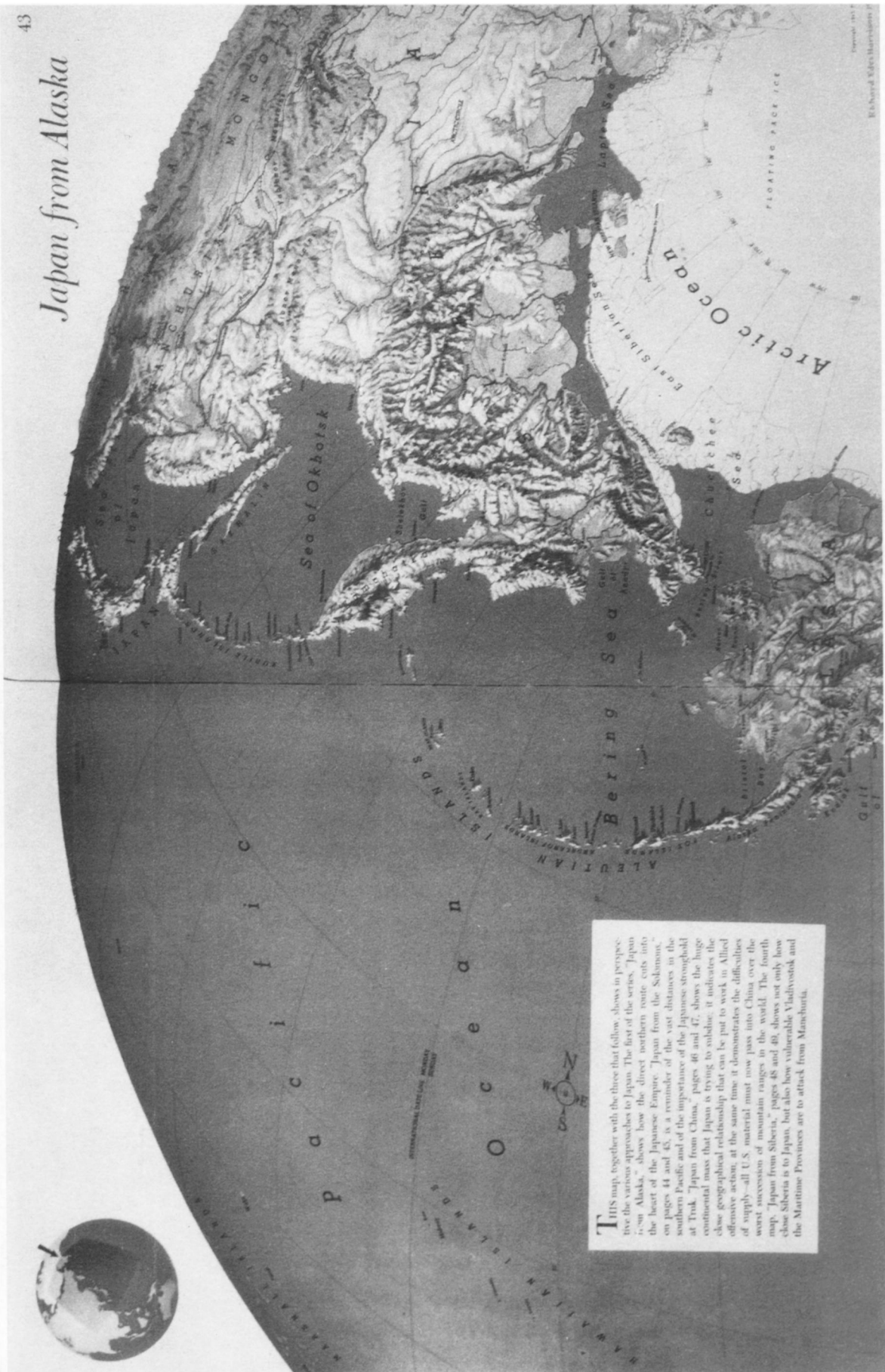


Fig. 9. Detail from Harrison's 'Japan from Alaska', in *Look at the World: The Fortune Atlas for World Strategy*. (© 1944-Time Inc. All rights reserved.)

sense of geography. Harrison's perspective maps were also used to train reconnaissance and bomber pilots, helping the pilot visualize regions that had not been photographed from the air.¹² Many of Harrison's maps, as well as those by other journalistic cartographers, were also copied and distributed to American soldiers through magazines such as *Newsmap* and *Yank*.

With civilian audiences, Harrison made an even stronger debut. Not only did his maps sell through *Fortune* and *Look at the World*, but they were endlessly imitated, emulated or simply copied. Harrison himself was deluged with clients during and immediately after the war: individuals, companies and organizations were all requesting maps for particular purposes.¹³ The editors of the *Atlantic City Press/Evening Union*, for example, asked for an azimuthal projection map centred on Atlantic City to show subscribers the view from New Jersey to the rest of the world. Maxwell Benson wrote to *Fortune* after noticing an advertisement in the *Nashville Tennessean* in which Harrison's maps were featured, referring to him as 'the well known cartographer whose maps are familiar to all readers of *Fortune*'. Benson, writing on behalf of the Nashville Community and War Chest, sought Harrison's advice on choosing a map to educate the city's residents about their geographical relationship to the foreign nations receiving aid from the war chest. As Benson explained to Harrison, he saw

the greatest need for visualizing to the public where this money goes; whom it helps. Local people have got to be made to see this need globularly [sic]. . . . When the campaign starts and the money is reported, I would like to have a scale airplane move out from Nashville on the red-lined routing, with perhaps each \$50,000 advancing our scale airplane a certain distance along this round-the-world route to our needy Allies.¹⁴

Like the dozens of other letters he received, Benson's request reflects Harrison's ability to reorient the public's perception of the world on a map.

Most geographers and cartographers who wrote to Harrison were ardent supporters of his work. Erwin Raisz, a cartographer who also enjoyed tremendous acclaim for his wartime maps, freely admitted that he and his students at Harvard had come to admire the maps popularized by Harrison. He told Harrison, 'you carried a real blitzkrieg into the frontiers of cartography and we less talented people are glad to follow you through the breaks.'¹⁵

Other cartographers, however, were troubled by Harrison's maps. Wellman Chamberlin, staff carto-

grapher for the National Geographic Society, judged Harrison's work as artistic rather than cartographical because it sacrificed mathematical precision and conformality of shape in order to convey a three-dimensional relationship. Even more interestingly, Chamberlin connected what he saw as Harrison's 'unscientific' approach to the propagandistic use of maps in Nazi Germany. Chamberlin believed Harrison's maps subordinated accuracy to dramatic illustration. In associating the resurgence of this type of map with the growth of the Nazi party in the early 1930s, Chamberlin was implicitly questioning the morality of Harrison's 'pictorial' maps. He saw a wide gulf between 'propaganda' maps and what he considered to be the 'objective' mapping pursued by organizations such as the National Geographic Society.¹⁶ Another of Harrison's critics was Charles Colby, then Chairman of the Department of Geography at the University of Chicago, who directly confronted the limitations of Harrison's cartography.

Most of the exhibits which you call maps are not maps at all. A map must have coordinates, that is, the parallels and meridians must be shown. A map should be drawn on a projection and scale which will further its purpose. In most cases a map needs to be so designed that its north-south dimension is parallel to the longitudinal direction of the page. Any deviation from this idea confuses most readers. There are many things which cannot be shown on maps or at least cannot be shown under our present knowledge of cartography. To be effective maps need to be agreeable in color especially in their gradations within a color. Most of your maps have not met these basic considerations. Many of your maps, moreover, have been messy in appearance and confused in detail.¹⁷

One way Harrison responded to both Colby and Chamberlin's criticisms was simply to remind them publicly that one purpose of maps was to elucidate a global sense of geographical relationships, and that all maps sacrificed some degree of precision in their attempt to represent the Earth graphically. Beyond this, through both his maps and his writings, Harrison repeatedly contended that cartography is inherently argumentative, and that all maps are suggestive.¹⁸ Characteristically, he had strong words for the cartographical profession itself:

. . . the representative of one of the big map companies came to me and sounded me out on the possibility of my drawing a couple of hemispheres for a sort of wall atlas which they are about to produce. What he revealed to me—unwittingly perhaps—was the extraordinary timidity of map companies in regard to trying anything which has the slightest tinge of unorthodoxy. He even said they couldn't present an orthographic projection of the Eastern Hemisphere centered any-

where but on the Equator. He gave me several examples of how staid educational directors and professors with influence if [in?] the teaching of geography are able to dictate to the map companies and keep them in the strict groove of cartographical orthodoxy, including of course the greatest sacred cow of all: north should always be at the top of the page. Judging from the reader reaction to Fortune maps, some of which are admittedly whacky, and also the increasingly flexible use of maps by advertisers, the general public is way ahead of teachers and map companies.¹⁹

Harrison often mentioned to friends just how many requests for maps he had received. To him, such requests constituted solid proof that the public was not only willing but eager to challenge established map conventions.

Alongside the growing popularity of the new and unconventional maps that other journalistic cartographers as well as Harrison were drawing was a rising media interest in the problems and principles of mapping in an age of aviation and global war. News articles, advertisements and radio programmes touted the public's fascination with new and innovative maps. As the man most closely associated with this revolution, Harrison himself was the author of a number of articles on the subject and was often invited to speak to citizens' groups, universities, boards of education and the general public. The aviation industry was particularly involved in the effort to 'educate' the public in the new visual truths of the air age. The Consolidated Vultee Aircraft Corporation, for example, printed 350,000 pamphlets entitled *Maps, and How to Understand Them*, which were illustrated with Harrison's maps. By linking its work in aviation with the cutting-edge maps produced for the company, Consolidated Vultee enjoyed increased popularity, and the maps they used advertised and promoted a future of aviation.²⁰

One World

Harrison's three-dimensional views gave Americans a new sense of proximity to the rest of the world. Most Americans who wrote to Harrison reflected a deeply internationalist posture, though whether the maps generated or reinforced these ideals is unclear. Harrison's writings in the 1940s, which were often in collaboration with foreign-policy experts, urged Americans to take up the challenge of world leadership. But his broadly internationalist message contained an array of possible readings.

On the one hand, some people speculated on the effect these new maps would have on the balance of geopolitics. For them, Harrison's maps drew Americans closer to the conflict and closer to the enemy, ultimately heightening a sense of national power and national vulnerability. Alexander de Seversky's *Victory through Air Power*, a popular Book-of-the-Month Club selection in 1943, captured perfectly the fears brought by this new sense of geography.

From every point of the compass—across the two oceans and across the two Poles—giant bombers, each protected by its convoy of deadly fighter planes, converge upon the United States of America. There are thousands of these dreadnoughts of the skies. Each of them carries at least fifty tons of streamlined explosives and a hailstorm of light incendiary bombs. Wave after wave they come—openly, in broad daylight, magnificently armoured and armed, surrounded by protective aircraft and equipped to fight their way through to their appointed targets. Aerial armadas now battle boldly and fiercely, just as great naval armadas used to do in the past, only with a destructive fury infinitely more terrifying.²¹

To be sure, de Seversky was exaggerating. The book was prefaced by a disclaimer from the Book-of-the-Month Club so that readers would not be alarmed by his conclusions, but de Seversky's aim was only to impress on Americans the magnitude of the geographical change war and aviation had brought about. As in his subsequent book (1950), de Seversky used orthographic and polar-centred maps to demonstrate the need for the United States to defend itself against foreign threats coming over the North Pole.²²

On the other hand, Harrison's maps—together with the upheaval of the war itself—could also motivate a strain of internationalism that was highly humanistic. During and just after the war, such writers as Edward Steichen, Carey McWilliams, Wallace Stegner and Wendell Willkie were introducing Americans to a new transnational identity through their textbooks, atlases, photography and other media. This new identity, I would argue, was closely related to Harrison's cartographical perspectives. Consider, for example, Willkie's *One World*, written in the midst of war. The book opens with an air-age map charting Willkie's 49-day flight around the world. The map, together with his narrative, implies a world of easy internationalism.²³ Willkie spoke of men and women from different parts of the world as if they were his hometown neighbours. He crossed racial, ethnic and national lines in order to impress on Americans

the dangers of nationalism in a world so tightly woven together. Unlike the world of the late-nineteenth century, Willkie's mid-twentieth century world was fundamentally plastic. He was celebrating the essential unity of mankind through 'universal' values of health, security and education. Willkie's descriptions of this new world include a number of references to the spatial reorientation brought by war, aviation and technology. In the light of his text, it is unsurprising that Willkie also used a Harrison-style map to represent his optimism about the future.

Similarly, immediately after the war, the *New York Times* commissioned Harrison to create a large wall map based on his oblique orthographic views for the lobby of its premises in midtown Manhattan. This prominent image remained in place for twenty-five years. What is perhaps most striking about the map is the accompanying quotation, taken from a late nineteenth-century poem entitled 'Begin Again': Every day is a fresh beginning / Every morn is the world made new.²⁴ The choice of so optimistic a verse to describe the map reflects the way Harrison's work could be read in a highly humanistic manner.

The design of the lobby at the *New York Times*, like Wendell Willkie's treatise for the future, contrasts strikingly with the tone of de Seversky's geopolitical writings. The difference encapsulates the diverse ways that Harrison's maps could be understood and used. In one sense, they reinforced national divisions, by showing the relationship between belligerents. In another, however, they highlighted the degree to which national borders created a false sense of separation. Although de Seversky and Willkie used the new realities of world geography to support quite different arguments, they were both reflecting a sense of immediacy that can be directly related to the creative cartographic output nurtured by the war. While Mercator's projection—where distance separates the American from all points on the map—affords an easy detachment, Harrison's work forced the viewer to confront the reality of the new proximity of American stewardship at mid-century.

Acknowledgments: I would like to acknowledge the suggestions made by participants in the Special Session on Theory at the 17th International Conference on the History of Cartography in July of 1997, where ideas in this essay were presented. Thanks are also due to the anonymous referees at *Imago Mundi*.

Paper read at the 17th International Conference for the History

of Cartography, Lisbon, July 1997. Revised manuscript received November 1997.

NOTES AND REFERENCES

1. See Alan K. Henrikson, 'The map as an "idea": the role of cartographic imagery during the Second World War', *American Cartographer* 2 (1975): 19–53. Mark Monmonier gives some attention to journalistic cartography generally during the war but has little on Harrison specifically (Mark Monmonier, *Maps with the News: The Development of American Journalistic Cartography* (Chicago, University of Chicago Press, 1989)). On the production of maps for President Roosevelt during the Second World War, see John B. Garver, 'The President's map cabinet', *Imago Mundi* 49 (1997): 153–57.
2. Richard Edes Harrison, 'War of the maps', *Saturday Review of Literature* 26 (August 7, 1943), 24.
3. Richard Edes Harrison to editors of *Fortune*, 20 October, 1942 (in Richard Edes Harrison Collection, Geography and Map Division, Library of Congress).
4. Although Harrison liked to position himself outside the academic profession, he was a respected mapmaker by the early 1940s and corresponded regularly with a number of geographers and cartographers. A member of the Royal Geographical Society, he also taught cartographical design at a number of universities in the northeastern United States. Much of the information in this paper relies on my interview with Harrison, New York City, 14 October, 1993.
5. Harrison first used the polar projection in April 1936, when *Fortune* printed his map of world airways that passed around the pole. But the 1941 edition of the polar projection—with a modified version following in 1942—reached a larger audience and dealt explicitly with political relationships. 'The world divided', *Fortune* (August 1941): 48–49; 'One world, one war', *Fortune* (March 1942) [insert]. These maps were also printed, along with an explanation of Harrison's approach to cartography, in one of the many articles that popularized him during the war: see 'Perspective maps: Harrison atlas gives fresh look to old world', *Life* (February 28, 1944): 56–61.
6. Textbook image produced by Consolidated Vultee Aircraft, for Leonard Packard, Bruce Overton and Ben Wood, *Our Air-Age World: A Textbook in Global Geography* (New York, Macmillan, 1944).
7. Harrison's most notable and frequently cited maps are in *Fortune* for November 1935, April 1936, September 1936, February 1937, July 1940, July 1941, August 1941, March 1942, May 1943, and October 1945. On his perspective maps as a 'missing link' between the globe and traditional maps, see Harrison, 'The face of one world: five perspectives for an understanding of the air age', *Saturday Review of Literature* (July 1, 1944): 5–6.
8. I would like to thank Jon Leverenz, Andrew S. Cook, Ronald Grim, and Ralph Ehrenberg for their help in deciphering Harrison's production techniques.
9. The willingness of journalistic cartographers to depart from the then-current styles of lettering and colouring had important consequences for the look of post-war cartography. See Susan Schulten, 'The transformation of world geography in American life, 1880–1950' (University of Pennsylvania, Arts and Sciences Faculty, Ph.D. thesis, 1995), especially chapter 9, 'Maps in the age of war and aviation.'
10. Significantly, a publication like *Look at the World* had been proposed a few years earlier, after the enthusiastic

reception of the 'Atlas for the U.S. Citizen', but the idea for a commercial atlas based on these maps had been rejected by three publishers. See Richard Edes Harrison's notes, uncatalogued, in Harrison Collection (see note 3).

11. Letter from M. Lincoln Schuster, dated 26 January, 1945, to Richard Edes Harrison, in Harrison Collection (see note 3). Simon and Schuster released their own *War Atlas for Americans* in early 1944, and Erwin Raisz's *Atlas of Global Geography* also did well in the same year. All of these atlases emphasized the effects of aviation and war on geographical perception. On the consumer ratings of these atlases, see 'Maps', *Consumer Reports* 8, no. 11 (November 30, 1943): 291–95.

12. Figures on Army orders of Harrison maps in uncatalogued notes in Harrison Collection (see note 3). On the use of these maps to train pilots, see Henrikson, 'The map as an "idea"' (see note 1).

13. For example, Lockheed, British Information Services and the Milprint Corporation all submitted requests for special maps, while Pan American Airways, Douglas Aircraft, *Aero Digest* and Metro-Goldwyn-Mayer Productions requested permission to use Harrison's maps and designs for their own purposes.

14. Maxwell E. Benson, Public Information Director of the Nashville Community and War Chest, in a letter to Richard Edes Harrison, 30 June, 1943, in Harrison Collection (see note 3).

15. Letter from Erwin Raisz at the Institute of Geographical Exploration, Harvard University, to Richard Edes Harrison, dated 27 May, 1940, in Harrison Collection (see note 3).

16. Wellman Chamberlin, 'The round earth on flat paper: a description of map projections used by cartographers' (Washington, DC, National Geographic Society, 1950 [1947]), 52–55.

17. Letter from Charles Colby to Richard Edes Harrison, dated 1 October, 1941, in Harrison Collection (see note 3).

18. Richard Edes Harrison and Hans W. Weigert, 'World view and strategy', in *Compass of the World: A Symposium on Political Geography*, ed. Hans W. Weigert and Vilhjalmur Stefansson (New York, Macmillan, 1944), 12.

19. Richard Edes Harrison to George B. Cressey, Department of Geology and Geography, Syracuse University, dated 8 December, 1941, in Harrison Collection (see note 3).

20. *Maps, and How to Understand Them*, prepared by Richard Edes Harrison, J. McA. Smiley and Henry B. Lent (New York, Consolidated Vultee, 1943).

21. Alexander de Seversky, *Victory through Air Power* (New York, Simon and Schuster, 1942), 7.

22. This book, too, contained a disclaimer, this time by the publisher.

23. Wendell Willkie, *One World* (New York: Simon and Schuster, 1943). David Hollinger has pointed to this transnational theme in wartime and post-war literature in his *Postethnic America* (New York, Basic Books, 1995), chapter 3. See also Carey McWilliams, *Brothers under the Skin* (Boston: Little, Brown, and Company, 1942), which contrasted America's role in combating racism abroad with its need to confront discrimination at home. Similarly, Wallace Stegner's *One Nation* (Boston, Houghton Mifflin, 1945), written together with the editors of *Look* magazine, focused on the racial and ethnic communities within the United States to explore the poverty and racism they faced. And, as I have argued elsewhere, Edward Steichen's highly popular photographic exhibit entitled 'The Family of Man' also suggested that Americans were united with their neighbours around the world through a shared human identity.

24. Quotation from 'Begin Again' by Sarah Chauncey Woolsey, written under the name of Susan Coolidge (1889).

Richard Edes Harrison et son défi à la cartographie américaine

Les cartes de facture nouvelle des années 1940 de Richard Edes Harrison représentent en elles-mêmes une critique de la cartographie américaine antérieure. Ses techniques s'opposent à toutes les normes et créent un nouveau type de l'apparence et de la forme du Monde sur une carte. Harrison dessinait ses cartes de telle sorte qu'en même temps elles attirent le regard et sont riches politiquement, faisant ressortir l'imminence de la guerre tout en conservant un aspect artistique élégant. On étudie dans cet article comment il a publié ces cartes et pourquoi elles ont enthousiasmé la population.

Richard Edes Harrison und die Herausforderung der amerikanischen Kartographie

Die Karten von Richard Edes Harrison aus den 1940er-Jahren sind entscheidend für die Entwicklung der amerikanischen Kartographie des zwanzigsten Jahrhunderts. Er verwarf konventionelle Methoden und setzte neue Maßstäbe für die kartographische Präsentation der Erdoberfläche. Harrison konzipierte Karten, die sowohl optisch ansprechend als auch politisch wirksam sein sollten, die die Unausweichlichkeit des Krieges zum Ausdruck brachten, ohne auf eine ausgefeilte künstlerische Darstellungsweise zu verzichten. Der Beitrag untersucht, wie Harrison diese Karten herstellte und warum sie geradezu elektrisierend auf seine Zeitgenossen wirkten.