AIRWAYS TO PEACE Sequence of Exhibits for

SECTION II, How Man Has Drawn His World

This section shows how man has translated his knowledge of the world into disgrams (maps) and how he has altered these diagrams with each increase in knowledge. Basic inventions such as steam-powered ships and aircraft have demanded ever greater accuracy of his charts of the world.

The world is a sphere and can never be recorded on a flat chart without distortion. A globe being the only completely accurate map, all other maps are useful only for certain limited purposes. Therefore, to understand global geography we must understand the purpose and limitations of the types of maps we use.

A Text panel

AA Ga-Sur clay tablet. 2500 B.C. 2½" square. Mounted on pedestal. Accompanied by panel 11" by 18" horizontal, showing diagram of map and enlarged photo. (Semitic Museum, Harvard University)

AAA Marshall Islands chart. Model reproduction, approximately 30" square. Mounted on panel. (Museum of Natural History)

B Homer's map of Mediterranean World. 900 B.C. 18" diameter. Disc with glass dome, mounted on pedestal. Total height approximately 50" (Renner diagram).

C Anaximander's world. 611 B.C. Colored photostat of drawing. 18" square with margin - panel.

D Ptolemy map. 150 A.D. Color reproduction from Fortune, 11" by 28" frame. (Courtesy of Dr. A. S. W. Rosenbach)

E Roman Road Map. (Pentinger Tables). Color reproduction. Total length, 13' 8" by 10" horizontal. Mounted on shelf panel. (American Geographical Society)

EE Beatus Biblical map. 950 A.D. Color reproduction, 21½ by 15" horizontal. Framed. (American Geographical Society)

F Leardo world map. 1452. Color reproduction. 29" by 31½" vertical. Framed. (American Geographical Society)

G Portolan chart. 13th-15th centuries. Photograph of original. Panel. (Hispanic Society)

AIRWAYS TO PEACE--Exhibits for SECTION II--page 2

H Behaim globe. 15th century. Facsimile model. Approximately 48" high.

III Columbus' known world, before 1492, with picture of Santa Maria. 30" by 24" horizontal. (Construction)

I Turkish navigation chart. 1513. Full color reproduction. 25" by 35" vertical. Framed. (American Geographical Society)

J Mercator's cylinder projection. 1599. 45" wide, 24" high. Panel. (American Geographical Society)

~~JJ Phillips Mercator projection. (Modern) 4' by 3' horizontal. Panel. (Hammond)~~ (out)

K Lumarith model of Mercator cylinder. (Life Magazine). On pedestal.

KKK 12" globe and Mercator map to scale, showing exaggerated dimensions of continental extremes such as Greenland and Australia. (Construction)

KKKK Harrison Conic Projec (42" horiz). Eurasia

KK L Panel with text and graph of historical development of maps, and 16" globe and plane models mounted on lumarith Great Circle bands (LL) Symbolizes world-girdling flight and introduces polar projection map series. (Construction)

Pedestal with model of conic projec.

M Glareanus polar projection. 1510. (Photostat)

N Mercator polar projection. 16th century. Color engraving. 35" wide, 19" high. Framed. (American Geographic Society)

O Cassini polar projection. 1696. Color reproduction. 25" square. Framed. (University of Michigan)

P Stereographic polar projection. (Stefansson) 1921. 12" by 17½" vertical. Framed. Macmillan Company.

Q Grapefruit peel model. 12" by 30" wide. Demonstrates Goode polar projection. Panel. (Construction)

QQ Goode's Lambert projection (polar equal area). Color to be added. 14" by 21" wide. Panel. (The University of Chicago Press)

R Polar projection with world air routes. 11' diameter; mounted on wall.

RR Parasol device and drawing by Renner to demonstrate polar projection.

RRR Harrison gnomonic polar projection. (Construction)

RRRR Riddiford device, showing transition from globe to polar projection.

RRRRR World Divided. Harrison polar projection. First usage of polar azimuthal equidistant to show relationship of political forces.

S Dymaxion model. Ca. 12" diameter. Suspended. (Buckminster Fuller)

T Fisher Icosahedron. Ca. 9" diameter. Mounted on stand. Animated. Flat, mounted form suspended behind standing model. (TT)

U Betts's folding globe. Ca. 15" diameter.

AIRWAYS TO PEACE

Sequence of Exhibits for ~~Part~~ Section II, How Man Has Drawn His World

A Ga Sur. Clay tablet, cuneiform; 2500 B.C. Oldest map on record. 2½" square. (Semitic Museum)

A1 Marshall Island chart. Photographs, back and front. Framework diagram of ocean currents and coral reefs, made of reeds and seashells. (Museum Natural History)

B Homer's map of Mediterranean world. 900 B.C. Disc-shaped world with glass dome. 18" diameter. ~~Supported by Atlas.~~ Total height approximately 50" ~~(construction)~~.

C Anaximander's world. Photostat of drawing. 611 B.C. Diagram of disc and related heavenly arcs. (Blow up to 18" square with margin.)

D Ptolemy map. 150 A.D. Color reproduction from Fortune, ~~or photostat.~~ 11" by 28." Ptolemy represents summary of Greek geography, the founder of modern principles of cartography.

E Roman Road map (Peutinger tables). Color reproduction. Total length, 13' 7½". 10" height. Shows distances and turns; ignores topography.

EE Biblical map according to Beatus 950 - 21½" x 15" hgt.

F Leardo map of world. 1452. Full color reproduction. 29" by 31½" vertical. (American Geographical Society) Monk's map with improvement on biblical description of world.

G Portolan chart. 13th century. Facsimile of sheepskin map. In color. 12" high, 18" wide. Coastlines based on accurate observation. Celestial plotting lines. (Hispanic Society Museum)

H Behaim Globe. 15th century. Facsimile model. Approximately 48" high. (American Geographical Society)

HH Columbus' known world, route and picture of Santa Maria. Approximately 20" wide, 12" high. (Weber-Costello)

I Turkish navigation chart. 1513. Full color reproduction. 25" by 35" vertical. Based on Columbus' map seized by Turks along with other Spanish booty.

J Wright adaptation of Mercator. 1599. Photostat. 4" enlargement. 15" high. (New York Public Library)

K. British Empire - mariners map

L Mercator cylinder projection. Approximately 15" high, 8" wide. Demonstrates disparity between Mercator projection and globe. (Life)

LL 12" globe + small Mercator

~~KK Figure of earth in Mercator projection. Drawing. Demonstrates disparity between Mercator projection and globe. Approximately 15" high by 18" wide. (Harrison)~~

LLL - Greenland demonstration - (or Australia)

~~L Homolographic projection. (Goode.) Ocean Basin map. (Rand McNally)~~

P Grapefruit peel model. 12" by 30" long. Demonstrates Goode projection. (Construction.)

M - Text panel

V. - Air age ~~symbol~~ globe + planes

AIRWAYS TO PEACE--2 Gerardus 1510 - 1st polar projec. (azimuthal equidis.)

M British Empire. Mercator projection. 5' or 6' long. (Hammond Map Company)

where? O Mercator Polar Projection. 16th century. Color engraving. 35" wide by 19" high, including margins. ~~Earliest polar projection map.~~ Interesting in its inaccuracy. Shows pole as rock with four rivers emanating. (American Geographical Society) Amer. Geog. Soc.

One of the

OO Cassini Polar Projection. 1696. Color reproduction. Earliest accurate polar projection. Approximately 25" square, including margins. (William Clements Library) Univ. of Mich.

OOO Steffanson polar projection. 1925. Photostat. Original size 12" by 17½" vertical.

Orange peel

OOOO Goode's Polar Equal-Area projection. 1939. Linear drawing. 14" by 21" horizontal. (The University of Chicago Press)

Hammond Ridgford folding polar profic. map

P 10" sphere symbolizing world-girdling flight. Plane models mounted on lumarith Great Circle bands. Black globe. Light gray land masses. (Construction)

R Dymaxion model. Suspended. (Life or construction)

S Fisher model. Suspended. (Yale or construction)

Q Polar Projection Blow-up. Linear. ~~12' square~~ diam. ~~[illegible]~~.

QQ Parasol polar projection demonstration. Harrison map. Renner drawing and map - mounted parasol. (Construction)

~~? SS Hammond Ridgford folding polar profic map~~

QQQ Harrison Polar Projection. 26½" wide by 21½" high, including margins. Gnomonic map. All straight lines are Great Circle routes and show distances accurately. (Fortune)

T Betts

omit U Geared hemispheres. 14" by 26" table model. (Construction)

(end of exhib.

Suggested alternates:

Babylonian world map. Cuneiform. Photostat. 4" square. And reconstruction drawing, 4" square. (New York Public Library)

Hereford World Map. 13th century. Color reproduction. Biblical interpretation of the world; repudiation of scientific factual data. 26" by 32" vertical. (American Geographical Society)

Columbus Map. Color reproduction. 22"by 13½." Portolan chart reputed to have been used by Columbus. Black and white, actual size 44" by 27" (New York Public Library)

Juan de la Cosa chart. Color reproduction. Portolan Chart drawn by Columbus' pilot; shows America. 12" by 16" (New York Public Library)

Archimedes' model of globe. Drawing. (Encyclopedia Britannica, 1911)

Map sources: -

Dr. Ristow - Pub. Lib. - Br 9-1500 Rm. 312
Dr. Renner - Teachers Col.:
R.E. Harrison - 22 W. 48 - Br 9-2683
12:30 La 4-8659 Chas. Shiverick - 160 S. Middle Neck Rd, Gr. Neck
Fortune Mag. - circa, 1690 Bleau Holland
(Chinese)
1712 woodcuts - battle maps of low lands
2 Dailey Cangela + U.S.
1720 - London, Liberty, Antwerp

Nystrom Maps Co. - 200 5th Ave
Denoyer - Geppert - 2929 Bway - Un 4-6818
Rand McNally - 111 8th Ave Ch 3-4100
Hammond Map. Mr. Frazin 1 E. 43 - Mu 4-2745
Mr. Schmidt

WEAF global war map (R. McN.)
Willkie route - (Plane Talk)

Marshall Island Mus. Nat. Hist. - Ella Weitzner Assoc. Cur. Anthro
Univ. Pa. Mus. - J. Alden Mason - Chf. Archaeol.

letter to: TRENTON

Director
Trenton Mus-

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June 3, 1943

DEPARTMENT OF MINES AND RESOURCES
SURVEYS AND ENGINEERING BRANCH
HYDROGRAPHIC AND MAP SERVICE
OTTAWA, CANADA

CAN YOU SUPPLY AT OUR EXPENSE SIX COPIES OF YOUR NORTHERN HEMISPHERE MAP

XXX 1941 NORTH POLE PROJECTION

MONROE WHEELER
MUSEUM MODERN ART

& dimensions -

Letter to: TRENTON

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Library Has Ma
Over 500 Yrs. Ola

Dept

The New York Public Library has obtained the only known copy of a map of the world, drawn on a projection of a full globe, antedating the voyages of Columbus, it was revealed at the library yesterday.

The map was used to illustrate the book, Deutsche Ptolomaeus, published in Nuremburg some time between 1436 and 1490.

Gifts to the library during 1943 totaled more than $2,000,000 and 203,285 literary gifts.

Martha Wins a Divorce

By the Associated Press.

EL PASO, Texas, Feb. 4.—Judge Xavier Rosas Ceballos of the Juarez (Mexico) Civil Court yesterday granted Martha Raye, fil
comedienne, a divorce from
third husband, Capt. Ne
of the U. S.

2/7/44

10/27/43

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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TRENTON

Director
Trenton Mus.

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Q55B RL; NL

TDB CAMBRIDGE MASS OCT 26 1943

MONROE WHEELER,

MUSEUM OF MODERN ARTS, 11 WEST 53RD , NEWYORK, NY

SEMITIC MUSEUM GLADLY EXTENDS LOAN OF GASUR MAP FOR EXHIBITION OUTSIDE OF NEWYORK

ROBERT H PFEIFFER

946PM

told Miss Sytz! 10/27/43

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

& dimensions -

Letter to: TRENTON

Director
Trenton Mus-

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WANT A REPLY?
"Answer by WESTERN UNION" or similar phrases may be included without charge.

Mr. Robert H. Pfeiffer
Semitic Museum
Harvard University
Cambridge, Massachusetts

Civil Aeronautics Administration of the U.S.Government wants entire AIRWAYS TO PEACE exhibition for Washington. SanFrancisco Museum would like it thereafter. Would Semitic Museum be willing to extend loan of Ga-Sur map for exhibition in other cities. The Semitic Museum of course receives full credit for loan. Kindly wire answer collect, Museum of Modern Art, 11 West 53rd Street.

MONROE WHEELER

permission wire received 10/27/43 - ~~tod~~ - Miss Dudley B - office

4 dimensions -

letter to:

TRENTON

Director
Trenton Mus.

~~We want the Strabo map depicted on cover of a recent catalogue for We are informed by Mr Ristow of NY Pub. Lib.~~

Write for catalogue depicting Strabo map & dimensions -

Charge to the account of _____ $ _____

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SERIAL		DEFERRED	
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JUNE 19, 1943

MR. RIDDIFORD
WASHINGTON, D. C.

HELMUTH BAY URGES INCLUSION OF YOUR POLAR PROJECTION UMBRELLA DEVICE IN MUSEUM'S GLOBAL GEOGRAPHIC EXHIBITION ENTITLED AIRWAYS TO PEACE. COULD YOU SEND IT EXPRESS COLLECT FOR CONSIDERATION?

MONROE WHEELER

Airways to peace

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DAY LETTER		URGENT RATE	
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JUNE 9, 1943

MR. JOSEPH TRATNYEK
SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

PLEASE XXXXXXX HIRE MAINTENANCE MEN TO MOVE CASES AND SEND GA-SUR MAP TO THE MUSEUM OF MODERN ART, 11 WEST 53 STREET, NEW YORK CITY, BY EXPRESS COLLECT.

ROBERT H. PFEIFFER

arrived June 15
O.K.
Receipt sent. #43.1267

Charge to the account of _____ $_____

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WANT A REPLY?
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MAY 27, 1943

MR. ROBERT H. PFEIFFER
SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

DELIGHTED TO HAVE CAST OF GASUR MAP. PLEASE SEND

EXPRESS COLLECT AT YOUR CONVENIENCE.

MONROE WHEELER
MUSEUM MODERN ART

Lowel Page

~~MAPS FOR A NEW AGE~~

2 pages

MAPS FOR A NEW AGE

The aviator did not have to have new types of maps. Even before Mercator published the projection which has served the mariners so well, the most useful projections for the conquest of the air had been discovered. But they had been neglected for some time.

~~Xxxxxxxx~~ Most adults have learned geography from Mercator maps, and it is hard to readjust the eye and the imagination to other maps better suited to the air age.

If you understand the purpose for which each map is made, and remember that no flat map can portray the world accurately, you will not be misled.

When in doubt, look at a globe, not a map.

TO THE VISITOR ETC.

Plan - like a fish lives in an element which we have only started to explore etc.

STRATEGY - MACKINDER HARRISON

Constitution Vattel credit. — Wright Kelly Hook.

1 A Spinal — credit on Mennyn and Hook.

GENERAL LABEL FOR MAP SECTION Metternich — [illegible]

The only true map of the earth is its replica in miniature, A Globe.

To transfer a sphere to a flat surface necessitates deformation in one way or another, but each flat map is made to serve some specific purpose.

If you understand the purpose of a given map and use it accordingly it will not mislead you. But there is a disadvantage in the general use of a Mariner's map like Mercator's projection for it fails to show the arrangement around the North Pole of three-fourths of the land on our planet.

(2)

white 10"

What is a GREAT CIRCLE?

This plane is so fixed that in any position it bisects the globe. Where the plane cuts the surface of the sphere (red line), that is a great circle. To find the great circle between two points, manipulate the plane so that it passes through both of them.

The great circle is of increasing importance in the world today because it is the shortest route possible. A ship has to sail around promonotories; a train has to follow tracks; the airplane does not. Following the great circle it can fly from point to point with little interference from geography.

√ white 10"

7

ANTIPODES

If you dig a hole straight down in the earth you will not reach ~~com to~~ China.

To find the approximate antipode (opposite point) of any point on the earth, sight through that point and along the red bead that marks the center of the earth.

(20) white 10!

STEREOGRAPHIC PROJECTION OF THE NORTHERN HEMISPHERE

On a rectangular map the polar regions appear only as an indeterminate and seemingly useless upper edge; whereas as a matter of geographical fact they are the center of the northern hemisphere. Not until after the First World War did anyone begin to grasp the importance of this.

The caption of this twenty-year-old map by the Arctic explorer Stefansson contains some interesting and prophetic sentences. It is a stereographic projection, ~~more commonly used to show the division of the hemispheres east and west. — that as an azimuthal but not equidistant~~ one of the six ~~that is~~ azimuthal ~~but not equidistant~~ projections — more commonly used to show the eastward and westward division of the hemispheres. Its chief property is its veracity of shape, whereas the true ~~equidista~~ azimuthal equidistant projection has veracity of distance as well.

22

UP-TO-DATE AZIMUTHAL EQUIDISTANT PROJECTION: L942.

This map, centered on the North Pole, is based on Glareanus' projection of 1510 (see Map 17). Its ~~great practical~~ merit and utility for us today lie in the fact that all the power countries of the modern world ~~today~~ lie in the northern hemisphere; and the true general relations of one country to another appear more clearly on a continuous map than on one in which the arbitrary interposition of edges interfere with ~~out~~ our geographical understanding.

Like all flat maps it has certain limitations and inaccuracies. Note, for example, that of the great circles shown on it only those running north and south appear as straight lines. All the rest seem to curve outward from the Pole. Note also the rapid increase ~~of~~ in distortion south of the Equator.

Lent by R.E.Harrison.

22

UP-TO-DATE AZIMUTHAL EQUIDISTANT PROJECTION: L942.

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Lent by R.E.Harrison.

22 22A

A MAP CAN BE MADE TO TELL A PARTICULAR TRUTH

Although no flat map can be universally correct, it is possible to construct one satisfactorily for a specific purpose. The purpose and the problem in this instance was to show the distances from Washington to several other world capitals, and the direct great circle routes to them. It is an azimuthal equidistant projection, and it gives the right answers to the limited questions for which it was designed.

Note what happens to these same great circles on the two adjacent maps — Polar Azimuthal and Mercator — which were not made for this purpose.

Maps by R.E.Harrison, courtesy Consolidated Vultee Corp.

36

write 10"

GNOMIC MAP

This is an Azimuthal Projection used extensively in navigation to supplement Mercator. It is ~~highly~~ extremely distorted but very useful for the exclusive purpose of finding great circles. Any straight line on it in any direction is a true Great Circle. It is accurate only in this sense; it cannot be used to measure distances. ~~in the measurement of distances~~

It is indispensable in ~~avit~~ aviation, for which it is usually centered on one or another of the oceans. ~~the one ocean or another.~~

Map by R.E.Harrison, courtesy Time, Inc.

(Polar Projection with World Air Routes?)

Mrs. Foster
Aviation

The total mileage of air routes now being operated by the Army Air Transport Command and its ~~xxxxxxx~~ civilian contractors in the United States and throughout the world is ~~in the neighborhood of 150,000~~ more than 90,000 miles, being extended as the need arises. This includes more miles of air routes in the United States than all our airlines operated prior to the war, which was 40,000 miles. An estimated ~~500~~ transport planes are in use, manned and serviced ~~by some 7,000 men in addition to many thousands of cargo handlers and~~ by more than 50,000 men, in addition to a large supervisory personnel. Air routes are established, airway aids are in operation, and airports are built in Africa, India, Asia and South America, and will be available for use by all nations after the war. A worldwide radio communication system is in operation. ~~More than 500~~ Several hundred trips a week across the Atlantic are being flown. ~~In normal times these planes could carry nearly 10,000 passengers.~~ Many of our air transports have flown round the world in performance of routine duties.

All of this is in addition to the ferrying of strictly combat planes to world battle fronts, a job requiring its own airways, airports and flight aids, and all proceeding along routes kept secret by the military. All these will be utilized for worldwide peace-time air transport.

12 trips in 13 days across Atlantic. Round trip across South Atlantic in 24 hours. Dakar to Natal.

Dr Walter Ristow
N.Y. Public Library

A A. The earliest maps, as might be expected, are of small areas, covering in many cases boundary limits of property, as does this ancient Babylonian map. The oldest known map, constructed about 2500 B. C., this small clay tablet is believed to show an estate of a large land owner in the territory now known as Iraq.

A A A-1. The desire and need for maps is common among all primitive peoples, who make crude maps from whatever materials available to them. This chart from the Marshall Islands is constructed from reeds and seashells, and plots islands, corral reefs, and ocean currents.

B. We have no surviving examples of maps used by the early Greeks, but from various writings of these learned ancients, we are able to reconstruct their conception of the earth they inhabited. Thus to Homer, living about 900 B. C., the world was a flat disk, surrounded by a circular ocean stream, and roofed ~~over~~ with the dome of ~~the~~ heaven~~s~~.

C. Anaximander is credited with constructing the first Greek map in which he incorporated the ~~wonderly~~ geographical conceptions of the sixth century B. C. He retained the flat circular frame encircled by Oceanus, but his oecumene is based upon more fact than that of Homer's day. The land area is divided into three divisions by the Mediterranean sea whose outlines are relatively accurate. Anaximander's map has not come down to us, but we have descriptions of it in later Greek writings.

D. Claudius Ptolemy, who lived at Alexandria about 150 A. D., is one of the great cartographers of all time. He summarized the cartographical and geographical knowledge of his Greek prede-

cesors, and produced an atlas of 28 maps. His world map was constructed on scientific principles and included latitude and longitude grids. The projection used resembled the conic type, and extended over 180° of longitude. Neglected and forgotten for over 1200 years, Ptolemy's Atlas was rediscovered and translated into Latin early in the fifteenth century, and exerted a profound influence on pre-Columbian cartography.

E. The theoretical and philosophical Greeks were interested in solving the problems of the shape and size of the earth. The practical Romans, on the other hand, were more concerned with holding together the Empire. It is natural, therefore, that the best surviving example we have of Roman cartography is an extensive road map. The map is done in a number of sections totalling 21 feet in all. No attempt is made to show true directions and distances, but towns, castles and other landmarks are portrayed in colorful and pictorial detail.

add to G.H.H.

E.E. BEATUS

F. During the Middle Ages scientific geography and cartography were in disrepute, and all of the learning was confined to the monasteries. The idea of a spherical earth was regarded as heretical, and the ~~monkish~~ map-makers turned to the Scriptures, rather than to the discoveries ~~and experiences~~ of the past, for their conception of the world. Maps followed three general patterns, rectangular, oval, and round. Jerusalem usually occupied the center of the world, with the Garden of Eden in the east, which was at the top of the map. The Leardo map, dated 1452, was drawn near the end of the period known as the Dark Ages, when some of the scientific knowledge of the past was finding its way into western European minds.

G. Contemporary with the inaccurate and unscientific scriptural maps of the Middle Ages, there was produced a series of unusually accurate maps, or rather, charts. Perhaps ~~descended~~ derived from the periplus, or book of sailing directions, used by the early Greek navigators, these charts outlined with some precision the shoreline of the Mediterranean Sea, including bays, inlets, landmarks and other nautical information. The influence of the mariner's compass is apparent in the fact that most of the charts are oriented with north at the top. No projection was used, but a network of directional lines radiating out from various centers, perhaps aided in laying out sailing routes. There are a few charts in existence dating before 1300, but they were more common during the fourteenth and fifteenth centuries. Portolan charts were frequently drawn on parchment, and the size of the goat or sheepskin determined the size of the chart.

H. Behaim Globe. The leading scholars of the fifteenth century were acquainted with the writings of the ancient Greeks, and many of them accepted the idea of a spherical world. As concrete evidence of this we have the globe of Martin Behaim of Nürnberg, constructed in 1492, and the oldest surviving terrestrial globe. Although the globe shows the explorations of the Portuguese around Africa, Behaim still leaned heavily on the cartographic ideas of Ptolemy. Columbus very likely had seen Behaim's globe, and might possibly have had a copy on his memorable journey of discovery in 1492.

HH. Columbus' known world - (Weber-Costello) - [New York Public Library does not have a copy of this and I do not recall this specific map.]

I. During the Middle Ages when scientific cartography in Western Europe was stifled within the confines of the monasteries, the geographical heritage of the Greeks was preserved by the Moslem peoples in the eastern Mediterranean area. They constructed celestial globes, and improved upon the map of Ptolemy, whose works were familiar to them.

J. Gerhard Mercator produced, in 1569, the world chart on the cylindrical projection which still bears his name. Designed for use in navigation, the projection did not become popular until Wright, an Englishman, used it for a world map in 1599. This is believed to be the map referred to in Shakespeare's "Twelfth Night" when Maria says of Malvolio that "he does smile his face into more lines than are in the new map with the augmentation of the Indies."

J)

K. This is one for Harrison.

KK. Ditto.

L. Ditto.

M. Ditto.

N. Ditto.

O. Mercator Polar Projection - 16th century - (I assume this reference is to the polar projection inset on the chart of 1569) - Although not the earliest example of the use of a polar projection, the inset on the chart of 1569 is of interest as indicating recognition by Mercator of the possibilities of the projection. In its inaccuracy in the polar regions it is

typical of the maps of the sixteenth and seventeenth centuries.

A. In fact it is only in the present century that explorations of the north and south polar regions have provided data for relatively accurate maps.

OO. With a wealth of new scientific data at his command, Jean Dominique Cassini constructed a remarkably scientific and accurate map on the floor of the Paris Observatory in 1682. Drawn on the Polar Equidistant Azimuthal projection, Cassini's map was later printed separately and in atlases. This reproduction is from the 1696 edition of the map, in the collection of the William Clements Library.

OOO. For Harrison.

OOOO. " "

P. " "

Q. " "

R. " "

S. " "

SS. " "

T. " "

U. " "

ALTERNATES

Babylonian world map. The early Babylonian idea of a flat disk world encircled by the ocean stream was similar to the Greek concept. The projections leading out from the main center of the map form "bridges" to the heavenly ocean or sky wherein were pictured the animal constellations. Among the later Babylonian contributions to cartography is the division of the circle into 360°. Accepted by Ptolemy for his world map, the 360° grid has been adopted for most world maps.

Hereford World Map. The Hereford World Map, constructed by Richard de Haldingham about 1280, is an example of the cartography during the end of the Middle Ages. By this period the ancient knowledge of the Greeks was finding its way into western Europe, but the maps still have a distinct Scriptural foundation as is apparent in this map. Centered on Jerusalem, the Hereford Map is reasonably accurate in relative location of places, but it is sadly out of scale, and outlines are badly distorted, even in the Mediterranean area, which is accurately drawn on the Portulan charts of contemporary date.

Columbus Map. There is no record to indicate what maps Columbus used on his journey of exploration, and claims have been put forth for several examples of the late fifteenth century. It is quite possible he used this map, or maps of the same type, for as an experienced navigator he was undoubtedly acquainted with the charts produced by the Italian and Catalan map-makers. This is a fairly typical example of the Portolan charts of the period of Great Discoveries.

Juan de la Cosa chart. Oldest surviving map to show the discoveries of Columbus is this manuscript chart by Juan de la Cosa, who accompanied Columbus on one of his journeys to America. The la Cosa map is really

just an enlargement of a Portolan chart to include the new discoveries. The Portolan frame, as well as the Ptolemy world, were thus patterned to meet the problem of the enlarged world.

Archimedes Globe.

Beatus map. In 776 A. D. St Beatus, a Spanish monk constructed a world map based upon the old "Orbis Terrarum" of the Romans. Done in typical fanciful Scriptural style, the map was designed to show the spread of Christendom. It is of interest cartographically because it was widely copied by the other monkish map-makers of this period. There are at least ten surviving maps which show the Beatus influence, although there are certain variations added to each. Thus, some are oval, some round, and still others oblong, in accordance with which Scriptural passage the cartographer was using as his authority.

Glareanus. Information about Glareanus is very scanty. He was born Heinrich Loritz at Glarus, Switzerland, in 1488, but he is better known by the latinized name of his birthplace, Glareanus. He is best known as a humanist poet and for his contributions to theoretical music, and in 1512 he was named poet laureate by Emperor Maximilian I. He left Switzerland in 1529 to become professor of History and Poetry at Freiburg, Germany, a post he held until 1560. He died at Freiburg in 1563. Glareanus constructed several maps, among them the one dated 1510 which is on the equidistant polar projection. The map includes projections centered on both the north and south pole, and is believed to be the first instance of the use of the polar projection. Mercator may have based his polar region maps (insets on his map of 1569) upon the 1510 map of Glareanus.

Airways to Peace
MV/C - Amer Geog Soc

COPT TO MISS DUDLEY

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

19 BROADWAY

all the rest of copies is in
whole file general office
Airways to Peace

December 4, 1944

Airways to Peace

THE MUSEUM OF MODERN ART

Date December 20, 1944

To: MISS DUDLEY
Copy to MISS COURTER

Re: American Geographical Society maps in AIRWAYS

From: H. Ward

Miss Courter tells me that Baltimore wants to keep the AIRWAYS show until January 14th and that, therefore, the maps cannot be returned to the American Geographical Society as soon as we had planned. I believe that I said in my letter to Miss Yonge that we hoped to make all the returns in January which, with a little luck, would still be possible under the new arrangement. I rather hesitate to write her again about it if it can be avoided. Do you think that we could rush the maps to her as soon as they got here without too much extra trouble, or do you think I should write a letter of explanation? Perhaps I could write when and if it looks as though we couldn't make it on the nose.

Rec'd 2/11/45

HW

showing there on December 30. The material will then be shipped to New York and we hope to make all the returns to lenders during January.

I hope very much that this arrangement will be satisfactory to you. If not, please let me know and we shall find out whether it will be possible to withdraw the maps from the Baltimore showing.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

HW:w

Airways to Peace
MV/C - Amer. Geog. Soc

COPT TO MISS DUDLEY

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

19 BROADWAY

all the rest of corres is in whole file general office
Airways to Peace

December 4, 1944

AIRWAYS to WASH

THE MUSEUM OF MODERN ART

Date ~~December 11, 1944~~

To: Miss Ward

Re: Airways to Peace

From: Miss Courter

Helen: Baltimore wants to keep the Airways show on into January until about the 14th. As far as we are concerned it will be better for us to have a little more ~~xxime~~ time before it returns, but the only hitch is the man who wrote for the maps a few days ago. Could you persuade the gentleman (I presume he is) to let us have them two weeks longer?

I'll tackle Herbert Bayer, who, being a bridegroom, may be amenable to another change.

showing there on December 30. The material will then be shipped to New York and we hope to make all the returns to lenders during January.

I hope very much that this arrangement will be satisfactory to you. If not, please let me know and we shall find out whether it will be possible to withdraw the maps from the Baltimore showing.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

HW:w

Airways to Peace
NYC - Amer Geog. Soc

COPY TO MISS DUDLEY

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

19 BROADWAY

all the rest of corres is in
Wheeler file general office
Airways to Peace

December 4, 1944

Miss Dorothy H. Dudley, Registrar
The Museum of Modern Art
11 West 53rd Street
New York 19, N. Y.

Dear Miss Dudley:

We wrote to you last February concerning the return loan made to you by this Society for an exhibit. We told over the telephone that these maps had been sent and later asked our permission to do so. This was a peculiar thing to do.

Have these maps come back to New York, for we would like to have them returned. The maps are as follows:

1) Mappamundi hecho en 970 por el

December 6, 1944

Miss E.L. Yonge
Map Curator
American Geographical Society
Broadway at 156th Street
New York 30, New York

Dear Miss Yonge:

Miss Dudley has referred your letter of December 4 to me. I am very sorry that there should have been any misunderstanding about the loan of the maps for our tour of the exhibition AIRWAYS TO PEACE. As you no doubt remember, I talked to you on the telephone about the matter last February at which time you said that you thought we might borrow the maps but that a letter should, of course, be written to Dr. Wright. Mr. Wheeler wrote Dr. Wright on February 14 and received a letter from Dr. Wright giving the Society's permission on February 16.

I have consulted the Director of our Department of Circulating Exhibitions and find that the exhibition is now concluding its tour at the Baltimore Museum and will end its showing there on December 30. The material will then be shipped to New York and we hope to make all the returns to lenders during January.

I hope very much that this arrangement will be satisfactory to you. If not, please let me know and we shall find out whether it will be possible to withdraw the maps from the Baltimore showing.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

HW:w

A M. GEOG. SOC.

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

December 4, 1944

Miss Dorothy H. Dudley, Registrar
The Museum of Modern Art
11 West 53rd Street
New York 19, N. Y.

Dear Miss Dudley:

We wrote to you last February concerning the return of certain maps loaned to you by this Society for an exhibit, and were told over the telephone that these maps had been sent on tour, although you had never asked our permission to do so. We thought that was rather a peculiar thing to do.

Have these maps come back to New York, for we would like to have them returned. The maps are as follows:

1) Mapamundi hecho en 970 por el Beato de Liebana
2) World map, Septentrionalium terrarum descriptio por G. Mercatorem, 1613?
3) Facsimile of Piri Reis map, 1513 (Turkish map)
4) Weltkarte des Castorius gennant die Peutinger'sche tafel von Dr. Konrad Miller. 1888

Yours very truly

E. L. Yonge
Map Curator

closes Dec 30. Baltimore

Return in fall.

Am. Geog.
AIRWAYS

Miss Converter

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK
BROADWAY AT 156th STREET

February 16, 1944

Dear Mr. Wheeler:

Thank you for your letter of the 14th.

The Society is very happy to give you permission to exhibit the maps that we have loaned to the Museum of Modern Art in other cities where the exhibition is scheduled to be shown.

Sincerely yours,

John K. Wright

Director

Monroe Wheeler, Esq.
The Museum of Modern Art
11 West 53rd Street
New York 19, N.Y.

Am. Geog.
AIRWAYS

19 19

November 8, 1943

Mr. John K. Wright
American Geographic Society
Broadway at 156th Street
New York, New York

Dear Mr. Wright:

We have returned to you the globe listed on the enclosed receipt and we should be very grateful indeed if you will sign it properly and return it to us in the enclosed envelope.

May I take this opportunity to thank you for your generosity in lending this globe for the AIRWAYS TO PEACE exhibition.

Very sincerely yours,

MW:hw

AM. GEOG. SOC.
A to R to WASH

19

November 1, 1943

Dr. John K. Wright, Director
American Geographical Society
Broadway at 156th Street
New York, New York

Dear Dr. Wright:

We had hoped to be able to borrow a replica of the Behaim Globe from the Library of Congress to include in the Washington showing of the AIRWAYS TO PEACE exhibition but we have been told, somewhat to our surprise, that the Library of Congress does not possess it. Do you by any chance know whether another copy of this globe exists in Washington? If you do not would you perhaps consider letting us send your globe for the Washington showing? The Civil Aeronautics Administration, which is sponsoring the show in Washington, will be extremely grateful if you find it possible to do this. I can assure you that the globe will be packed and handled with the greatest care and we shall be glad to take care of all insurance on it.

If you can consent, the globe would leave here November 18th and would be on view in the Commerce Building Auditorium in Washington throughout the month of December.

With renewed thanks for your many courtesies, I am,

Very sincerely yours,

MW:hw

copy to Miss Dudley

Am. Geog. Society
A to P. WASH

October 11, 1943

Dear Dr. Wright:

It is most kind of you to extend to the Museum of Modern Art permission to include the maps which you lent us for Airways to Peace in the Washington showing. Thank you very much indeed for the unfailing courtesy with which you have cooperated with the Museum.

With renewed appreciation, I am

Sincerely yours,

Dr. John K. Wright, Director
American Geographical Society
Broadway at 156th Street
New York, New York

MW:joc

Peace
Geog Society

AMERICAN GEOGRAPHICAL SOCIETY • NEW YORK

BROADWAY AT 156th STREET

Office of the Director

October 7, 1943

Dear Mr. Wheeler:

In writing to you on October 2, Miss Yonge apparently did not understand that the Airways to Peace exhibition was to be continued through this month. I am therefore writing to Mr. Gombarts that it will not be possible for us to loan the maps that he requested.

We shall be very glad to have the maps that are now part of the New York exhibition appear also in Washington in the exhibit in the Commerce Department Building.

I am sorry that you were troubled by this misunderstanding.

Sincerely yours,

John K. Wright

Director

Monroe Wheeler, Esq.
Director of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd Street
New York City

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

Airways to Peace

NY - Amer Geog Society

October 5,

Dear Dr. Wright:

In her letter of October second Miss Ena Yonge informed us that the American Geographical Society would like to lend to the William Howard Taft High School certain maps belonging to it which are now included in our Airways to Peace exhibition. The exhibition, as you know, continues through this month, and we hope very much that it will be possible for you to arrange to let us keep the maps for that time. Perhaps Mr. Gombarts could arrange to bring his pupils to see the entire exhibition at this Museum, as so many other teachers have done. The New York Board of Education has recommended that all children above the seventh grade be taken to visit the exhibition in groups, and many, many thousands have seen it here.

The Civil Aeronautics Administration in Washington has expressed a desire to bring the entire exhibition to be installed for public view in the auditorium of the Commerce Department Building there. If these plans materialize, I wonder whether you would be willing to have the Society's maps which are part of the New York exhibition appear also in Washington? Whether or not you will permit your maps to be included in the Government showing, we do hope you can arrange to let us keep them during the continuation of the exhibition here.

With many thanks for the extremely valuable items from your collection lent by the Society to the Airways to Peace exhibition, I am

Very sincerely yours,

Dr. John K. Wright, Director
American Geographical Society
Broadway at 156 Street
New York, New York

→ Miss Dudley

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

Ac 34620

October 2, 1943

Miss Dorothy H. Dudley, Registrar
The Museum of Modern Art
11 West 53rd Street
New York City

Dear Miss Dudley:

We have given permission to Mr. George K. Gombarts of the William Howard Taft High School in the Bronx, to borrow certain maps belonging to the Society which are at present on view in your Museum, as follows:

a - St. Sever Beatus map
b - Leardo map of 1452
c - Turkish map 1513
d - Roman road map (Peutinger)

They cannot have the Behaim globe.

As we have not heard just when they will be needing these maps, I presume they will get in touch with you. Please have them give a receipt for these maps, and let us have a copy for our files.

Yours sincerely,

Ena L. Yonge
Map Curator

Answer: To Peace
Amer. Geog. Society

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156th STREET

September 10,1943

Miss Helen Ward
Museum of Modern Art
11 West 53d Street
New York City

Dear Miss Ward:

Thank you for your letter of September 8th, and for returning the text which accompanies our facsimile of the 1569 Mercator world map.

Yours very truly,

E. L. Gonge
Map Curator

Airways to Peace
NY - Amer Geog. Society

July 22, 1943

Dear Sirs:

On Tuesday we returned to you two packages containing maps which were not used in our exhibition Airways to Peace. When you have checked them, will you please sign and return to us the enclosed receipt so that we may complete our records.

Sincerely yours,

Registrar

American Geographical Society
Broadway at 156th Street
New York, N. Y.

Miss Dudley

June 17, 1943

Dr. John K. Wright
American Geographical Society
Broadway at 156th Street
New York, New York

Dear Dr. Wright:

I am delighted to know that we may include the Behaim globe in our exhibition, Airways to Peace.

You are more than kind to have helped us so greatly in our preparation for this show. Our Registrar, Miss Dorothy Dudley, will arrange with your office the details of collecting the globe.

With many thanks, I am

Sincerely yours,

MW:BK

Am. Geog. Society

AIRWAYS

EARL HARKER HANSON
AMERICAN GEOGRAPHICAL SOCIETY
BROADWAY AT 156th ST., NEW YORK

May 1, 1943

June 10, 1943

Dr. John K. Wright
American Geographic Society
Broadway and 156th Street
New York, New York

Dear Dr. Wright:

I cannot tell you how greatly we appreciate all your kind cooperation in connection with our forthcoming exhibition, Airways to Peace, which will open on June 29. It was most generous of you to give the Museum a copy of the Leardo map and your book describing it. We have found it to be of the greatest value in our preparation of the show.

The Museum would like very much to borrow your Behaim Globe. Inasmuch as President Roosevelt has agreed to lend his fifty-inch globe for the exhibition, we are most anxious to include other significant maps and globes. I can assure you that your loan would be handled with the utmost care by expert members of our staff only. It would be exhibited in such a way that no visitor could possibly touch it. The Museum would, of course, bear all costs of transportation and insurance. If this important loan is possible, as our Trustees very much hope that it will be, we should like to call for the globe during the week of June 21. I am enclosing herewith our usual loan form.

With many, many thanks for your very valuable collaboration, I am

Sincerely yours,

MW:BK

Hanson - Am. Geog Society
A 1131-/AVS.

EARL PARKER HANSON
AMERICAN GEOGRAPHICAL SOCIETY
BROADWAY AT 156TH ST., NEW YORK

May 1, 1943

Dear Monroe:

Thanks for your note. Will get in touch with Loth next week.

It occurs to me that the Explorers Club may also have something to add to your map exhibit. Suggest that you get in touch with Mr. Donald Upham, the club's secretary, in the club quarters, 10 W 72nd Street, Trafalgar 7 - 0421.

Sincerely

Earl

Am. Mus. of Nat. Hist.

AIRWAYS

June 10, 1943

Miss Bella Weitzner
Assistant Curator, Department of Anthropology
Museum of Natural History
New York, New York

Dear Miss Weitzner:

I have seen the picture of the Marshall Island Map in the book on cartography by Dr. Raisz and think that if the photographs which you have on file are as clear or clearer than the picture in the book, we would definitely want them in our exhibition. I am sorry that I have not had time to visit the Museum to see those pictures and will have to take your word on their suitability. We would like prints of both negatives No. 38049 and No. 38050 enlarged to 12" and will, of course, pay whatever expenses of enlargement and delivery are involved. I sincerely hope that this does not inconvenience you unduly and appreciate your kind assistance in this matter.

Order?

Sincerely yours,

Charles Keller

CK:BK

P.S. I am returning your folio to you as, I believe, you wished.

A to B-HER

Baravalle

19

19

December 20, 1943

Dr. Hermann von Baravalle
Adelphi College
Garden City
Long Island, New York

Dear Dr. von Baravalle:

Mr. Wheeler has asked me to thank you very much indeed for bringing to his attention your folio of extremely interesting maps. Unfortunately the folio arrived after our exhibition, AIRWAYS TO PEACE, had closed. Mr. Wheeler wanted to include your maps in the travelling exhibition on the same theme but it had already been shipped.

May I assure you that Mr. Wheeler appreciates your kindness in thinking of him and is very glad to have had this opportunity of seeing your maps.

Very sincerely yours,

Assistant to Mr. Wheeler

P.S. I am returning your folio to you as, I believe, you wished.

FISHER

February 23, 1944

Professor Irving Fisher
Box 1825
New Haven 8, Connecticut

Dear Professor Fisher:

Mr. Wheeler is out of town just now on a brief vacation but before he left he asked me to acknowledge your letter of February 2nd. He is most grateful for your continued interest in the Airways to Peace exhibition and appreciates your expenditure both of time and of money for this educational purpose.

Mr. Wheeler was delighted to hear of the various write-ups Likaglobe has received and will receive. He hopes very much that you will eventually get back more than your original investment.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

HW:w

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN, CONNECTICUT

February 15, 1944

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, N.Y.

My dear Mr. Wheeler:

The enclosed explains itself.

I hope my suggestion is unobjectionable.

I enclose the article in question.

Sincerely,

Irving Fisher

IF:M

Enclosures

C O P Y

February 15, 1944

Miss E. D. Courter
Buhl Planetarium and Institute of Popular Science
Pittsburgh, Pennsylvania

My dear Miss Courter:

One order for Likaglobe has thus far come in traceable to the Exhibit in Pittsburg.

It occurs to me that some of your visitors might be interested in seeing the enclosed basic article on my projection. I can send you a hundred, or any number required.x I enclose a return postcard which I suggest you sign and send me, via Mr. Wheeler, in the enclosed stamped envelope addressed to him. As this (using the article) is a new procedure and lest it encroach on space otherwise required, it should, I assume, be submitted to him first.

I am also sending him a copy of this letter.

Sincerely,

IF:M (signed) Irving Fisher

Enclosures

x to be given away free to any adults who'd like them - one each.

reprinted from The Geographical Review; vol XXXIII, no 4, 1943; pp 605-614

A WORLD MAP ON A REGULAR ICOSAHEDRON BY GNOMONIC PROJECTION*

IRVING FISHER

[With separate map, Plate II, facing p. 618]

PROFESSIONAL cartographers wrote indignant protests to the *New York Times* concerning its editorial of February 21, 1943, which said of the Mercator projection that "the time has come to discard it for something that represents continents and directions less deceptively."

The cartographers were right; so was the *New York Times*. The time most certainly has *not* come for discarding Mercator as a working chart for navigators, but the time *has* come for discarding it as the standard world map for the millions to look at as a means of visualizing world relationships. Especially in our schools should the distortions of the Mercator projection be rectified; for it is at the school age that we form the geographical images to be carried through life.

The icosahedral projection described in this article attempts to remedy this situation by providing a flat world map (Pl. II) that can be folded quickly and easily into a shape resembling a sphere. "It has been stated in language terse and effective, that the best way of judging a world projection is to look at it."[1] The icosahedral map, folded or flat, in its several regions looks right to the eye—whether the eye of the layman or of the professional user of maps. Certainly the layman will appreciate verisimilitude and be content with approximations of scale, direction, and area.

Polyhedral Maps in General

The regular icosahedron, one of the five Platonic bodies familiar to geometers, is easily formed from cardboard cut in the shape shown in Plate II. Albrecht Dürer's "Unterweysung des Messung mit dem Zirckel und Richtscheyt" (edition of 1538) contains such a diagram without any map, as one of a score of cardboard forms from which a near sphere can be made by folding. It is likely that a chief reason for presenting these forms was that they could be used for world maps. In one case he refers to certain lines as "meridians" and "parallels."

So far as is known, the present writer is the first to have designed a

* My thanks are due to Mr. O. M. Miller of the American Geographical Society for helpful suggestions and criticisms.

[1] C. H. Deetz and O. S. Adams: Elements of Map Projection, *U. S. Coast and Geodetic Survey Special Publ. No. 68*, 4th edit., 1934, p. 182.

THE REMAINDER OF THIS PUBLICATION HAS NOT BEEN SCANNED.

FISHER
AIRWAYS

October 18, 1943

Dear Professor Fisher:

Thank you very much indeed for sending me the No. 3 version of your map globe. I am so sorry that you had to leave the other day, for I would have liked to thank you in person once more for all your generosity and invaluable cooperation in connection with Airways to Peace. You have been most kind, and we all greatly appreciate your help.

Sincerely,

Irving Fisher

Professor Irving Fisher
Box 1825
New Haven, Connecticut

MW:joc

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN, CONNECTICUT

October 2nd, 1943

Mr. M. Wheeler
Museum of Modern Art
11 West 53rd Street
New York City

My dear Mr. Wheeler:

I enclose with my compliments the No. 3 version of my map globe.

I am having one especially varnished in case you would like to have it hung next to the string version. I also left one at the desk the other day. I had hoped to see you then but had to catch a train.

Sincerely,

Irving Fisher

IF:M

LIKAGLOBE

405 TEMPLE STREET

NEW HAVEN 11, CONN.

TO PURCHASERS OF NO. 3 LIKAGLOBE

1. Unfold carefully.

   (Be especially careful not to injure any of the twelve protruding "tongues").

2. After the Likaglobe is fully unfolded, place it (map side down) on a clean table. Fold it into a near globe by following the directions printed on the up side.

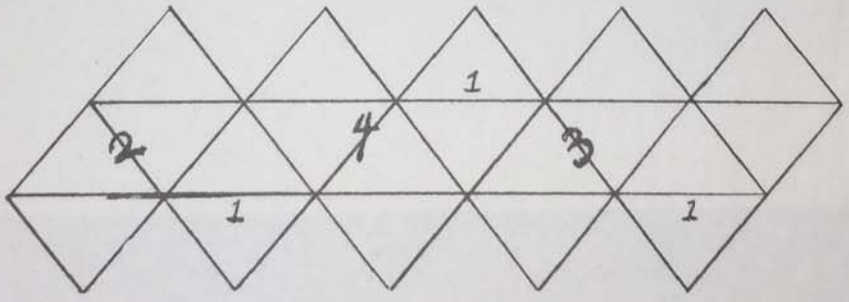
3. To pack the Likaglobe put it into the hexagonal form in which you found it. To avoid injuring any of the twelve tongues, again place it map side down and:

   (a) Fold, along the horizontal creases, the three triangles "1" indicated in the diagram;

   (b) Fold along crease "2" the block of two triangles (at left);

   (c) Fold along crease "3" the block of six triangles (at right);

   (d) Fold at crease "4" the block of eight triangles (at left).



Fisher

HIRL/AVS

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN 10, CONNECTICUT

June 16, 1943

Mr. Keller
Museum of Modern Art
11 West 53rd Street
New York City.

June 18, 1943

My dear Mr. Keller:

Professor Irving Fisher
Box 1825
New Haven 10, Connecticut

Dear Professor Fisher:

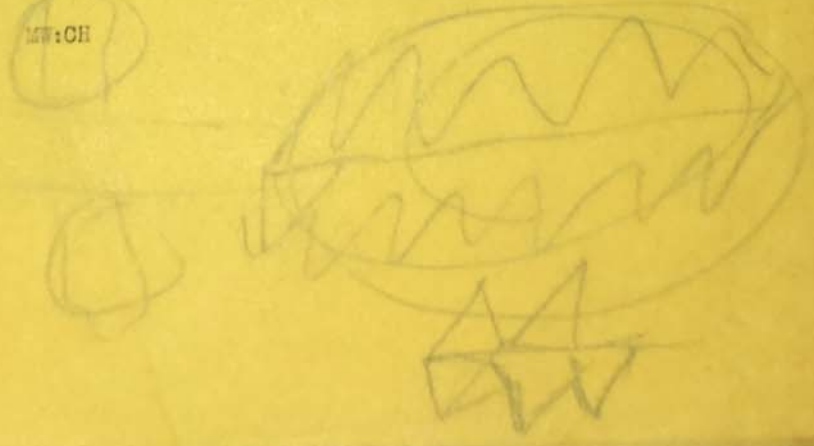
Mr. Wheeler has asked me to tell you that space for your model of the icosahedron globe has definitely been assigned, and we plan to suspend from the ceiling a small panel beside it, upon which we shall mount, uniformly with our other displays, a specimen of the flat printed form, if you will be kind enough to provide it, together with a brief explanatory note. We should receive this material for the panel by next Wednesday, the twenty-third. The actual stand with the icosahedron could arrive as late as Monday, June twenty-eighth.

Very sincerely yours,

(Mrs. C. S. Hartman)
Assistant to Mr. Wheeler

IFs

MH:CH



HISPANIC SOCIETY
Fisher

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN 10, CONNECTICUT

June 16, 1943

Mr. Keller
Museum of Modern Art
11 West 53rd Street
New York City.

My dear Mr. Keller:

As I remember it, today was the date at which Mr. Wheeler hoped to have everything in for the exhibit. I assume, however, since you made a definite allotment of space for the model to stand on the floor and wall space beside it that there will be no embarrassment so long as the model is delivered before the 29th.

I shall deliver it as early in advance of that date as possible. It was impossible to get the help to push it as fast as I had expected but it is proceeding with some speed.

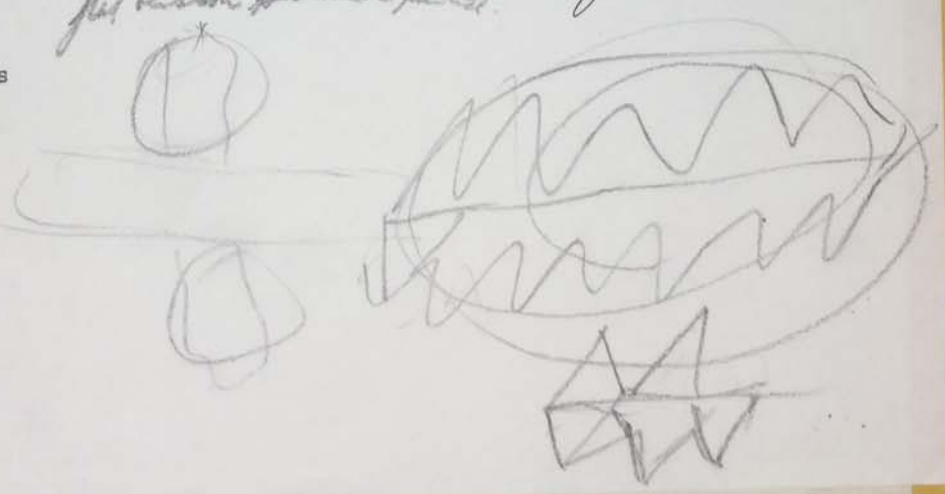
Hoping that my understanding is correct and expecting to contact you soon, I am

Sincerely,

Irving Fisher

Flat version destined for text.

IFs



HISPANIC SOCIETY
A W R

1 EAST 89TH STREET
NEW YORK CITY

June 19, 1943.

My dear Sir:

Replying to your letter of June 10th, I regret that the Hispanic Society cannot lend material of any kind for exhibition outside of the building. This does not apply to photographs, and I understand from my secretary that you have enquired whether the Society could lend photographs for such exhibition. There are photographs available at the Hispanic Society of edited Portolan material. There is also an original Portolan chart at the Geographical Society.

Will you kindly consult with the Curator of the Museum at the Hispanic Society for information?

I regret not having received your former letter.

Yours truly,

Archer M. Huntington

Monroe Wheeler, Esquire,
Director of Exhibitions & Publications,
The Museum of Modern Art,
11 West 53rd Street,
New York City.

Miss Dudley
Important Events
AIRWAYS

June 10, 1943

Mr. Archer M. Huntington
One East 89th Street
New York, New York

Dear Mr. Huntington:

We are enclosing a copy of a letter written to you on May 27 which your secretary informs me you have not received.

Naturally, we are still very much interested in exhibiting a Portolan map and are somewhat anxious about shortness of time. The exhibition is to open on June 29.

I would be glad to visit the Hispanic Society at your convenience in order to select such a map if you are able to help us in this way.

With many thanks, I am

Sincerely,

MW:BK

Huntington
Hispanic Soc
AIRWAYS

May 27, 1943

Mr. Archer M. Huntington, President
Hispanic Society Museum
Broadway and 155th Street
New York, New York

Dear Mr. Huntington:

The Museum of Modern Art, with the Office of War Information, is planning an exhibition to be shown from the end of June to October, of geography in the age of flight and its effects on human affairs. We shall include maps, globes, models, charts, etc. and will preface the exhibition with a few pertinent ancient maps to acquaint the visitor with the development of cartography prior to the age of flight.

Mr. Ristow of the Map Department of the New York Public Library suggested that we write you to inquire about the possibility of exhibiting one of your Portolan skin charts drawn in the fifteenth century. We are very anxious to show such a map or a good facsimile of one as an example of the type of map used by Columbus.

We would appreciate information concerning the dimensions of such a Portolan chart and the possibility of borrowing it for our exhibition. Naturally, the Museum of Modern Art would assume the proper responsibility in taking care of this valuable display.

With many thanks, I am

Sincerely yours,

MW:BK

U. of Michigan -

WILLIAM L. CLEMENTS LIBRARY
OF AMERICAN HISTORY
UNIVERSITY OF MICHIGAN
ANN ARBOR

AIRWAYS

V-25-'43

Michigan
Storm

WILLIAM L. CLEMENTS LIBRARY
UNIVERSITY OF MICHIGAN
ANN ARBOR

AIRWAYS

June 1, 1943

Dear Mr Wheeler:

Thank you for your letter of May 27.

I have sent your order to the Printing Department. The book and map should be one their way to you within a day or two. If they are not received promptly, please let me know at once.

Believe me,

Sincerely yours

Colton Storm

Colton Storm
Curator of Maps

Mr Monroe Wheeler
11 West 53rd Street
New York, New York

was the case a month ago when I wanted a considerably larger photograph. Photostats are still available in the original size.

Sincerely yours

Colton Storm
Colton Storm
Curator of Maps

U. of Michigan -

AIRWAYS

WILLIAM L. CLEMENTS LIBRARY
OF AMERICAN HISTORY

UNIVERSITY OF MICHIGAN
ANN ARBOR

V-25-'43

Mr Monroe Wheeler
New York, New York

Dear Mr Wheeler:

Dr Adams has given me your letter to him of May 20 for answer, since it concerns the department in my charge.

The map about which you enquired was issued in 1696. Does this throw your plans off? It is a copper engraving (not steel) colored by hand. The size of the original is 21 3/4 inches.

In 1940 this Library issued a facsimile of our copy of the Cassini map. The reproduction, by collotype, colored by hand, was made for us by the Meriden Gravure Company. The predecessor of the Cassini map, the Sanson map, is a rare item. The facsimile of the Cassini map, published by the University of Michigan Press, 1941, and the map are available at $5.00 from the University of Michigan Press, Ann Arbor, Michigan. It was one of the Fifty Best Books of the Year.

We have a pair of good glass negatives of the map from which we can have photographs made. I am not certain, however, that we can now secure photographic prints larger than 9 by 12 inches - at least, that was the case a month ago when I wanted a considerably larger photograph. Photostats are still available in the original size.

Sincerely yours

Colton Storm
Curator of Maps

May 27, 1943

Mr. Colton Storm
Curator of Maps
William L. Clements Library
University of Michigan
Ann Arbor, Michigan

Dear Mr. Storm:

Many thanks for your letter of May 25 regarding the Cassini map. I think that the color reproduction made by the Meriden Gravure Company will suit our purposes very nicely. Will you please have a copy sent to us and bill us accordingly? With many thanks, I am

Very sincerely yours,

MW:CH

WILLIAM L. CLEMENTS LIBRARY
OF AMERICAN HISTORY

UNIVERSITY OF MICHIGAN
ANN ARBOR

V-25-'43

Mr Monroe Wheeler
New York, New York

Dear Mr Wheeler:

Dr Adams has given me your letter to him of May 20 for answer, since it concerns the department in my charge.

The Cassini map about which you enquired was issued in 1696, not 1796. Does this throw your plans off? It is a copper engraving (not steel) colored by hand. The diameter of the original is 21 3/4 inches.

Late in 1940, this Library issued a facsimile of our copy of the Cassini map. The reproduction, by collotype colored by hand, was made for us by the Meriden Gravure Company. Six months later, my predecessor, Lloyd A. Brown, published a fine study of the map and its author under the title Jean Domenique Cassini and his World Map of 1696, Ann Arbor: University of Michigan Press, 1941. The book and the map are available at $5.00 from the University of Michigan Press, Ann Arbor, Michigan. It was one of the Fifty Best Books of the Year.

We have a pair of good glass negatives of the map from which we can have photographs made. I am not certain, however, that we can now secure photographic paper larger than 9 by 12 inches - at least, that was the case a month ago when I wanted a considerably larger photograph. Photostats are still available in the original size.

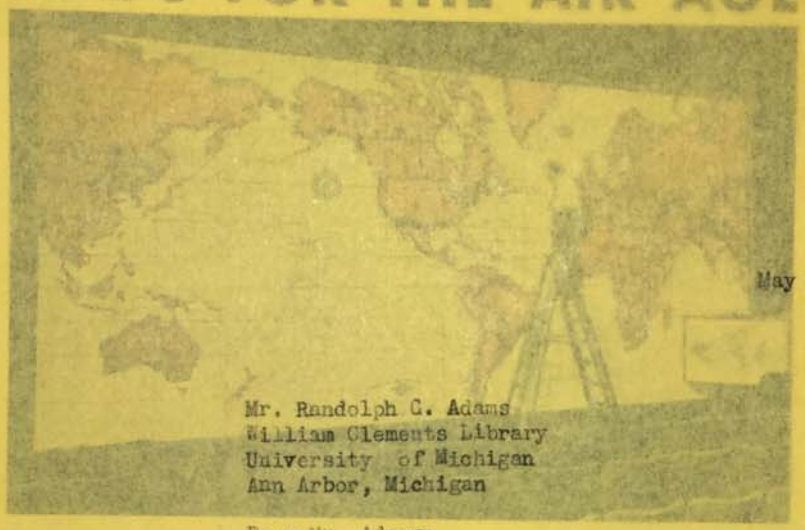
Sincerely yours

Colton Storm

Colton Storm
Curator of Maps

V. L. Nedrigan
AIRWAYS

MAPS FOR THE AIR AGE



May 20, 1943

Mr. Randolph G. Adams
William Clements Library
University of Michigan
Ann Arbor, Michigan

Dear Mr. Adams:

The Museum of Modern Art is planning to show this Summer a major exhibition of air-age geography and its effects upon human affairs. The exhibition will form a sequel to that of last Summer, entitled "Road to Victory." I am enclosing a tentative outline herewith.

Dr. Ristow has suggested that I consult you about the original steel engraving in your collection of the Cassini polar projection world map, dated 1796. Would it be possible for you to send us, at our expense, of course, a photograph of the engraving? Could you tell me, also, its exact size? We shall appreciate very much your assistance and any advice or suggestions which you might care to give us. May I thank you in advance?

Sincerely yours,

MW:CH

By Wayne Whittaker

The giant map above, one of the world's largest, was two years in the making. It is 75 feet long, [illegible] high and [illegible] feet wide.

IT'S the airplane and not the Nazi blitz of boundary [illegible] that has map-makers worried.

When the Wright brothers made the first flight that historic day at Kitty Hawk they discovered a new world just as Columbus did in 1492. And map-makers are too busy charting that new world and distances to bother about European boundaries smashed by one Adolph Schicklgruber for as they are concerned, he hasn't altered a boundary.

The official map-maker recognizes a change of boundary only when it is fixed by treaty. Since the beginning of World War II, just three have been changed: boundaries between Finland and Russia, Ecuador and Peru, Indo-China and Thailand. The makers of military maps, however, follow the blitz of boundaries in each fresh edition of the newspapers.

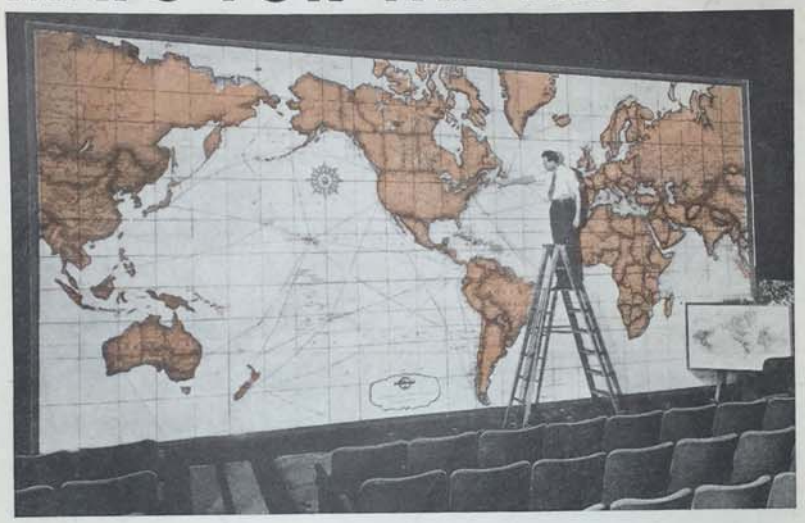
It's a jolt to think of the [illegible] of airplane instead of the road routes—a world where distances are measured across continents and oceans and not by miles of mountains, deserts or arctic wastes. Such a world is shown on a new map that looks like a wheel with the North Pole for a hub. It is designed for the air age.

At first the map gives you a dizzy feeling—like being on a perch on the North Star directly above the pole looking down at the earth, with the southern hemisphere

RENNER AIRWAYS

POPULAR MECHANICS

MAPS FOR THE AIR AGE



The giant map above, one of the world's largest, was two years in the making. It is 15 feet four inches high and 32 feet six inches wide. Below, cutting hole in plate to change a boundary

Courtesy Rand McNally & Company

By Wayne Whittaker

IT'S the airplane and not the Nazi blitz of boundary lines that has map-makers worried.

When the Wright brothers made the first flight that historic day at Kitty Hawk they discovered a new world just as Columbus did in 1492. And the map-makers are too busy charting that new world of air distances to bother about European boundaries smashed by one Adolph Schicklgruber. As far as they are concerned, Hitler hasn't altered a boundary.

The official map-makers recognize a change of boundary only when it is fixed by treaty. Since the beginning of World War II, just three have been changed: boundaries between Finland and Russia, Ecuador and Peru, Indo-China and Thailand. The makers of military maps, however, follow the blitz of boundaries in each fresh edition of the newspapers.

It's a jolt to think of the world in terms of airplane instead of flat land routes—a world where distances are measured across continents and oceans alike without regard to mountains, deserts or arctic wastes. Such a world is shown on a new map that looks like a wheel with the North Pole for a hub. It is designed for the air age.

At first the map gives you a dizzy feeling —like being on a perch on the North Star directly above the pole looking down at the earth with the southern hemisphere

Sent June 29 or 30, 1943, by our messenger.

— over —

RENNER AIRWAYS

Polar projection map, above, is made like a wheel with North Pole in center. Black lines trace present routes of heavy air travel. Below, spraying a globe after it has been mounted to give it lustrous, waterproof surface

conveniently raised into view. You pick up a piece of string to prove that this strange map world is badly out of joint.

One end of the string is held on Tokyo, the other on the Panama Canal. This shows the shortest route for a squadron of bombers between these points is over the Aleutian Islands and the western part of the United States. Checking this with the globe, you find that the straight line on the new map nearly coincides with the great circle route—the shortest distance between two points on the earth's surface—from Panama to Tokyo.

The map also shows that the Maine coast is the closest point in the United States to Africa; that the shortest route from Seattle to Moscow passes near the North Pole, and that bombers from Berlin can strike at the steel mills of Gary, Ind., almost as easily as they can attack the east coast by flying over Iceland and Greenland. The string measurements reveal that this flat map may be used like a globe.

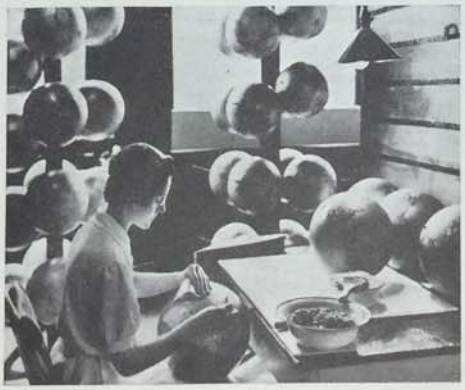
The pole-centered arrangement on the map calls for a new conception of the earth—just like an original camera angle gives a new slant on a familiar

— over —

RENNER AIRWAYS

Photographing a map drawing with huge camera which makes negative on plate glass the exact size the printed map is to be

The center of interest for world travelers at the Pan American terminal in Miami is the mammoth globe, above. Below, hand-mounting a globe by pasting on individual "gores" that are printed in flat sheets and then cut out to make perfect fit



homestead. The concept of the world with the North Pole in the center and continents radiating from it is as strange to us as were the maps of the New World to Europeans after Columbus discovered America.

Looking down at the air-age map from the North Pole, you see that 75 percent of the land areas are north of the equator and that the pole forms a hub for direct aeronautical routes between the great population centers of the earth. The future importance of polar routes was stressed by the late Brig. Gen. William Mitchell in 1935 when he said:

"Whoever holds Alaska will hold the world. Alaska is the most central place in the world of aircraft."

Lindbergh, too, knew he was flying across the center of future air travel when he flew north to the Orient. Russian fliers blazed a trail when they flew across the Arctic from Moscow to California. In the postwar world huge stratosphere planes will shuttle across the arctic region carrying passengers and freight much as commercial planes travel today between New York and California.

The airplane pilot finds cold air 20,000 or 30,000 feet above the earth. It is little if any colder over the pole at this height than it is over Chicago or Omaha. Air explorers report that the weather is more constant over the Arctic area and the air calmer than it is over the temperate zones.

The Arctic Sea has been called the "Mediterranean of the Air Age," harking back to 1000 B.C. when the routes of sailing vessels criss-crossed the Mediterranean and the world was thought of as a flat disk with that sea in the center.

Development of large ocean-going sailing boats and then fast power-driven ships called for new conceptions of the earth, just as air routes do today. Down through history the making of maps has been spurred by inventions—rowboat, sailboat, steamboat,

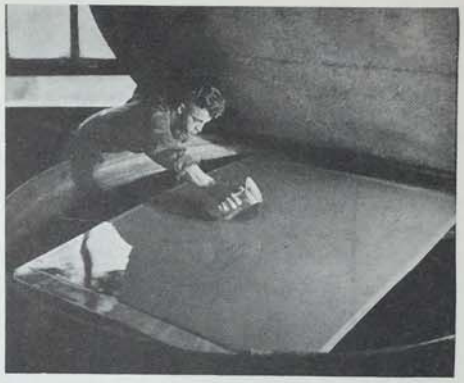
— over —

RENNER AIRWAYS

train, airplane—by wars, the search for gold, fur and jewels. Great explorers like Marco Polo, Magellan, Drake, Bering, Livingstone, Amundsen, Byrd and scores of others have kept the cartographers busy.

Ever since the world was discovered to be spherical in shape, the big job for the map-makers has been to chart it on a flat surface with a minimum of distortion. This is accomplished by what is called a "projection," or grid of lines representing latitude and longitude.

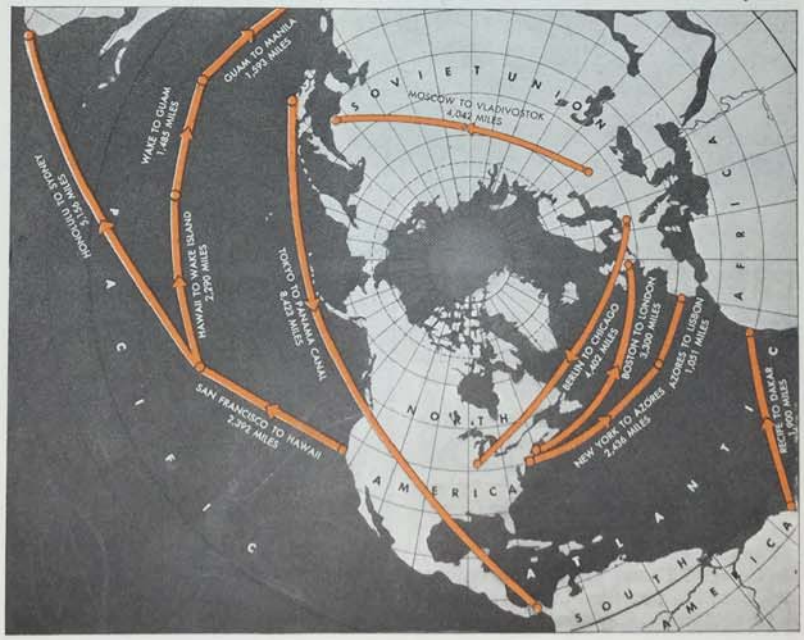
One of the most widely used projections was devised by a Dutchman named Mercator in 1569. Airplanes make the Mercator projection outdated because it gives a conception of the world as a cylinder. Bring the ends of a flat map together and you have the cylinder. Today the airplane makes it impossible to regard the North Pole as the top of the map and the South Pole as the bottom. The airplane places the North Pole at the center like the hub of a wheel with the meridians forming the spokes.



Preparing the grained surface of thin sheet of zinc for offset printing of map by coating it with a sensitizing solution

The cartographers had to find a polar projection for the air age. They discovered

The air-age map which revolutionizes man's conception of the earth is marked with airplane routes. Direct bomber route from Tokyo to the Panama Canal is via Dutch Harbor and Salt Lake City

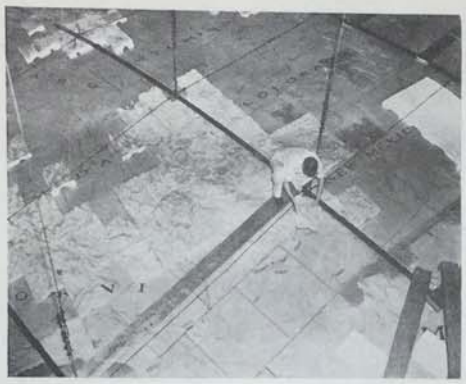


1943

Sent June 29th 30, 1943, by our messenger

over —

RENNER AIRWAYS



Geographical expert at work on the world's largest curvature relief model of the U. S. at Babson Institute. Below, view of the Great Lakes on model, looking down from Ontario, Canada

the projection was all worked out for them back in 1581 by a man named Postel. Helmuth Bay, assistant chief cartographer for Rand McNally & Company, says that prior to 1930 he had seen only two maps made from the polar projection which is the basis for the new air-minded map. Every point on this map is shown at its exact distance from the pole.

"As long as the world was conceived as a cylinder, there was no great interest in the Arctic region," said Mr. Bay. "Air travel has changed this, and today airplane geography requires a map of three dimensions with the North Pole in the center."

The new Rand McNally map, edited by Dr. George T. Renner of Columbia University, has little distortion in the continents of the northern hemisphere. The east-west distortion south of the equator, which gives the map its unusual appearance, is caused by the continued divergence of meridians when they actually converge toward the South Pole on the globe.

Germany, Japan and Russia are ahead of the United States in teaching their people an air concept of the world, according to David E. Sites, the noted geographer. Polar maps, now being introduced in American schools, have been used in the institutions of those nations for several years.

Japanese students were not surprised—as were many American adults—that the Aleutian Islands are on the direct bomber route to America. Youthful Nazis have been taught that the Luftwaffe can fly over the rim of the Arctic Circle to strike at the industrial Middle West.

The strategic value of Iceland and Greenland cannot be overlooked on the new map—no longer are they vague areas somewhere north of the travel routes. The nearest point in Occupied Europe to the United States is the northern tip of Norway. This is a distance of only 3,100 miles from the

(Continued to page 162)

Measuring great circle routes on a new "free turning" globe with hinged blades on either side. Air routes follow curve

— over —

RENNER AIRWAYS

Maps for the Air Age

(Continued from page 32)

Maine coast and the stratosphere highway passes over Iceland and the lower tip of Greenland.

Tokyo is 8,423 miles from the Panama Canal via the great circle route which passes over Dutch Harbor, Salt Lake City and Houston. The shortest way from Oklahoma City to Ceylon is almost directly over the North Pole—9,500 miles.

Air distances are converted quickly to flying hours which are reduced by every advancement of aviation. Some distances that loom significant in the air-age world are: New York to Chungking, 7,500 miles; Fairbanks, Alaska, to Berlin, 4,300 miles; San Francisco to Sydney, Australia, via Honolulu, 7,548 miles, and Duluth to the coast of Norway, 3,750 miles.

A new globe that is helping correct the general east-west misconception of distances from the United States—"Europe is straight east; Asia is straight west"—has what is called a universal mount. The ball turns freely in a cradle. A vertical ring over the top holds it in place and hinged blades on either side are used to measure great circle routes. By placing the United States at the zero point on the blade, one can see quickly that Europe is more nearly north than east and that Asia lies to the north instead of to the west.

Map companies today are doing their largest volume of business in history. A leading company estimated its total output this year "in the neighborhood of 100,000,000 maps." Never before have persons been so interested in the entire world. The maps that are found in almost every edition of newspapers testify to the demands of the public.

Where is Palembang? Unalaska? Port Moresby? Petropavlovsk? The chances are that you know or have a pretty good idea. How far is it from Hawaii to the Marshall Islands? From Dutch Harbor to Tokyo? From Vladivostok to Yokohama? From Dakar to Panama? These are vital questions and a war-conscious America is busy getting the answers.

The importance of maps in enabling a person to grasp the scope of global war was stressed by President Roosevelt when he asked the nation to look at "a map of the

Sent June 29 or 30, 1943, by one of messengers.

over —

RENNER AIRWAYS

whole earth" while he gave a radio address.

Not only on the home front are maps helping fight the war, but in the wardrooms of warships, staff headquarters behind the lines, in cabins of giant bombers and in the training stations and camps for the army, navy and marines. The spectacular commandos are drilled in map reading until they can tell at a glance the topography of a coastal area where an attack is planned.

Making maps from aerial photographs, now developed to a high degree by the army, did not become widespread until after World War I. It took years of experiment before accurate maps were made by air survey methods. The American Geographical Society spent six years mapping northern Labrador from 600 aerial photographs and designing special instruments for the work. Now the army completes a sketch from an aerial photograph in the field and rushes it to troops moving to a new position on the battlefront.

Meanwhile, the "mills" of the map-makers are grinding out maps for peace as well as war, commercial maps to further the interests of hundreds of industries. These maps, based on careful research, outline trading areas, concentrations of population, divisions formed by highways and railroads, rich agricultural districts, the location of mineral deposits, oil wells, and contain other important information. A unique map, prepared by Dr. John M. Wigmore of Northwestern University, traces the world's legal systems. Maps, always colorful, are also made for decorative purposes and have been used to cover the entire walls, ceilings and floors of rooms.

More road maps are made than any other type. Last year more than 120,000,000 road maps were printed, mostly for large oil companies and state highway departments. Sometimes a single road map is changed four times in one year, necessitated by new highways and the improvement or deterioration of old ones.

Maps of all types are undergoing constant change—a change that has been continuous since the first primitive man scratched the outline of river, hill and tree on a piece of bark. Each change is dictated by man's conception of the earth. None has been more revolutionary than the map for the air age—the map that points the way to American leadership in the postwar world.

over —

RENNER AIRWAYS
Columbia Univ.

TEACHERS COLLEGE
COLUMBIA UNIVERSITY
NEW YORK

June 15, 1943

Mr. Monroe Wheeler
Dept. of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd Street
New York City:

Dear Mr. Wheeler:

The small map designs which you returned, as per your letter of May 21, reached me promptly. I am glad that they were of use to you.

I hope that you can get something useful from the larger maps also. Incidentally, I am in no hurry for the large maps, but I will need them near the opening of Summer School in July. It will meet my needs, if you can get them to me no later than the last day of

— over —

Sent June 29 or 30, 1943, by our own messenger.

June.

Incidentally, my article in the June issue of Harpers Magazine carries a map and a couple of map designs which are suggestive. The azimuthal map ~~of~~ the Pacific in my article in the June American Magazine shows what can be done by a peculiar choice of color and tone in portraying an idea.

Cordially yours,

George T. Renner

P.S. If I am not in when your messenger delivers the maps, they can be left at the Information Desk near the entrance in the front of Teachers College Building.

G.R.

Replogle Globe
AIRWAYS

REPLOGLE GLOBES
315-325 NORTH HOYNE AVENUE • MONROE 7000
CHICAGO

August 9, 1943

Mr. M. E. Guyette
Replogle Globes
315 North Hoyne Avenue
Chicago, Illinois

Dear Mr. Guyette:

I wish to acknowledge with thanks the receipt of your Air-Ways Globe. It is an exceedingly useful one, and bears a very close relation to our Airways to Peace exhibition. It is, however, rather small in relation to most of the globes which comprise the show. As you know, we have the President's own Fifty-Inch Globe, and we also constructed a fifteen-foot "outside-in" globe which permits the visitor to see from within how the most populous countries are clustered around the North Pole. We shall be very happy to keep your globe, with a view to finding a place for it in the show if possible.

With many thanks for your kindness in sending it to us, I am

Very sincerely yours,

MW:CH

Mr. Wheeler

MANUFACTURERS OF FINE GLOBES

REPLOGLE GLOBES

315-325 NORTH HOYNE AVENUE * MONROE 7595

CHICAGO

August 3, 1943

AIR MAIL

8/4

Museum of Modern Art
New York City,
N. Y.

Attention: Director

Dear Sir:

We noticed in the latest issue of "New Yorker" magazine that you are featuring an exhibit on the role of the airplane, using maps and globes.

Because our new Air-Ways Globe ties in so well with the great interest in air travel and how it is changing our world, we feel it might be an interesting addition to your exhibit, and we are sending you one, separately, with our compliments.

Whenever I have been in New York, I have always enjoyed visiting your interesting museum.

Thank you too!

Sincerely yours,

REPLOGLE GLOBES

M. E. Guyette

M. E. Guyette

"A GLOBE IN EVERY HOME"

~~Mod. Geographic~~ Riddiford

AIRCLAYS

National Geographic Society
Wash. D.C.

21 June 1943

June 24, 1943.

Mr Monroe Wheeler
Museum of Modern Art,
11 West 53 St.
New York City

Dear Mr. Riddiford:

Thank you so much for your letter of June 21.

Dear Sir: The Next day we did receive a message from the C. S. Hammond Company, saying that they could not spare your Globe because they needed it in their plant. Their only suggestion was that you make and send us another especially for our exhibition. It opens, however, a week from today, so I am a little worried about your being able to do it in time. If you can, please do send it to us, and we should be very pleased to include it.

morning, initial original Co. 88 & ask

With many thanks for your kindness, I am

Sincerely yours,

These are 12" globes. I have a large one here, a rather dull looking affair since color. The Hammond people are now making my globe. I hope you hear from them soon.

Mr. Charles E. Riddiford
National Geographic Society
Washington, D. C.

MW:lf

Sent by Hammond
Mr. Riddiford

The New York Public Library

AIRWAYS

National Geographic Society
Wash. D.C.

21 June 1943

see section material at front of folder

Mr Monroe Wheeler
Museum of Modern Art,
11 West 53 St.
New York City

Dear Sir:

In response to your telegram, received this morning, I deeply appreciate the honor in being invited to exhibit my collapsible globe. The two original models of this are with C.S. Hammond & Co. 88 Lexington Avenue, N.Y. and I have written them to ask if they would send one to you for consideration. These are 12" globes. I have a large 25" model here, a rather dull looking affair since it is without color. The Hammond people are now making my globe. I hope you hear from them soon.

Yours very truly,

Chas E. Riddiford

C.E. Riddiford

AIRWAYS

The New York Public Library

Astor, Lenox and Tilden Foundations

FIFTH AVENUE & 42ND STREET

New York, June 21, 1943

Dear Mr. Keller:

I am enclosing the annotations for the list of maps included with your letter of June 10, omitting the ones relating to the technical questions better handled by Harrison. Glareanus was a stickler, and I was able to locate very little of interest about him, particularly about the 1510 map. Unfortunately his original publications are out of the library for the duration.

see section material at front of folder

Because of press of other matters I've had to rush these blurbs more than I would have liked, but I am assuming they will be rewritten. I am sending them on now, and if you have any other specific problems we might still add to them. If time permits I'll try to get more on Glareanus.

I have not kept any accurate check on total time involved in my work connected with the Exhibit, but it is in the neighborhood of ten or eleven hours.

Sincerely yours,

Walter H. Kerr

N.Y. PUB. LIBRARY
Map P

June 10, 1943

Mr. Walter Ristow
Map Department
New York Public Library
New York, New York

Dear Mr. Ristow:

Enclosed is the list of maps which we discussed over the phone. If you will annotate those maps at your earliest convenience and return them to me, I will have Harrison take care of the technical material and the final wording.

Also any information on the Gleanus map which you can locate for me would be much appreciated. Encyclopedia Britannica, 1911, might help.

Sincerely yours,

Charles Keller

CK:BK
Enc.

Air-age geography exhibition

HISTORIC MAPS FOR SECTION "HOW MAN HAS DRAWN HIS WORLD"
(Suggested by Dr. Walter Ristow, New York Public Library)

Primitive Maps

Mexican (or Aztec) drawn on cloth; photograph reproduced in Imago Mundi, Part III (New York Public Library)

Marshall Island chart -- framework diagram of ocean currents and coral reefs, made of reeds and seashells; 4 ft. sq. (Museum of Natural History)

Ancient Civilization

Ga Sur Clay tablet cuneiform; ca. 2500 B.C. Oldest map on record. 2½ inches sq. Original at British Museum (Semitic Museum, Harvard University)

Babylonian World Map Cuneiform. Photography in Imago Mundi, Part I (New York Public Library)

Homer's Map of Mediterranean World (900 B.C.); wafer-shaped world surrounded by vast river. Drawing, Hughes Atlas, N.Y.P.L.

Strabo (200 B.C.). Greek map recognizing globular concept of world; accurate measurement of earth curvature. (Trenton Museum)

Roman Road Map. Clear color reproduction reconstruction by Pentinger; accurately shows distances and turns in road; ignores topography or direction; interesting contrast to philosophical approach of Greeks.

Mediaeval Period

The monastic orders devoted much time to designing world maps which literally interpreted the Biblical references to geography and repudiated all known scientific factual data, including the work of Ptolemy, second-century Egyptian scientist. Examples:

Beatus, 8th century A.D. Color; oval.
Herefordi, 13th century A.D. Color; round.
Cosmos outline drawing; square. (N.Y.P.L.)
Arabian, 15th century. Color. Clear and accurate. Interesting illumination. Possibly used by Columbus. (N.Y.P.L.)
Behaim Globe. 15th century. Original in copper. Photograph of original and gores in color. Studied by Columbus. (N.Y.P.L.)

Navigators' hide charts (Portolani) 13th century

Portolan chart Very accurate; based on Greek coastal charts; shows celestial plotting lines; original examples on sheepskin in Hispanic Society Museum.

Columbus map (reconstruction) in full color (N.Y.P.L.)

Juan de la Cosa Columbus' pilot drew map including America Clear color reproduction, N.Y.P.L.

Mercator Double hemisphere map 1587
This was not the projection for which Mercator became famous. However, it was more popular during 17th century than that known today. Reproduction, N.Y.P.L.

Mercator Projection 1569 (unclear)
This is the projection which has been most widely used for the last three centuries. Reproduction of original at N.Y.P.L.

Wright adaptation of Mercator, 1599
Much clearer reproduction than the original Mercator (N.Y.P.L.)

Baroque - 17th century Mercator
Highly decorated and semi-scientific. Good originals in full color. (N.Y.P.L.)

Cassini Polar Projection 1696
New scientific contribution to field of cartography (William Clements Library)

SEE Rosenbach to SEE M
A AIRWAYS

June 17, 1943

Dr. A. S. W. Rosenbach
15 East 51st Street
New York, New York

Dear Dr. Rosenbach:

The Museum of Modern Art is planning to open on July 1 an exhibition entitled Airways to Peace. This will include many maps, models and globes having to do with global geography and the effect of aviation on human affairs. We are very anxious to include in this exhibition the reproduction of your Ptolemy map which appeared in the April, 1932 issue of Fortune magazine. Fortune has been kind enough to supply us with the issue in question, but since the map belongs to you we should like very much to have your approval in the matter. If you have no objection to our exhibiting this most important map, will you kindly write or ask your secretary to telephone my office to this effect?

Sincerely yours,

MW:BK

HARVARD SEMITIC MUSEUM
A to P to WASH

October 30, 1943

Mr. Robert H. Pfeiffer
Semitic Museum
Harvard University
Cambridge, Massachusetts

Dear Mr. Pfeiffer:

Mr. Wheeler is out of town but before he left he asked me to convey to you his very sincere thanks both for your permission to use the Ga-Sur map in the tour of the AIRWAYS TO PEACE exhibition and for your kind comment on the exhibition itself. Your cooperation has been and continues to be most helpful.

Thank you again.

Very sincerely yours,

w

Assistant to Mr. Wheeler

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

October 27, 1943

Mr. Monroe Wheeler
Museum of Modern Art
New York City

Dear Mr. Wheeler:-

In reply to your telegram of yesterday, I wired you that the Semitic Museum gladly approves the plan to include the Ga-Sur map in the "Airways to Peace" exhibition tour of various cities in the United States. May I use this opportunity for congratulating you for the success of the exhibition which you have assembled, and also our pleasure of having been able to make a slight contribution to it?

With my kindest personal regards,

Yours faithfully,

Robert H. Pfeiffer

Robert H. Pfeiffer

AIRWAYS

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

August 24, 1943

Mrs. C. S. Hartman
The Museum of Modern Art
New York City

My dear Mrs. Hartman:-

It was very kind of you to send back to me Meek's book and the Bulletin of the American Schools of Oriental Research in which the Ga-Sur map is described. I am glad to hear that this material was of some use to Mr. Wheeler in preparing the descriptive label for exhibiting the tablet.

Thank you for your kind letter of the 17th. I am very eager to see your exhibit, AIRWAYS OF PEACE, and I hope to be able to visit it before its close at the end of October.

With kind regards,

Yours respectfully,

Robert H. Pfeiffer

Robert H. Pfeiffer

Pfeiffer-Semitic Mus

AIRWAYS

August 17, 1943

Dear Dr. Pfeiffer:

Mr. Wheeler is in Chicago at present, but before he left he asked me to return to you the publications concerning the Ga-Sur tablet which you so kindly lent him. This material was, of course, extremely helpful to Mr. Wheeler in preparing the labels.

If you have not already seen the exhibition, AIRWAYS TO PEACE, you may be interested to hear that it will continue through October 31.

I trust that the book and the pamphlet will reach you promptly. With many thanks on behalf of the Museum, I am

Very truly yours,

(Mrs. C. S. Hartman)
Assistant to Mr. Wheeler

Dr. Robert H. Pfeiffer
The Semitic Museum
Harvard University
Cambridge, Massachusetts

CCH:cv

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

ROBERT H. PFEIFFER
ROUTE 1
WESTPORT, CONN.

June 5, 1943

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
New York City

Dear Mr. Wheeler:-

Thank you for your recent letter about the "oldest map in the world" found at Ga-Sur (Nuzi, Iraq).

To my great regret my assistant, whose letter I enclose [please do not return it], writes that the case in which the cast of the map is deposited, is practically inaccessible. To get this map it would be necessary not only to employ five or six men to move a number of heavy cases, but first of all to obtain the permission of the U.S.A. Army to do this. The Museum building has been entirely taken over for the School of Army Chaplains and I have no jursidiction at present. The necessary formalities and the rest would take considerable time, and some expense. I therefore hope that, under the circumstances, the drawing and photograph of the map (published in Meek's book, a complimentary copy of which I have ordered for you) may be sufficient for your purposes; I sincerely regret that war conditions prevent me from serving you better.

With my kindest regards and good wishes,

Yours faithfully,

Robert H. Pfeiffer

HARVARD UNIVERSITY
DEPARTMENT OF SEMITIC LANGUAGES AND HISTORY
CAMBRIDGE, MASSACHUSETTS

June 2 1943

Dear Dr. Pfeiffer:—

Glad to hear you arrived safely and had a nice trip. Now—here's hoping you are having nice weather. So—that you and Mrs. Pfeiffer can enjoy a swell vacation. Lots of rain here. And—everything O-K, at the home and museum. I looked in the Curator's room and find no Nazi map. As to the

map in the case. I am unable to get at it. The cases are jammed against one another. It will take quite a few men to unravel the cases.

With best regards,

Yours very truly

Joe

Semitic Museum -

AIRWAYS

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

ROBERT H. PFEIFFER
ROUTE 1
WESTPORT, CONN.

May 29, 1943

Mr. Monroe Wheeler
Director of Exhibitions and Publications
Museum of Modern Art
New York City

June 4, 1943.

Dear Mr. Pfeiffer:

I cannot tell you how much we appreciate your kindness and interest in connection with our summer exhibition entitled Airways to Peace. It will open June 29 and continue through October 17, and if you can come to see it I hope you will let me know so that I may have the pleasure of thanking you personally.

In the meantime, I hope that Mr. Tratnyek will be able to ship your cast of the Ga-Sur map. If he cannot do so, however, we shall use the publication which you have so kindly asked the Harvard Press to send us. I shall look forward to receiving it.

With many thanks for your courteous collaboration, I am

Sincerely yours,

Mr. Robert H. Pfeiffer
Route 1
Westport, Conn.

MW:lf

Miss Dudley

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

ROBERT H. PFEIFFER
ROUTE 1
WESTPORT, CONN.

May 29, 1943

Please return to

Mr. Monroe Wheeler
Director of Exhibitions and Publications
Museum of Modern Art
New York City

My dear Mr. Wheeler:-

Your telegram to Cambridge reached me just before I was leaving, and your similar telegram to Westport awaited my arrival here.

I am writing at once to the Superintendent of the Semitic Museum (Joseph Tratnyek) to ship you the Ga-Sur map (i.e. its cast), and I hope he will be able to do it. There may be some difficulty. For the duration, the Semitic Museum has been taken over entirely by the Army School for Chaplains and civilians like me no longer enter the building. To provide for classrooms they have pushed all the exhibition cases against the walls and Mr. Tratnyek told me he feared that the case containing the Ga-Sur map may now be inaccessible unless many other cases are moved.

To provide for the contingency that the cast of the map be now out of reach, I am asking the Harvard University Press to send you a copy of "Excavations at Nuzi, vol. III" (Theophile Meek, OLD Akkadian, Cappadocian, and Sumerian texts from Nuzi). In the volume you will find a drawing, ~~a drawing,~~ a photograph, and an explanation of the Ga-Sur map: you are welcome to the volume in any case with our compliments, and you may cut out the drawing and the photograph for exhibition purposes. They will give to the public an excellent idea of "the oldest map in the world" (about 2400 B.C., in any case earlier than 2200 B.C.).

With my kindest regards,

Yours faithfully,

Robert H. Pfeiffer

Robert H. Pfeiffer

Mr. Wheeler

Airway

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

May 21, 1943

Mr. Monroe Wheeler
The Museum of Modern Art
New York City

Dear Mr. Wheeler:-

Before sending you the map from Ga-Sur (Nuzi, near Kirkuk, Iraq), which you request for your "Air Age Geography" exhibition, I must tell you that the original tablet--to my great chagrin--is now in Baghdad, Iraq. According to the terms of our excavations at Nuzi, we were obliged to allow the Iraq Museum to select half of the published tablets from that site, and unfortunately the "map" is one of those I sent back after publication. I have here only a plaster cast of the original, colored brown, as well as photographs. I shall be glad to send you the cast, if you wish to exhibit it. If such is the case, can you let me know as soon as possible, since I expect to be gone for a month after the 28th?

With kind regards,

Yours sincerely,

Robert H. Pfeiffer

Robert H. Pfeiffer

STEFANSSON
A to P. to WASH.

19

October 30, 1943

Mr. Vilhjalmur Stefansson
67 Morton Street
New York 14, New York

Dear Mr. Stefansson:

Mr. Wheeler is out of town but before he left he asked me to convey to you his most sincere thanks for your permission to include your northern hemisphere map in the tour of the AIRWAYS TO PEACE exhibition. Your cooperation has been and continues to be most helpful.

Thank you again.

Very sincerely yours,

w

Assistant to Mr. Wheeler

VILHJALMUR STEFANSSON
67 MORTON STREET
NEW YORK 14

October 27, 1943

Dear Mr. Wheeler:

Your letter of October 26 asks whether you may use my northern hemisphere map from THE ADVENTURE OF WRANGEL ISLAND, New York, 1925, in your Airways to Peace exhibition at the Civil Aeronautics Administration, Washington, and in future exhibitions there or elsewhere. I am of course delighted to say yes.

V. Stefansson

Mr. Monroe Wheeler,
Director of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd St.
New York 19, N.Y.

A to P. to/ASH

Stefansson.

UNIQUE PTG. & STA. CO., INC.—No. 420

Stefansson-
A to P. to Wed

TELEPHONE MESSAGE

Tpd. Miss Ryko 10/27/43

Date

For Mr. Wheeler

By Mr Stefansson

Phone

Time

Remarks Answering his letter of October 27 and to say — yes — you may use his map in Bird aerophotography Exhibit

Rec'd by

Mr. V
67 Mo
New Yo

Dear M

The Ci S. Government
has ar e exhibition
to Was it the polar
projec ly lent us
for th o give us
permis ?

We hop after the
close en December 1.

MW:hw

A to P. to l-r/ASH

19

Stefansson.

October 26, 1943

Mr. Vilhjalmur Stefansson
67 Morton Street
New York, New York

Dear Mr. Stefansson:

The Civil Aeronautics Administration of the U. S. Government has arranged to take the entire Airways to Peace exhibition to Washington and we should like to include in it the polar projection map from your book which you so kindly lent us for the exhibition. Will you be good enough to give us permission to send your map with the exhibition?

We hope to send the exhibition to other cities after the close of the run in Washington where it will open December 1.

Very sincerely yours,

MW:hw

Stefansson's AIRWAYS

July 12, 1943

Mr. Vilhjalmur Stefansson
67 Morton Street
New York, New York

Dear Mr. Stefansson:

Enclosed are some photographs taken at the opening of AIRWAYS TO PEACE. As some of these have been released exclusively to certain magazines, please do not release them for publicity purposes without consulting the Museum's Publicity Director, Miss Sarah Newmeyer.

It was delightful to have you with us for the opening, and we are exceedingly grateful for your kind collaboration.

Sincerely yours,

P.S. We are having a photograph taken of your map, including the label, in the exhibition, but it is not ready yet. As soon as we receive it, I shall send you a copy.

MN:CH

Firm AIRWAYS

VILHJALMUR STEFANSSON
67 MORTON STREET
NEW YORK

June 23, 1943

1925 MAP OF NORTHERN HEMISPHERE

Dear Mr. Zinn:

At the direction of Mr. Charles Keller of the Museum of Modern Art, we are sending you herewith a copy of a map, "The Arctic in Our Midst," which was published by the Macmillan Company the autumn of 1925 at the back of my book THE ADVENTURE OF WRANGEL ISLAND. That book itself is being sent to Mr. Keller.

For your information and for that of Mr. Keller, to whom I am sending a carbon:

I published my first map, which had back of it the same argument, in the National Geographic Magazine for August, 1922; a second map was published two months later at the back of my book THE NORTHWARD COURSE OF EMPIRE.

I am sending Mr. Keller the August National Geographic, containing the 1922 map, and the Macmillan Company are sending him a copy of THE NORTHWARD COURSE OF EMPIRE.

Mr. Jacob Zinn,
33 West 14th Street,
New York, 11, New York.

Stefansson A to P

STEFANSSON

WA 5-5623

VILHJALMUR STEFANSSON
67 MORTON STREET
NEW YORK

June 17, 1943

June 23, 1943.

Dear Mr. Keller:

Dear Mr. Stefansson: sending you northern and southern hemispheres by DeLisle, dated at St. Petersburg, 1740; and

We are very grateful indeed for your recent kind letter to Mr. Keller regarding the DeLisle and Faden hemispheres. ern hemispheres of the same size and comparable execution;

Our introductory map section, "How Man has drawn his World," is necessarily very brief and I doubt if we shall be able to fit these in at the present time although we shall be most happy to consider them.

In your letter you mention that you were sending them to us, but they have not yet been received.

We sincerely hope that you and Mrs. Stefannson will be able to attend the supper that our Trustees are giving to inaugurate the Airways to Peace exhibition on July 1.

With kind regards, I am

Museum of Modern Art,
11 West 53rd Street,
New York, New York.

Very sincerely yours,

Mr. Vilhjalmur Stefansson
67 Morton St.
New York, N. Y.

MW:lf

T.H.

Stefansson
A WP.
WA 5-5623

VILHJALMUR STEFANSSON
67 MORTON STREET
NEW YORK

June 17, 1943

Dear Mr. Keller:

We are sending you northern and southern hemispheres by DeLisle*, dated at St. Petersburg, 1740; and ditto by Faden, of 1790. These hemispheres are from atlases which presumably contained eastern and western hemispheres of the same size and comparable execution; but you had better check, for we do not have the complete atlases.

Stefansson

Mr. Charles Keller,
Museum of Modern Art,
11 West 53rd Street,
New York, New York.

* Was it Des

T.H.

Stefansson
AGP

The Stefansson Library,
67 Morton Street,
New York, 14, New York.

June 17, 1943

THE NEAR WAY TO THE FAR EAST

According to the life of Christopher Columbus by his son Ferdinand, and other sources, a plan had developed in the Admiral's mind before he sailed on his fourth voyage westward to the Indies that his fifth voyage would be northward to the Indies. He said that in February, 1476, he had sailed 100 Spanish leagues (about 300 English miles) north from Iceland without seeing any ice, and he believed that he could sail in that direction all the way to China without interference by ice. We know now both that he was right about the usual absence of ice in winter from the sea for more than 300 miles north from the northeast corner of Iceland and that he was wrong about thinking he could sail to China by way of Latitude 90° North. But as late as 1818 this belief was held by many; for instance in that year the government of Britain sent an expedition commanded by David Buchan (an ancestor of John Buchan who was Governor General of Canada under the name of Lord Tweedsmuir) with instructions that his ships, Dorothea and Trent, should proceed from England direct north to the North Pole and thence direct south to the Hawaii Islands.

During the entire period from Columbus to Buchan, and indeed until the Sir John Franklin tragedy of about 100 years ago, the maritime nations, specially the Dutch and British, were intensely conscious that the earth is spherical and that the near way to the Far East is north from northwestern Europe. Millions of pounds sterling, scores of vessels and hundreds of lives were invested in the proposition that you can reach China from Europe by sailing the northern, northeastern or northwestern passage.

During the same period the maps reflect these aspects of knowledge and belief. There may never have been a time when, as a consequence, maps of the northern and southern hemispheres were more common than those of the eastern and western; but there was not in the sixteenth, seventeenth, eighteenth or early nineteenth centuries that nearly exclusive preoccupation with eastern and western hemispheres which we know who studied the ordinary school geographies of the last half century. Twenty years ago it was impossible to purchase from any American map publisher a wall map of the northern and southern hemispheres of the same size as the eastern and western hemispheres which they were issuing. Indeed, the nearest thing to a wall map of the northern hemisphere obtainable fifteen years ago was issued by the U. S. Weather Bureau, and it was without a complementary southern hemisphere. when

It would be interesting to telephone around to firms like Rand McNally, Hammond, etc., to see whether they now publish northern and southern hemisphere wall maps of the same size as their eastern and western; and, if so, at what time they first issued them.

STILLWELL

return to Wheeler

October 19, 1943

Dear Lieutenant Stillwell:

Your recent letter to Mr. Barr concerning the Airways to Peace exhibition has been referred to Mr. Wheeler. Airways to Peace will continue here through October 31st. After that it will probably go directly to Washington, and following that showing it will be circulated throughout the country. I am afraid, therefore, that the material included in it would not be available until the tour is completed, which will undoubtly not be for at least a year or two. I hope that some of your student officers have been able to see the exhibition during its New York showing.

With many thanks for your interest in Airways to Peace, I am

Sincerely yours,

Mrs. C. S. Hartman
Assistant to Mr. Wheeler

Lieutenant Richard Stillwell
Naval Air Combat Information School
Quonset Point, Rhode Island

CSH:joc

Mr Fisher
Mr Wheeler

U. S. NAVAL AIR STATION
QUONSET POINT, R. I.
NAVAL AIR COMBAT INFORMATION SCHOOL

2 September 1943

Mr. Alfred Barr, Director
Museum of Modern Art
New York City, New York

Dear Al:

You may be surprised to learn that I am up here conducting the course in Maps and Photographs at the Air Combat Information School.

I was very much interested to hear of the current exhibit at the Museum of Modern Art, and my colleague, Lieutenant (jg) Melville Branch, who has just seen it, suggests that there is some material in the exhibit which would be most useful to us in teaching map projections. Presumably, much of the material now in the exhibit would not be available when the show is over--nor would it be practicable for us to use any great amount of it, but if we could obtain some of the three dimensional material, such as globes or maps explaining various aspects of projections, it would be most useful.

We have insufficient time in our course to devote to the subject of projections, and our purpose is to give the student officers some understanding of the general problems involved and the advantages and limitations of various sorts of map projections. Hence the great advantage of any material which would facilitate the visualization of what to a good many people is a rather difficult subject to understand.

With best regards,

Sincerely,

Dick Stillwell

RICHARD STILLWELL
Lieutenant, U.S.N.R.

hq Fisher
Van Zandt

The Brookings Institution

Washington, D. C.

722 JACKSON PLACE N. W.

AIRWAYS

April 8, 1943

April 15, 1943.

Mr. Monroe Wheeler, Director
The Museum of Modern Art
11 W. 53d Street
New York, N. Y.

Dear Mr. Van Zandt:

Thank you very much for your very kind letter of April 8 calling our attention to Professor Irving Fisher's polyhedron. I have seen Professor Fisher and feel that his projection does simplify the representation of many aspects of global geography and I think it would be especially useful for schools.

Although we have not yet completed the financial arrangements for the Global Geography exhibition, we are proceeding with our plans for it and I shall certainly want to include Professor Fisher's projection.

Sincerely yours,

Mr. J. Parker Van Zandt
The Brookings Institution
722 Jackson Place N.W.
Washington, D. C.

MW:lf

Dear Mr. Wheeler: I have just received your interesting letter of April 8 concerning the geography, tent[illegible] I am impressed with the [illegible] and want to congratulate you on your forward-looking and imaginative approach to the problem.

Before the lay[illegible] of air-age geography, I have a suggestion which I believe will prove of real value to you:

It is a curious mathematical fact that the maximum number of plane symmetrical surfaces with which a solid can be constructed are 20 equilateral triangles. Mathematically, this is called an "icosahedron". Thus a sphere can be replaced with a solid with 20 exactly identical faces, the aggregate area of which will be within 5 percent of the actual area of the surface of the sphere.

[illegible] segments or equilateral triangles will rep[illegible] earth's surface. The scale in each tri[illegible] (by a projection tangent to the center of each triangle) [illegible] identical. That is, any triangle can be superimposed over any other triangle and will be identical as to scale and amount of area included.

This 20-sided polyhedron can be arranged as a flat map in a great variety of combinations. It lends itself to a number of very dramatic sequences by which to emphasize various factors of air-age geography. In this respect and in many others it is far superior to the non-symmetrical 14-sided "Dymaxion map" recently described in LIFE. Because of its symmetry it greatly simplifies the graphic representation of other factors, such as relative density of population (for example: the 20 equal parts of the earth could be shown

The Brookings Institution

Washington, D. C.

722 JACKSON PLACE N. W.

April 8, 1943

Mr. Monroe Wheeler, Director
The Museum of Modern Art
11 W. 53d Street
New York, N. Y.

Dear Mr. Wheeler:

Mr. Wm. A. M. Burden has referred to me for comment your interesting preliminary outline for an exhibition on air-age geography, tentatively called "Global War for World Peace." I am impressed with the objectives of the exhibit and want to congratulate you on your forward-looking and imaginative approach to the problem.

In connection with your second purpose, "to set before the layman in a dramatic and lucid sequence the basic factors of air-age geography," I have a suggestion which I believe will prove of real value to you:

It is a curious mathematical fact that the maximum number of plane symmetrical surfaces with which a solid can be constructed are 20 equilateral triangles. Mathematically, this is called an "icosahedron". Thus a sphere can be replaced with a solid with 20 exactly identical faces, the aggregate area of which will be within 5 percent of the actual area of the surface of the sphere.

Each of these 20 segments or equilateral triangles will represent 5 percent of the earth's surface. The scale in each triangle can be drawn (by a projection tangent to the center of each triangle) so as to be identical. That is, any triangle can be superimposed over any other triangle and will be identical as to scale and amount of area included.

This 20-sided polyhedron can be arranged as a flat map in a great variety of combinations. It lends itself to a number of very dramatic sequences by which to emphasize various factors of air-age geography. In this respect and in many others it is far superior to the non-symmetrical 14-sided "Dymaxion map" recently described in LIFE. Because of its symmetry it greatly simplifies the graphic representation of other factors, such as relative density of population (for example: the 20 equal parts of the earth could be shown

The Brookings Institution

Mr. Monroe Wheeler - 2

with figurines or small dolls standing on each segment in numbers proportional to the relative population density of each segment).

The inventor of this novel projection is Professor Irving Fisher, of New Haven, Connecticut (Box 1825). I have taken the liberty of telling him about your plans for the exhibition and have suggested that he contact you; or you may wish to get in touch with him. There are many interesting aspects of Professor Fisher's novel device which I am sure he will be pleased to discuss with you.

Trusting this suggestion may prove of value to both you and Professor Fisher, and with best wishes for the success of your exhibition, I am,

Very truly yours,

J. Parker Van Zandt

cc: Prof. Irving Fisher
Mr. Wm. A. M. Burden

WY9AL

October 7, 1943.

Dear Miss Wygal:

I have received your inquiry of October 5 regarding educational material on the global concept to be used in local YWCAs and I can highly recommend the publication on this subject by Consolidated Vultee Aircraft Corporation, which I believe may be obtained from them either at a low price or gratis. This was prepared by Richard Edes Harrison, who was our chief cartographic consultant for the Airways to Peace Exhibition.

In addition to this there are two air-age azimuthal equidistant projections published by C. S. Hammond Map Company and the Rand McNally Company. Above all, however, I recommend the use of two globes instead of maps because all maps will have distortions which are often difficult to understand, whereas by studying great circular routes on the actual globes there is no danger of misleading.

I enclose a copy of our Bulletin on our Airways to Peace Exhibition, additional copies of which may be had for fifteen cents.

Very sincerely yours,

Miss Winnifred C. Wygal
Secretary for Religious Resources
Y.W.C.A.
600 Lexington Avenue
New York, N. Y.

Enclosure
MW:lf

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

Mr. Wheeler

The National Board
Young Womens Christian Associations
of the United States of America

600 Lexington Avenue, New York, N. Y. Telephone: PLaza 3-4700 Cable Address: Emissarius, New York

October 5
1943

Director
Museum of Modern Art
11 W. 53rd Street
New York City, N. Y.

Dear Sir:

I am very much interested in the map exhibit which has been going on. I am engaged in educational work with young people. Could you give me any suggestions as to how to get in quantity cheaply printed copies of any of the important new types of map showing the globular world?

We would like in our educational material to direct local YWCAs as to where they can secure such maps as show the world in a new way.

I shall appreciate any help that you can give me.

Sincerely yours,

Winnifred C. Wygal

Winnifred C. Wygal
Secretary for Religious Resources
Division of Community YWCAs

WCW:CMac

228

MW&HJ

sent to Miss Counts

MW:hw

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

19

Mr Wheeler

What shall I answer?

OK

COPY TO MISS COURTER

February 14, 1944

Dr. John K. Wright, Director
American Geographical Society
Broadway at 156th Street
New York, New York

Dear Dr. Wright:

I find that through an oversight we have not formally requested the loan of four maps from the American Geographical Society for the remainder of the tour of our exhibition AIRWAYS TO PEACE. I evidently asked only that we be permitted to send the maps to the Washington showing, after which they were unfortunately sent on to Pittsburgh with the exhibition.

We should be very grateful indeed if you would grant us permission to exhibit these unusual and very instructive maps in other cities where the exhibition is scheduled to be shown. I hope you will feel, as we do, that this tour will provide an opportunity to share your fascinating collection with many people who might not otherwise have the privilege of seeing it.

The exhibition is now scheduled to appear in various cities through the spring and will have concluded its tour by early fall. We can, of course, remove the maps from the exhibition and have them returned to you directly. If, however, you can permit us to continue to show them it will keep the map sequence intact and add enormously to the interest and accuracy of the show as a whole. HW & HJ

May I offer once more my sincere apologies for our carelessness and thank you for the courtesy of your consideration.

Very sincerely yours,

OK renewal + sent to Miss Courter

MW:hw

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156TH STREET

AU 3-4620

Mr. Wheeler
What shall I answer?
DLD

February 4, 1944

Miss Dorothy H. Dudley, Registrar
The Museum of Modern Art
11 West 53d Street
New York 19, N.Y.

Dear Miss Dudley:

In July 1943 you borrowed certain maps from us for your exhibit, and according to our records the following maps have not yet been returned, although we understand that the exhibit has been discontinued:

1) Mapamundi hecho en 970 por el Beato de Liebana
2) World map, Septentrionalium terrarum descriptio per G. Mercatorem. 1613?
3) Facsimile of Piri Reis map, 1513 (Turkish map)
4) Weltkarte des Castorius gennant die Peutinger'sche tafel von Dr. Konrad Miller. 1888

We would appreciate it if you could return these four maps to us as soon as possible, as they are all valuable items from our library.

Yours very truly,

E. L. Yonge
Map Curator

I haven't talked with Miss Y. yet but I know it is O.K. with her but we ought to write Mr. Wright & ask a formal permission - also give sets and a description of the things to Miss Yonge -

P-
Society

AMERICAN GEOGRAPHICAL SOCIETY • NEW YORK

BROADWAY AT 156th STREET

Office of the Director

Return to

November 3, 1943

Dear Mr. Wheeler:

My understanding is that our Behaim globe is unique. It was made especially for the Society on the order of one of our former Councilors. While we were happy to loan it for exhibit here in New York as a courtesy to a sister institution, where we knew definitely that it would be well looked after, I hope you will forgive us if we do not accede to your suggestion that it be loaned for exhibition in Washington. Were it not unique I would feel differently about the matter, but under the circumstances I do not feel justified in taking the responsibility.

Sincerely yours,

John K. Wright

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd Street
New York 19, N.Y.

Amerap -

Am. Geog. Society

September 8, 1943

Miss Ena L. Yonge
Map Curator
American Geographical Society
Broadway at 156th Street
New York, New York

Dear Miss Yonge:

Miss Dudley has given me your letter of September 3 and I am sending immediately the text which accompanies the facsimile of the Mercator world map of 1569.

We are very sorry indeed that this should have been overlooked.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

w

AMERICAN GEOGRAPHICAL SOCIETY·NEW YORK

BROADWAY AT 156TH STREET

Mr. Wh

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK

BROADWAY AT 156th STREET

September 3, 1943

Miss Dorothy H. Dudley, Registrar
Museum of Modern Art
11 West 53d Street
New York City

Dear Miss Dudley:

here 4

Mr Kel

We wrote to you on July 24th last, but as we have had no reply, are bothering you again.

here

here

You failed to return to us the text which accompanies the facsimile of Mercator world map of 1569, issued by the International Hydrographic Bureau in 1931. You returned the two sheets of the facsimile, among other material which you had borrowed, and we are anxious to have the text returned, as it is important that it should not be lost.

Yours very truly,

Eva L. Gorge

Map Curator

AMERICAN GEOGRAPHICAL SOCIETY·NEW YORK

BROADWAY AT 156TH STREET

Mr. Wheeler

July 24, 1943

Miss Dorothy H. Dudley, Registrar
Museum of Modern Art
11 West 53d Street
New York City

Dear Miss Dudley:

Enclosed is the receipt for the maps returned to us, and following is a list of the items still charged to you, according to our records:

here 43.1343 1) Mapamundi hecho en 970 por el Beato de Liébana

Mr. Kelly could not find 2) World map, Septentrionalium terrarum descriptio per G. Mercatorem. 1613?

3) Text of 39 pp. to accompany facsimile of Marcator world map of 1569, issued by International Hydrographic Bureau, Monaco, 1931 — hereafter

here 43.1344 4) Facsimile of Piri Reis map, 1513 (Turkish map)

here 43.1345 5) Weltkarte des Castorius gennant die Peutinger'sche tafel von Dr. Konrad Miller. 1888
[the cover to this map was returned]

With regard to item 3, we would be glad to have the text returned, as you returned the two sheets of the map itself, as we presume you do not mean to keep the text.

Yours very truly,

Ena L. Yonge

Map Curator

THE MUSEUM OF MODERN ART

Date July 9, 1943

To:

From

AMERICAN GEOGRAPHICAL SOCIETY · NEW YORK
BROADWAY AT 156th STREET

July 20, 1943

Museum of Modern Art
11 West 53rd Street
New York City

Gentlemen:

On June 22nd Miss Catherine Weinstein borrowed a copy of the Zeitschrift für Geopolitik for January, 1940 with the understanding that the cover was to be photostatted for use in your exhibit. As it has not been returned, we would like to have it as soon as possible.

Very truly yours,
Nordis Felland
(Miss) Nordis Felland
Assistant Librarian

Have on July 20

#9 (MOMA 43.1344)
#11 (MONA 43.1345)

Atlas on receipt 43.1374 - Mercator Polar Projection 16th Cy - Reprod.

THE MUSEUM OF MODERN ART

Date July 9, 1943

To: Miss Dudley

Re: Returns to Am. Geog. Soc.

From: M. Allen

Taken on July 20

The following is a list of the items which are to be returned to the American Geographical Society, Broadway at 156th Street when we next have a trip.

- The ancient Mappa Mundi in Hereford Cathedral (Key to map and text - 1 sheet)
  (Their #1 on memo)
- Richardi de Haldingham seu de Bello Mappamundi (facsimile of Hereford map, from Konrad Miller's "Die alten weltkarten" Heft IV, 1896
  (Their #2 on memo)
- ~~Axx~~ Arabic map; facsimile from "Mappae Arabicae", Vol. 5
  (Their #4 on memo)
- Peutinger table; Plate 5, from Konrad Miller's "Die altesten Weltkarten" 1898 Heft VI (with folder)
  (Their # 5 on memo)
- Plates 8 & 9 from full-size facsimile of Mercator map of the world 1569 by International Hydro, Bureau, Monaco, 1931 and text of 39 pp.
  (Their #7 on memo)
- Facsimile of reduction of G. Mercator map on 1 sheet, from "Sphere terrestre et sphere celeste de Gerard Mercator de Pupelmonde..." Bruxelles, 1876
  (Their #8 on memo)
- Plates III & IV from "Geographie de Ptolemee" Bibliotheque Nationale Paris
  (Thier # 10 on memo)

Not listed on memo:
- Zeitschrift Magazine
- Large Map on roll of South America (Harry has the cardboard box in which this came in the Mezz.)

The following is still somewhere in the Museum, but unlocated. To be returned later:

Septentrinalium Terrarum descriptio, per G. Mercatorem 1613?
(Their #6 on memo) Still not found. Notified Mr. Wheeler

Keeping for exhibition, and receipt sent, the following #s on their memo to Mr. Keller:

- #3 (MOMA 43.1343)
- #9 (MOMA 43.1344)
- #11 (MONA 43.1345)

Also on receipt 43.1374 - Mercator Polar Projection 16 th Cy - Reprod.

AIRWAYS

Acknowledged June 17

AMERICAN GEOGRAPHICAL SOCIETY . NEW YORK

BROADWAY AT 156th STREET

THE MUSEUM OF MODERN ART

Date June 21, 1943

To: Harry Shevington

Re: Picking up Globe from American Geographical Society

From: M. Allen

Dear Harry:

On Friday morning, June 25th, on your way down to work, would you please stop off at the American Geographical Society, Broadway and 156th St. and collect a globe mounted on iron stand for the Airways to Peace Exhibition. Bring it down in a taxi to the Museum.

I am attaching full pick-up order on my envelope for this collection.

Very truly yours,

John E. Wright

Director

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
New York City

AIRWAYS

Acknowledged June 17

AMERICAN GEOGRAPHICAL SOCIETY . NEW YORK

BROADWAY AT 156th STREET

June 11, 1943

Dear Mr. Wheeler:

I thank you for your kind letter of June 10. I am returning the loan form for the replica of the Behaim Globe.

The globe was specially made for Dr.Walter B. James, a former member of the Council of the Society, who presented it to us between 1908 and 1924. The globe itself was made by George Philip & Son, Ltd. of London, using the colored facsimile in the form of gores accompanying E.G. Ravenstein's book entitled"Martin Behaim: His Life and His Globe," published by George Philip & Son in 1908. The iron stand was made by wrought iron workers in Nürnberg who reproduced the original iron stand in the Museum there. We have a copy of Ravenstein's book which gives full details about the globe, and we should be glad to loan it to you for a few days should you so desire.

We shall be happy to deliver the globe to your representative during the week of June 21.

Very truly yours,

John K. Wright

Director

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
New York City

Received as a loan from the American Geographical Society the following maps from the permanent collections of the Society, it being understood that these maps will be retained in the offices of the

Museum of Modern Art, New York (Charles Keller)

and will be returned to the Society as soon as feasible or upon request by the Society:

1) The ancient Mappa Mundi in Hereford Cathedral
(Key to map & text - 1 sheet)

2) Richardi de Haldingham seu de Bello Mappamundi.
(facsimile of Hereford map, from Konrad Miller's "Die Ältesten weltkarten" Heft IV, 1896

3) Mapa-mundi hecho en 970 por el Beato de Liébana

4) Arabic map; facsimile from "Mappae Arabicae", Vol.5

5) Peutinger table; Plate 5, from Konrad Miller's "Die Ältesten Weltkarten" 1898 Heft VI

6) Septentrionalium terrarum descriptio, per G.Mercatorem 1613?

7) Plates 8 & 9 from fullsize facsimile of Mercator map of the world 1569, by International Hydro,Bureau, Monaco, 1931 & text of 39 pp.

8) Facsimile of reduction of G.Mercartor map on 1 sheet, from "Sphère terrestre et sphère celeste de Gerard Mercator de Rupelmonde...." Bruxelles, 1876

9) Facsimile of Piri Reis map, 1513 (Turkish map)

10) Plates III & IV from "Géographie de Ptolémée" Bibliothèque Nationale Paris,

11) Weltkarte des Castiruys gennant die Peutinger'sche tafel von Dr.Konrad Miller. 1888

Signed: (Office)

(by)

Telephone:

Date: June 2, 1943

Brentano's AIRWAYS

June 17, 1943

Brentano's Book Store, Inc.
586 Fifth Avenue
New York, New York

Gentlemen:

This is to identify Miss Catherine Weinstein, a member of the Museum of Modern Art staff, who wishes to select and bring back to the Museum certain maps. I shall issue an official order to cover these maps as soon as we know exactly what they are and the price.

Sincerely yours,

MW: BK

Miss Weinstein signs below:

FISITER

Canada- Hydrographic

AIRWAYS

CANADA

DEPARTMENT
OF
MINES AND RESOURCES
SURVEYS AND ENGINEERING BRANCH

ADDRESS REPLY TO:
HYDROGRAPHIC AND MAP SERVICE

QUOTE FILE

61763.

OTTAWA

Labelle Bldg.,
June 4th, 1943.

Monroe - Wheeler Museum,
Modern Art,
New York, N.Y.,
U.S.A.

Gentlemen:

I am in receipt of your telegram of June 3rd as follows:

"Can you supply at our expense six copies of your Northern Hemisphere map 1941 North Pole Projection".

Six copies of the map of the Northern Hemisphere have been mailed to your address.

An account for $1.50 is enclosed.

Yours very truly,

H.G. Barber
for Surveyor General, and
Chief, Hydrographic Service.

1 pcl.
1 encl.
EH.

FISHER
A to P

19 PROFESSOR IRVING FISHER
BOX 1875
NEW HAVEN 6 CONNECTICUT

Chicago

IF REMITTANCE IS MADE BY LOCAL CHECK, EXCHANGE MUST BE ADDED TO FACE OF BILL.

The University of Chicago Press

5750 ELLIS AVENUE
CHICAGO-ILLINOIS

Please Return One Copy of this Invoice with your Remittance.

2

PAYABLE IN UNITED STATES CURRENCY
TERMS: NET 30 DAYS

INVOICE NO.
88978

MO.	DAY	YR.	INVOICE NO.	YOUR ORDER NO.	SHIPPING INSTRUCTIONS, REMARKS, ETC.	INVOICE NO.
03	43		88978	18344		

SOLD TO
MUSEUM OF MODERN ART
11 WEST 53 STREET
NEW YORK NEW YORK

SHIPPED TO

NAME OF BOOK	QUANTITY	UNIT PRICE	TOTAL LIST	DISC. RATE	BILLED
GOODE MAP NO 201 PC	1	5	5		5 00
CARRIAGE					1
					10

label (stick)
Goode's North + South Polar Hemispheres
have Billy keep for A to P actions
sent to Billy 9/9/43

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

FISHER
A to P

19

January 23, 1945

Professor Irving Fisher
The Yale Club
Vanderbilt Avenue and 44th Street
New York 17, New York

Dear Professor Fisher:

Mr. Wheeler is away from the office just now so I am taking the liberty of answering your letter of January 19th.

I have checked with the Department of Circulating Exhibitions, which as you know is now handling the Airways exhibition, and they tell me that the material in the show has been returned and is now in our storage space. It is being checked for condition, etc., and they hope to return your model to you in New Haven by the end of this month or the first of February. The exhibition was held over in Baltimore until last week which has caused some delay in breaking it up.

Thank you again for your generosity in lending the model for the showing here and for the tour.

Very sincerely yours,

Helen Ward
Assistant to Mr. Wheeler

w

FISHER

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN 8, CONNECTICUT

January 19, 1945

Mr. Monroe Wheeler, President
Museum of Modern Art
11 West 53rd Street
New York City

My dear Mr. Wheeler:

I am wondering what has become of my model which you had exhibited in New York, Washington, Pittsburgh and Indianapolis.

I understant that you were to have the exhibit returned.

I expect to be in New York next week and sugest that you reply to the Yale Club.

With kind regards.

Sincerely,

Irving Fisher

IF:M

returned
Rec'd of this
Accounts to New Haven

PROFESSOR IRVING FISHER
BOX 1825
NEW HAVEN 8, CONNECTICUT

February 2, 1944

Mr. Monroe Wheeler, President
Museum of Modern Art
11 West 53rd Street
New York City.

My dear Mr. Wheeler:

Last week when in Washington I learned from Mr. Stern that the exhibit had passed on to Pittsburgh.

The enclosed letter explains itself.

I assume that there can be no objection to doing in Pittsburgh what was done in New York and what would have been done in Washington had government regulations not prevented.

As you doubtless know, I had the string model reconditioned.

The total cost now amounts to some $400 and the sales in New York amounted to less than $30 although indirectly they resulted in sales from New Haven of about $150. Perhaps eventually I'll get back the whole $400!

At any rate, I am glad to have had this part in your exhibit which is serving a good educational purpose.

You will be interested to know that a book, World Maps and Globes, written by me and O.M. Miller, Cartographer of the American Geographical Society, will soon be out and also that Likaglobe will be written up in Click Magazine and the Christian Science Monitor. You probably know it was written up in Fortune Magazine.

The newspapers have also taken it up and television had me talking over the radio.

In many instances your exhibit was referred to.

I hope it will be as great a success in Pittsburgh as it was in New York.

Sincerely,

Irving Trieber

IFs
Enc.c.Courter

Hartness

Columbia Univ. Press

AIRWAYS

Fisher
7/9/43
AIRWAYS

My dear Mrs. Hartman

As I have to catch a train to Washington, I'm writing this note instead of waiting.

This morning Mr. Wheeler told me over the phone that the committee had authorized the sale of my map and that a notice would be placed on the wall map behind my "globe" in the Exhibit.

(my fountain pen has given out)

I told him of the attached colored map to take the place of the one now on the wall (which is wrong especially as to the legend).

He asked me to give it to you. In order, if possible, not to miss

Northeast
Columbia Univ. Press
AIRWAYS

the sales this week end, I have arranged to have a rubber stamp and pad delivered to you this afternoon which, if O.K., you may stamp on the sheet, say at the top.

It reads:

"Copies (uncolored) of this sheet may be obtained at the Entrance Desk at 10 cents a copy."

Of course I have no objections to having the wording changed, if Mr. Wheeler, wishes nor to having any other changes made he wishes.

I hope, however, that it will

Hurricane

AIRWAYS

(2)

not be necessary to have any further delays.

I left 500 sheets at the Entrance Desk.

I may get back from washington tomorrow.

Sincerely

Irving Fisher

Mr. Wagner did the coloring

Hardware

~~Columbia Univ Press~~

AIRWAYS

Fisher -

~~Table Display~~

+ Flat drawing - 12x20
cardboard circle 12" sqe -
Polar view - reduced
Sec. of 6 of total
fighting area

under glass

Free literature incl. post card

Sale at exhit?

Prof. Irving Fisher
Box 1825
New Haven
Conn

Hardware

AIRWAYS

Green's Pattern Shop
194 Chapel St.
New Haven Conn

THE MUSEUM OF MODERN ART
11 WEST 53 STREET
NEW YORK CITY

DATE September 17, 1943

TO

LEAVE TO PAGE

Harkness

Columbus Day Volume

AIRWAYS

April 22, 1943

Mr. Richard Harkness
Box 660, Station G
New York, New York

Dear Sir:

Please send me a copy of your global map. I enclose fifteen cents (15¢) in stamps to cover the cost.

Very truly yours,

MW:lj
Encl.

Columbia Univ. Press
AIRWAYS

THE MUSEUM OF MODERN ART
11 WEST 53 STREET
NEW YORK CITY

TO ~~NEWSPICTURES~~
~~48 West 48th Street~~
~~New York, New York~~

DATE ~~September 23, 1943~~
PLEASE PUT ORDER NUMBER ON INVOICE

Nº 18160

INVOICE BEARING ORDER NUMBER SHOULD BE MAILED DIRECTLY TO CONTROLLER'S OFFICE.

	UNIT PRICE	TOTAL
Photograph of Stefansson Map as shown in the AIRWAYS TO PEACE EXHIBITION		5 00

ORDERED BY

AUTHORIZED BY

FOR AIRWAYS TO PEACE

Dr. Walter Hinton
New York Public Library
Fifth Avenue and 42 St.
New York, New York.

MRJ:F

Columbia Univ. Rennes
AIRWAYS

May 21, 1943

Professor George T. Renner
Teachers College
Columbia University
New York, New York

Dear Professor Renner:

I want you to know how very greatly we appreciate the help you are giving us on the global war exhibition which the Museum is holding this Summer. I am returning to you herewith the map-making designs which you so kindly permitted us to photograph. We shall return the larger maps to you early next week.

I am asking our Comptroller's office to remit to you our usual consultant's fee of twenty-five dollars. This is, of course, only a token of our appreciation of your great interest and generous collaboration.

Very sincerely yours,

MW:CH

Pub. Library
AIRWAYS
AIRWAYS

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

June 17, 1943

June 25, 1943.

Mr. Monroe Wheeler
Director of Exhibitions
Museum of Modern Art
New York City

Dear Doctor Ristow:

I am writing to thank you for the very valuable assistance which you have so generously given the Museum in the preparation of our forthcoming AIRWAYS TO PEACE exhibition. We are arranging to pay you an honorarium of fifty dollars ($50.00), in appreciation of your kind collaboration. Such honoraria are always paid shortly after an exhibition opens, and I hope that this arrangement will be satisfactory.

We shall doubtless want to consult you next week for a few minutes regarding some additional labels.

With many thanks and all best wishes, I am

Sincerely yours,

Yours faithfully,

Robert H. Pfeiffer

Robert H. Pfeiffer

Dr. Walter Ristow
New York Public Library
Fifth Avenue and 42 St.
New York, New York.

MW:lf

SEMITIC MUSEUM
HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

AIRWAYS

June 17, 1943

Mr. Monroe Wheeler
Director of Exhibitions
Museum of Modern Art
New York City

Dear Mr. Wheeler:-

By now the Ga.Sur map should have reached you. Mr. Tratnyek has written me that he suceeded in getting it out of the case and that he has sent it to you. He writes that the expenses involved are $12.00. To eliminate book-keeping work I am advancing the money personally, and I should appreciate having your check made out to me personally, according to the enclosed invoice.

With my kindest regards and all good wishes for the success of your exhibition,

Yours faithfully,

Robert H. Pfeiffer

Robert H. Pfeiffer

Semitic Museum

AIRMAIL

May 27, 1943

Mr. Robert H. Pfeiffer
Semitic Museum
Harvard University
Cambridge, Massachusetts

I am very grateful indeed for your kind letter of May 21 regarding the Ga-Sur tablet. The plaster cast which you have will suit our purposes very nicely, and we shall be very happy to have it. Our exhibition opens June 29, but we should like to have the cast here two weeks prior to that date in order to construct a proper case for it. Meanwhile, could you supply us with a photograph, at our expense, the exact dimensions and any other information suitable for the label in the exhibition, such as approximate date etc. The Museum of Modern Art will, of course, pay all insurance and transportation charges. I am enclosing herewith a loan form to be filled out at your convenience. With many thanks for your generous collaboration in this exhibition, I am

Very sincerely yours,

MW:CH
Enclosure

Semitic Museum/
AIRWAYS

May 19, 1943

Mr. Robert Henry Peiffer, Curator
Semitic Museum
Harvard University
Cambridge, Massachusetts

Dear Mr. Peiffer:

At the suggestion of the Office of War Information the Museum of Modern Art is holding this Summer a major exhibition on air-age geography. The purpose of the exhibition will be to show the layman how man's world has been changed by his ideas and inventions. An important sequence in the exhibition will be called "How Man Has Drawn His World" and will include examples of map-making from the earliest times to the latest globe which the President uses in his study. I am writing to ask whether it would be possible to borrow for this important exhibition your tablet map found at Ga Sur, which, we are told, is the oldest map in this country. The exhibition will open on June 29 and continue until October 17. We feel that this unique map would be of the very greatest interest to our large public, and our Trustees will be most grateful if it proves possible for you to make this loan; I am enclosing herewith our usual blank for lenders in case the loan can be arranged. We shall, of course, be glad to bear all insurance and transportation expenses.

Thanking you in advance for the courtesy of your consideration, I am

Sincerely yours,

MW:CH

Airways to Peace
(Stefansson)

February 5, 1945

Dear Mr. Stefansson:

We are now making arrangements for returning the exhibition Airways to Peace and we would like to return to you the Stereographic Projection, 1925 - Map from the Adventure of Wrangel Island which you so generously lent to the exhibition. If convenient, we should like to return this map to you by truck on this Thursday, February 8th. We would appreciate it if you could let us know either by postal or by telephone whether this arrangement is satisfactory to you.

I am enclosing a postal for your convenience.

Sincerely yours,

Assistant to the Registrar

Mr. Vilhjalmur Stefansson
67 Morton Street
New York 14, New York

Encl.

ok-
petrie 2/8/45