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The Millionth Map of Hispanic America

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THE MILLIONTH MAP OF HISPANIC AMERICA had its remoter origin in a personal experience of 1913 when, for the third time, I was preparing to go to South America on an expedition which had the good fortune to be sponsored by the American Geographical Society. My plans included a study of settlements on the margin of the pre-cordillera of northwestern Argentina and of the arid Puna de Atacama that marks the meeting place of Bolivia, Argentina, and Chile in the Central Andes. A base map for field notations was required and, though I searched the files of the principal collections in this country, I could find no map suited to the purpose. It was necessary to construct one, and a quick compilation was made to suffice. But in putting together the pieces of then-existing maps and in seeing on the ground the errors of earlier compilations, it seemed to me that a base map for all of Hispanic America was a first desideratum if we were to do serious geographic work in that vast territory in the years ahead and not waste the time of successive scholars, for the most part ill-equipped to do a

The desirability of a world map on a uniform scale was first brought to official international attention in 1891 at the International Geographical Congress held at Berne, when Dr. Albrecht Penck, then professor of geography at the University of Vienna, urged the scale of 1:1,000,000. Resolutions were adopted confirming the appointment of an international committee to attain this objective. United States members on this committee were Major J. W. Powell, then director of the U. S. Geological Survey, and Dr. W. C. Mendenhall, then geologic aid in the Survey and later its director.

The map was discussed at the International Geographical Congresses of 1899 and 1904, but no generally acceptable scheme of action could be found because of national loyalties—notably the reluctance of the British geographers to accept the metric system for the map and the insistence of the French geographers that its meridian of origin should be through Paris rather than through Greenwich.

Credit for bringing the discussions to a head, as well as for certain noteworthy contributions to the scheme of symbolization that was ultimately adopted, must go to Henry Gannett, the geographer of the U. S. Geological Survey, who exhibited a series of maps of states of the United States, showing relief by close contours in brown, at the International Geographical Congress held at Washington in 1904. This now-familiar convention contributed largely to the final decision to use this method of representing topography on the International Map rather than the hachures and hill shading favored by the Germans and French. Furthermore, his proposal of a 1:1,000,000 scale was unanimously accepted by the International Geographical Congress at Geneva in 1908 and led to the adoption of a series of resolutions dealing with the style, scale, and symbolism of the map.

To make these resolutions official, the British Government invited an International Map Committee to meet in London the following year. It is from the year 1909, when this meeting was held, that the International Map is generally dated.

The completion of the American Geographical Society's Map of Hispanic America, conforming in scale and style to the International Map of the World on the scale of 1:1,000,000—about 16 miles to an inch, was announced on 19 December 1945. The event was celebrated by a dinner for the Council at the Rainbow Room, Rockefeller Plaza, New York City, on that date. Dr. Bowman, who was director of the Society in 1920 when the work was started, spoke as recorded here. Mr. Spruille Braden, Assistant Secretary of State, whose long experience in South America forms a useful background for his remarks, spoke as recorded in part on pages 323–325.

The 107 sheets of the map cover all the land areas of the American continents from the Mexican-United States boundary to Cape Horn, including the West Indies, a total of about 8,000,000 square miles, or nearly one-sixth of the land surface of the globe. The task of producing the map has required the labor of an average of seven compilers, draftsmen, and editors working continuously for 25 years; the total cost of research, compilation and drafting, publication, and supplies has been nearly half a million dollars.

cartographic job expertly. Not only would the work of compilation of each cartographically untrained student be badly done—an amateurish compilation would be unsystematic and patchy and, in fact, unscientific and unscholarly—but there was also the question of how the job could be done for the whole of Hispanic America in one lifetime.

Two short years after my expedition of 1913 I became director of the American Geographical Society and found in its Council and members a spirit of enterprise that helped generate a feeling of happy accord with respect to future plans. The first World War interrupted these plans, but directly thereafter it was possible to launch a program of research in Hispanic America in which the Millionth Map played an important part. This is surely the place to say that there would have been no map and no Hispanic-American program of research if we had not had the support of Archer M. Huntington. Generous as his financial help has been, it is the lesser of his two gifts to this enterprise. His buoyant spirit is combined with a critical instinct and a scholarly approach. We have drawn liberally upon his intellectual strength. We are proud of the map, but we are equally proud of our association with him in an objective undertaking that has called out the best in the men engaged upon it.

In opening a program of Hispanic-American research I was anxious lest the quality and grand purposes of it be not fully understood. It would have been easier to choose a second-best plan, one of small scope, and coast to a near and undistinguished goal. A more austere point of view had to be taken. It would only make the plan and the Society second rate to concentrate energies and funds upon anything less good than the best. For is it not true that every time we consciously choose the second best our stature and our usefulness are diminished thereby? A first-class project inspires others also to reach for the stars, and though we all fail to touch them, the *effort* is what produces those powerful waves that wash the farthest shores of thought and action. A learned society can never be great through second-best performance or through mere advertising or by acquiring a large membership and revenues, but only through its generative or germinant power in men's minds. Thus, the American Geographical Society is not a building with collections and a staff at 156th Street and Broadway, New York, but an idea, a standard, and a wholesome force wherever men read its publications.

The scale of 1:1,000,000 is not what gives the map its peculiar distinction, but if one is going to do a map of Hispanic America, it is obviously wise to fit it into an existing scheme if this be possible without sacrificing quality and usefulness. I have heard it said of the Hispanic-American map that the millionth scale is not a new idea. This quite misses the point. It was deemed wise to advance the highly desirable Millionth Map of the world (agreed upon in 1909 by international action), while constructing a map of the particular area we had in view. It was the promotion of scholarly studies in Hispanic America on the part of students everywhere in the Western Hemisphere that was the grand objective, and the map was one instrument for such study. It was better to have it on the scale of 1:1,000,000 and thus secure the advantages of comparative studies as the world map on this scale advanced toward completion. I have used both the millionth sheets and the 1:500,000 compilations in the field and can testify that for most purposes they serve admirably. Photostatic enlargements of the source material used in the compilation, and available to any serious student at the Society, provide maps on scales that meet every need.

I hope that as time goes on and the number of source maps increases the millionth sheets will be constantly revised. Thus, a quality of endless growth would be introduced into the Hispanic-American program. Assuredly, the value of the source material will increase in time, and the Society will become, accordingly, a unique Western Hemisphere center for cartographic research. When Bancroft assembled his great collections in the field of Western history (now at the University of California), it was said that perhaps $250,000 went into the project. Today probably no library possessing it would sell it, but if it were to do so, its appraisal could hardly be under $10,000,000. The Society's great collection of source material is in this class, and in 50 or 100 years it will be a convenience and provide a stimulus to geographers second to no other like collection in the world.

The Millionth Map will bear comparison with the illuminated books of medieval time, for it was drawn by hand and is embellished with color. One important difference between the medieval book and the Millionth Map is that map printing has enabled us to reproduce in admirable color design the original drawings in thousands of copies, whereas each of the illuminated hand-drawn medieval books was unique. The lithographic art has been developed to the point which permits a very high standard of beauty to be coupled with mass production. Each sheet of the Millionth Map can be enjoyed for its aesthetic qualities. Indeed, these overshadow the utilitarian in my mind as I pick up each new sheet. While no printed book or map has the brilliance of an illuminated hand-drawn original, it can be said of the Millionth Map that it represents a level of beauty close to that of the medieval manuscript. This brief comparison is in-

tended to link the map to a great tradition and a high point in human enterprise, supplying energy and artistic impulse to the dissemination of the word.

To me it has always seemed remarkable that members of the conference of representatives of many countries at London in 1909 should have had the good sense and good taste to devise standards of color, draftsmanship, and composition that have stood so well the test of the intervening years and that have been improved only in detail.

May I say a word about projections and the so-called new way of looking at the earth on an occasion that celebrates a map of conventional projection and design? One of the popular pastimes of the war period has been the construction of maps viewed from unusual angles and presented to us in popular style by devotees of the so-called "new cartography." Bizarre projections have certainly made a splash in the ocean of public interest. In so far as they have stimulated popular interest in maps, I suppose we can say that the effort has been well expended. But they have given the public some quite erroneous impressions of the broader purposes of maps. If one is accustomed to seeing Tibet on a map with the north at the top, it takes a mental wrench to see it with the south at the top. Since a mental stimulus is its own excuse for being, the new cartography has its place in education. A stereotyped view of a country is likely to become a dull view. We should *think* as men might who approach a country from any direction. I wish to point out, however, that this is only a convenience to a man who does not understand maps or read them readily. I wonder if a Gallup Poll would not show that those who have to have their orientations adjusted to the angle of their imaginative approach really are in a state of complete confusion when they have finished with their examination of the world, or parts of it, from strange and constantly changing angles of view. I am inclined to conclude this from my own experience with the public, but I hesitate to draw a wider generalization.

It is essential, in any case, that we have conventional maps that can be used for comparative purposes from country to country throughout the world. The Millionth Map represents a bold attempt to satisfy such a need. In a remarkably short space of time—indeed, in little more than a third of a century starting from scratch—we have had the greater part of the world represented on this scale. The Millionth Map of Hispanic America has taken a continent and a half out of a state of cartographic disorder into one of order, and thus it has so far advanced the world map that the urge to complete it is now higher than ever. The enterprise whose completion we celebrate tonight has been accomplished at a cost of a half million dollars, which is remarkably low when we consider that the highest craftsmanship, not the lowest, has marked its construction throughout. It is now possible readily to compute the cost of the unfinished portion of the map and plan for its completion.

We can all take pride in the fact that the map represents mutuality of interest among the geographers of the world and hardly less among scholars in other fields who use maps for comparative purposes—the historians, the archaeologists, the foresters, the anthropologists, and all those whose imagination is quickened, whose research instincts are affected, or whose teaching processes are promoted by drawing designs upon a base map that show where it is populated and where the heaviest or the lightest densities occur, whether of people, of forests, of minerals, or of agricultural production. Government today rests upon the adding machine as well as the electorate, the executives, the legislature, and the courts. Unless regular censuses are taken and the statistics analyzed, no government can deal intelligently with its people, its production, its internal social organization, its public health requirements, and its grander schemes of water control, whether for irrigation on the one hand or for drainage of excess water on the other.

To gather the statistics that are pertinent to national administration is one of the most important elements of intelligent government today. It is a part of the fact-gathering that Plato commended in describing his House of Wisdom. Unless a government is responsive to the principle so well stated by Bagehot, that "it is the business of government to evoke new power," it will find itself governing people of which it does not know the number or the distribution and shaping its administrative measures for peoples and environments for which it has not provided the means of analysis. From the beginnings of government ages ago it has been learned a thousand times that good government and good statistics are inseparable; and wise administration demands full statistics—full in the sense of meeting all the requirements of a country's social program, including the general development of human aptitudes and higher standards of living, two essential elements of an efficient national power plant.

Seen in this light, the Millionth Map is not merely a map to "glance at," as writers commonly say, and then to drop on the table. It is part of a great human experiment, creative and stimulating, whereby man is brought into rational relation with nature. The map happens to be a tool, however, that is different from any other in the experiment to which I am alluding. Compared with a book, it is expensive to make and it

is useful almost in proportion as it covers a large extent of territory. The grander comprehensions of geographical science are over and above the meanings of the minute and local. The local must be studied for accurate detail, but the geographer is obliged also to bring the detailed parts into relationship if the realisms of human societies are to be understood. Indeed, this is his chief function. In doing so he must generalize, or his vocabulary becomes diffuse and his thought restricted to local neighborhoods. To bring the results of his work within the scope of government, industry, and national welfare, he must employ general descriptive terms for his analytical results—that is, he must identify types. In identifying and describing generalized types of human activity (cultural design and cultivation practices, for example), one must in a sense lose some of the detail. Only in this way can one see the grander features of a country, and surely only in this way can one develop a comprehensive view of the earth as a whole.

It was once said by a friend of mine that the geographer tries to bite off the world, but can he chew it? It takes long and hard study and an extremely keen appetite, as well as far-reaching curiosity and sustained eagerness of spirit, to carry a geographer to the point where he understands some of the major features of human relationships. In attaining this distant and high goal the maps and the statistical tables available are tools of the first importance. I like to think that the Hispanic-American map serves these great interests as well as the diverse disciplines of history and social science and geography. I like to think that it does so by its high standards of compilation, its faithful interpretation of available data, and finally, and not least, its aesthetic quality.

A significant feature of the Millionth sheets of Hispanic-America is the relative reliability diagram, introduced by the American Geographical Society. In 1928 I had the pleasure of sitting on an international committee on the Millionth Map which formally adopted the relative reliability diagram as a standard feature of the Millionth Map of the world. It is this diagram chiefly which distinguishes a scientific map. It tells how much we do not know and the degree of accuracy of that which we do know concerning the cartography of a given sheet. I hope the time will come when commercial maps will carry this feature, telling the reader the truth about the little we know concerning the less well-known parts of the world. The highest purpose of the relative reliability diagram, if I may put it paradoxically, is to lead to new surveys that will destroy the sheet upon which the diagram appears.

And now, having indulged me with respect to the hard core of purpose and use that marks the Millionth Map, will you let me take the lid of unemotional scientific control off my mind and indulge my imagination? The patch of color on the map of western Bolivia represents not merely marsh and water on the fringes of sheltered Lake Poopó, but also a vast flock of flamingoes which, in the soft light of sunset, give a shade of pink to the landscape. The rocky islets off the seacoast toward the northwest represent the tradition of one of the Indian romances of pre-Colombian days near the site of ancient Pachacamac. The caps of white that mark permanent snow are not mere meteorology, they are associated with the legendary gods of shore and mountain, fighting in deadly rivalry around the snowy peaks and storming at each other in the thunderheads that form on the flanks of the western cordillera. This trail does not represent the route of a modern pack train only; it represents Almagro marching into Chile.

The shores that front us represent the Spanish Main, and the blue is not merely a blue designed by Mr. Hoen, master engraver of Baltimore, who reproduced the drawings of the map. It is the primeval blue, the enchanting blue, of the Caribbean to which Lafcadio Hearn gave immortality. Dull the eye that cannot discern Orellano's rafts on the wide and muddy Amazon. There is a symbol on the map for Cartagena, but who can hear that name pronounced or see its letters on a map and not remember its walls and massive forts, the fighting and the jungle, and the storied enmity of Spaniard and Englishman? Not only Tehuelches and sheepherders but also Darwin and Hatcher have walked over those distant Patagonian plains. Freebooters, priests, and conquistadores should be sketched on all the borders of Hudson's Purple Land. In short, the map reflects human strife and greatness as well as a surveyor's drawings: we are in the presence not of first-class cartography alone but of great art and history.

The lines on the map, the colors and symbols, are visual representations of field measurements and contribute a systematically analyzed record of surveys reduced to a common scale. But they are more than this: they are inciters of the imagination that bathes all records with interest. Yonder island cape is no "sterile promontory" but the point of land around which de Quiros steered his little squadron as he set his course westward from Callao across the unknown Pacific, a venture hardly second to that of Columbus in boldness.* The dark-brown color layers represent not merely a mountain chain but also an upthrust of the oldest sea-remembering rocks in South America. The green patch on the coast of northeastern Perú represents more than a marine terrace and a playa. Here the bird hosts gather at night, and we hear their cries and flutterings today precisely as they were heard

by Pizzarro's men as they staked out their cavalry in the chaparral on their first night ashore.

Besides its use in settling boundary disputes, the map has provided underpinning for field expeditions. It was in amazingly wide use in wartime and was ready for the emergency because the Society had the forethought to begin it long before the anticipated need arose.

I will not apologize for our interest in its use in wartime, however much we prefer the instruments and arts of peace. It is no small thing to contribute to success at arms when the objects in view are honor and freedom in a world that, only four short years ago, was all but lost to dishonor and slavery. It is through freedom tempered by discipline that the finest social gifts of civilization have come. Through freedom in America we have made a unique contribution to education, in the promotion of which this map and its large accessory activities have given direct impetus. Men who make contributions to freedom through the ages tend the eternal light of a universal humanity, and they ask no recognition except understanding, by those who come after, that their candles may be lit at the same altar.

If the Map of Hispanic America were not a part of all of these things, it would not have deserved 25 years of work by a devoted staff of compilers, draftsmen, cataloguers and geographers, as well as collaborators and friends. Nor would it have justified the cost, for money abstracted from use today is money with a curse on it if it be not returned to human use tomorrow.

Congratulatory Address

Spruille Braden

Assistant Secretary of State, Washington, D.C.

WE DO NOT KNOW how the present efforts of government to cope with our daily problems may appear to future generations. Of this, however, I am certain: the completion of the Millionth Map, under the direction of the American Geographical Society, will in the long perspective be regarded as a great constructive achievement. Concluded in the midst of international chaos, it represents the indomitable determination of men to know and to master the world in which they live. It represents the forces of civilization advancing in spite of high barriers. It will stand as a permanent monument to the spirit of man. . . .

Having lived a good portion of my life among the peoples of the other American republics, for whom I acquired the deepest respect and affection, this map of their countries has a special meaning for me. Out of infinite detail honestly assembled and plotted, your Society has here set down a record of geographical realities. So those of us who have been privileged to dwell with the peoples of those countries have in our hearts and minds an appreciation of their rich culture and of their human values. For my part, I treasure the experience and am guided by it.

This Millionth Map, whose conclusion we are here to celebrate, represents a great cooperative undertaking. It is the product of active and constructive collaboration by scientific institutions, by government bureaus, by industrial organizations, and by individuals throughout the American republics. The moral is clear. Progress, the enlargement of knowledge, the achievement of human security, all call for the constructive and determined collaboration of nations, of organizations, of individuals everywhere. We do not live alone, and we cannot succeed alone.

Just as it is impossible for one man alone to make such a great map as this, so it is impossible for one single element in the nation alone to bring about relations of lasting friendship with the people of another nation. That, too, can come only from the countless threads of individual and collective association, woven together in an intimacy that brings warmth into human relationships.

That is the kind of foreign relations which we, the United States, desire to have. We cannot have it except as we respect ourselves and our obligations, at the same time respecting others and their rights in the same fashion that we expect them to respect us and our rights. We must seek to understand them as we hope they will understand us. We must never forget that intolerance begets intolerance, and that if we wish tolerance from others, we must first nourish it in ourselves. In these ways we shall gain friends and benefit ourselves by helping others. The guiding principle, in these matters, must always be reciprocity. That is the root of all friendship.

As a former mining engineer who has roamed in the Andes and through the jungles of South America, I can appreciate, not only the vastness of the cooperative undertaking represented by the Millionth Map, but the dangers that had to be faced in gathering the requisite information. You geographers will prob-