

MAP COMMUNICATION IN SOCIAL SCIENCE STUDY¹

by

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INTRODUCTION

Human Society generally progresses with two feet so to speak — communication and transportation. The first is communication which usually begins within the family. Witness the fact that when a child wants to call the attention of her mother she cries aloud — the mother tries to find out what she wants.

She is either wet or hungry — these are the first stages of communication between the child and the mother. Finding that she is wet, the mother changes the diaper but if the baby continues to cry she may be hungry — and mothers knows well what to do.

Wesley³ stated that in maps — he who learns to read their visible features — they speak various languages — can comprehend not only the obvious aspects of direction, distance and location, but also the less obvious story of man's relation with the earth.

THE LANGUAGE OF MAPS

In order to read the message which maps convey, one must learn the language in which they are written. This, we wish to impart to you thru this seminar-workshop on *Map Reading and Map Making*.

"The teacher of reading recognizes the difficulties which confront the beginners. The abstract symbols of letters and words reveal their meaning only when the pupil can identify them and relate to his own experience."

Specialists in reading have observed repeatedly that many students have serious reading difficulties; for various reasons they do not learn to read easily.

¹ Lecture delivered during the Seminar-Workshop II on Map Reading and Map Making at the NAST Hall, P. Gil St., Cor. Taft Avenue, Manila, October 27-29, 1982.

² President, Philippine Geographical Society.

³ Wesley, Edgard Bruce. 1949. *Teaching Social Studies Thru Maps — A Manual* to accompany the Wesley Social Studies Series — Our America.

"Teachers generally are aware of the abstract and complex nature of reading. They realize the special training, numerous exercises, and infinite persistence are necessary in order to master the art of reading — the conversion of hieroglyphics of type to correct and meaningful images and ideas."

While there are some difficulties for the young in the reading of a printed page, this is relatively a simple process as contrasted with that of reading of maps.

Teachers who are aware of the complexities of a written paragraph frequently assume that a map, one of the most condensed forms of communication ever devised, is self-revealing; that the pupil needs only a glance to grasp its message.

"One of the prerequisites to the successful use of maps is the acceptance of the idea that they require study — prolonged, detailed and thoughtful."

"A well-known teacher frequently tells his students that learning requires three qualities: intelligence, humility and persistence. Certainly these three qualities are needed in the study of maps."

1. *Intelligence* is necessary in order to see the relationship between the type of map and the data to be conveyed, to grasp the questions which should be asked, and to perceive the answers which the map provides.

2. *Humility* in the teacher is necessary in order to avoid the assumption that the pupil is already equipped to utilize the map. Humility in the pupil will lead him to study the legends, the symbols, and other aids to the proper interpretation of a particular map.

3. *Persistence* is necessary in order to keep the attention focused upon each feature and aspect long enough to gain their full impact. Persistence should be reflected in repetitive uses, for each successive study of a well-made map will reveal new information, new concepts and new relations.

The teacher and pupils who wish to gain from maps their full story must put forth repeated efforts. *He who would learn from maps must first learn to read maps.* While they are vivid and accurate aids to learning, they are not self-operating or self-revealing."

FUNCTIONS OF MAPS

"Maps serve a variety of functions. They are a means of recording information for permanence, for clarification, for comparison, and communication. Many maps and graphs are made to bring into sharp focus relevant facts and pattern."

"A sales manager of a beer manufacturing company wants a *pin* map showing the extent of his distributive organization; a superintendent

of school wants a map of his school district indicating the location of the schools and relative positions of the home from which the pupils and students come from."

"The principal function of school maps is to reveal geographic, economic, climatic, political and historical and other data for the sake of the pupil. Generally, maps present condensed information of areas too large to be viewed or comprehend directly; consequently, they are not only aids to learning; they are the only means by which many factors can be presented for learning."

These functions of the map can be summarized as follows:

1. *Location* — when properly made, maps generally show cities, towns, barrios, rivers, mountains, valleys, bays, oceans, plains, roads, railroads, highways, schools, churches, etc. The location is shown with respect to political boundaries and many such other phenomena. Thus the answers to the questions *what is* and *where is*?

2. *Arrangement* — Closely related to location is the pattern, place, shape, or arrangement of the various phenomena. Thus a map of the island of Luzon shows that Manila is at the eastern coast of Manila Bay and at the mouth of the Pasig River. And that the provinces near Manila are Laguna and Cavite to the south, Bulacan to the north, and Rizal to the east.

3. *Area* — Maps show relative sizes of provinces. A map may show clearly, for example, that Batangas Province is larger than Cavite Province and Bulacan Province is smaller than Nueva Ecija Province.

4. *Relationship* — Maps show numerous relationships beyond those of location, shape and area. The location of Manila shows its relationship to Manila Bay and the Pasig River. The City of Baguio on the mountain region has a cool climate even during the dry season of the year because of its elevation. Every detailed map presents phenomena which reveal a great number of relationships. Of course not all of these are apparent to the untrained eye; in fact only the trained person can see and appreciate fully these functions of a map. When one is already an expert in the use of maps — say, a road map — he can easily figure out how long it may take to go to Baguio by car while looking at the road map from Manila to Baguio.

5. *Other Uses* — There are many other uses of maps. When you study the soils of a province you should have a soil map.

A climate map shows you the types of climate of the country. (One of our lecturers will show how to make a climate map of the Philippines). There are maps that show density of population of provinces, maps that show regions devoted to the growing of sugar cane, tobacco, rice, abaca, bananas, etc.

BASIC PROBLEMS OF MAP MAKING

Maps serve their functions by making use of a variety of devices, techniques, and symbols. The most frequently used techniques should be recognized, learned and appreciated. The following are the basic ones which are found in many maps:

1. *Direction.* — "A map is plotted on a grid which is composed of a parallel horizontal lines (latitude) and meridians (longitude) that are seen on the globe and by which we can accurately locate every tiny place on earth. These lines serve another purpose: They show us true directions. The meridians are true north-south lines."

2. *Distance.* — Distance on the map can be indicated in three ways: (1) by statement in words such as "one inch to a hundred miles" or "one centimeter to one kilometer." (2) by a line graph into convenient fraction representing so many miles (3) or by a fraction such as $1/100$ or $1/50,000$, etc.

In this fractional scale the numerator represents the distance on the map and the denominator represents the number of the same unit of actual distance on the earth. This is known as the scale of the map.

3. *Area* — Area is of course, the result of multiplying dimensions of length and width. Area of a country or province can be compared if they are both on the same map or on different maps of the same scale.

Colors:

The use of colors by map-makers has enabled them to show a great variety of features, events, and data. By means of color schemes information such as altitude, political divisions, climatic belts, population density, racial groups, and such other data may be presented on the maps.

Symbols:

These are usually the conventional signs and legends designed by the many map makers and are usually followed. However, realistic symbols have severe limitations in actual use. Conventional symbols or legend must be explained carefully for easier understanding.

For example — a wavy line represents a river, a cross line, a waterfall and a hachure a mountain.

(NOTE: Some other facts about map reading and map making will be explained to you by other lecturers following this.)