

Geographic Intelligence

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An experienced practitioner essays a tentative conceptual portrayal of his evolving discipline.

The examination of any single functional sector of the intelligence spectrum requires at the outset a choice between looking at it in isolation and emphasizing its relationships with the other sectors. The restrictive approach gives a picture so incomplete as to be misleading; the broad one may obscure the focal point. This discussion of the geographic sector will try to avoid the two extremes but will favor the larger picture where this seems desirable. The term "geographic intelligence" will refer interchangeably to the process or its product. These will be treated functionally, in abstraction from administrative organization, but with the entirety of the scattered U.S. apparatus in mind.

Its Part in the Whole

The graphic device in Figure 1 symbolizes the whole of the U.S. foreign intelligence effort. Divisions of the triangle represent the usual functional sectors of the intelligence spectrum. In the center is the geographic sector, as the focal point of this discussion. Near the top of the pyramid, around the dashed horizontal line, sector boundaries fade out and all intelligence becomes in a sense politico-military. Importance increases inversely with volume from the bottom to the top.

The lines between the sectors are lines of theory for orientation

purposes; they should not be thought of as clean dividers, much less barriers to keep practitioners of one sector from participating in the work of neighboring sectors. To the question why sector lines, if uncertain and often crossed, need be considered at all, the answer is that such theoretical lines are essential to conceptual examination and in practice guide the organizational dispositions required in intelligence as in all group endeavors.

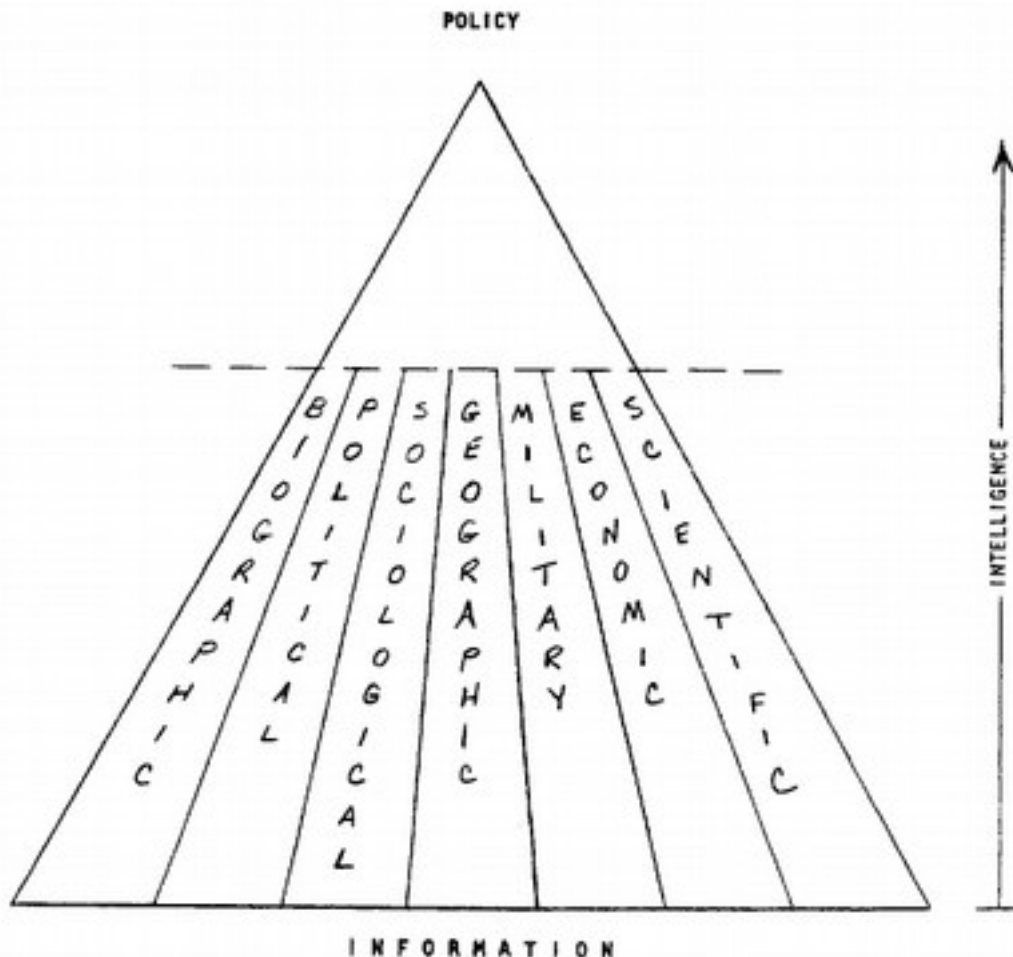


Figure 1. The Intelligence Spectrum.

"Intelligence," which once denoted simply news or information, has come to mean, among other things, information procured and synthesized to serve uniquely the purposes of statecraft. The science of geography studies the areal differentiation of natural and man-made phenomena over the earth's surface. Geographic intelligence is then this study articulated through selection and evaluation to the policy formation and operational guidance requirements of a national government. At the margins it will not be easy to say where geographic intelligence leaves off and some other kind of intelligence begins, but the lines can be

made somewhat clearer by reference to specific tasks and responsibilities.

The collection and use of geographic intelligence is a very old activity, certainly as old as war. Moses' instructions to the spies he was sending to the land of Canaan in about 1490 B.C. include requirements for geographic data:

... go up into the mountain; and see the land, what it is; and the people that dwelleth therein, whether they be strong or weak, few or many; and what the land is that they dwell in, whether it be good or bad; and what cities they be that they dwell in, whether in tents or strongholds; and what the land is, whether it be fat or lean, whether there be wood therein or not."

In this ancient requirement for information relevant to the strengths and weaknesses of a state-like entity of that time and place we can discern some of the functional sectors of today's intelligence. The several items might be classified by sector as follows:

"and see the land, what it is"	geographic
"and the people that dwelleth therein, whether they be strong or weak, few or many"	military, political (?), sociological
"and what the land is that they dwell in, whether it be good or bad"	geographic
"and what cities they be that they dwell in, whether in tents or in strongholds"	sociological, geographic, military
"and what the land is, whether it be fat or lean"	geographic, economic
"whether there be wood therein or not."	economic, geographic

It will be noted that geography appears above both as a pure element standing alone and in association with the matter of other sectors. So does today's geographic intelligence. More generally, the breakdown indicates that different functional sectors have long been closely related, and useful pieces of intelligence often straddle sector boundaries.

Mission and Duties

The basic mission of geographic intelligence is to tell "what the land is," as formed by nature and by man. The telling is done in three main ways: as bearing directly on a specific policy problem and thus contributing to the formation of policy (analyzing routes of access to Berlin, for example, at a time when measures involving the possibility of having to relieve the city are under study) ; as filling a particular need for data in the conduct of operations (delineating, for example, cross-country routes between drop sites on island X) ; and as anticipating with general or background information a number of potential problems or data needs (as with a transportation map of Southeast Asia). Two subsidiary missions warrant particular mention—to monitor geography, mapping, and related earth science developments in foreign countries, and to provide a variety of geographic support and coordination services to the whole intelligence spectrum and the government at large. Geographic intelligence draws upon incoming raw reports, finished intelligence studies, and open source information as necessary to fulfill these missions.

The work processes of geographic intelligence are not unlike those of other functional sectors. Put simply, these are: procure, collate, hold ready, retrieve, focus on problems or data needs, and present. Some of these processes are carried out in much the same way as in other sectors, others differently. Report handling, for example, is similar, but the map bulk that must be held ready brings differences to storekeeping.

Representative of the tasks geographic intelligence may be called upon to perform are the following:

In support of the formation of policy--

Highlight the environmental factors influencing a political crisis.

Weigh the merit of a territorial claim.

Review the environmental aspects of a disarmament proposal.

Assess the problems of a particular international boundary.

Consider the geographic implications of a new scientific development.

In support of operational activities--

Map routes used by such-and-such defectors.

Evaluate the suitability of an area for cross-country movement.

Select maps suitable for guiding travel.

Pinpoint security features along a frontier.

In carrying out such tasks as these and in anticipation of others like them, it engages in continuing procurement programs and does extensive map-making.

Individual tasks vary greatly in scope as in other respects. A request to identify a single installation in a large city--perhaps a five-minute job--might be succeeded by a requirement for a group of annotated city plans identifying and indexing all important installations, an assignment that might take five months.

Spheres of Competence

Some aspects of the role of geographic intelligence can be brought out best by considering its main functional responsibilities or spheres of competence and then looking at the way it shares some responsibilities with other sectors of the intelligence spectrum or across-the-board

intelligence components. For to fill the data needs of statecraft with pertinent information concerning man in relation to his earth environment, modern geographic intelligence must be prepared to go all the way in some matters and at least a short distance in a great many others. In general, the all-the-way spheres of competence include the following:

Mapping. Maps serve intelligence as spot fact sources, as summary portrayals of the landscape, as reflections of the aspirations and plans of states, as analysis and reporting tools, and as framework for presentations of finished intelligence; thus they can be either means or end. Geographic intelligence undertakes to procure the best maps, to make the best maps (directly or by supplying data to others), to encourage use of the best maps, and to procure, evaluate, organize, and hold ready data needed to achieve these goals.

Basic Geography. Geographic intelligence must be able to produce on short notice an up-to-date picture of the geography of any area. Such compilations often include data on climate, terrain, drainage, vegetation, boundaries, population, main lines of communications, and principal economic activities. The capability of geographic intelligence in basic geography is used by the whole intelligence spectrum and the U.S. Government at large in the development of broad studies, for briefing purposes, and as a reservoir from which the answers to spot questions can be obtained. Keeping the storehouse full and up to date requires a constant effort to identify and fill gaps.

Place names and place name problems. Geographic names are an important map ingredient and the fix-points to which much reporting is keyed. Without the facilities and personnel necessary to resolve name problems--names garbled in transmission, minority language variants, conventional names, obsolete names, incorrect transliterations, etc.--important intelligence interrelationships and the fruit of much collection effort would be lost. Foreign geographic names and the boundaries of civil divisions and other named entities undergo continual changes which must be monitored, a task especially difficult when names must be transposed from one alphabet to another. Moreover, geographic names used in official domestic and foreign publications, including maps, have political or propaganda implications that must be taken into consideration; the substitution of the old name now restored by the Chinese Communists to their capital city for that used by the Kuomintang might for example be read as a recognition of the new

regime.

Access to geographic data and reference materials. The geographic and related literature extant constitutes a vast body of descriptive and analytical information, which, however, varies greatly in currency and areal and subject coverage. Only a small proportion of it is likely ever to be used in intelligence, but there is no way of knowing where the lightning of events will strike, or to what depth. Thus geographic intelligence must maintain considerable familiarity with the whole body of geographic literature and with means of exploiting it quickly.

Systematic geography in foreign countries. The monitoring of the systematic study of geography and related earth sciences in foreign countries, by means including participation in international programs, contributes to the assessment of foreign capabilities and intentions, guides our own procurement, and supports policy decisions on the release and exchange of scientific data. This work is of exceptional significance with respect to Communist countries, which often undertake geographic studies and mapping programs in direct support of development plans.

Foreign techniques. Geographic intelligence follows the techniques and methods of geographic research developed in foreign countries in order to evaluate their technical progress and to take prompt advantage for itself of promising innovations.

In carrying out these functional responsibilities geographic intelligence devotes special attention to ten categories of subject matter as the foci of a large proportion of the policy problems in which spatial aspects figure importantly:

- Political status of particular areas, land or sea
- Administrative divisions
- Travel conditions
- Land use
- Causes and effects of recent landscape changes
- Patterns of "little known" and "well known" regions
- Location of natural resources

- National frontiers and frontier zones
- Locational aspects of communications
- Urban areas

The last three of these comprise most of the critical regions of an average national state. This is not to say that nothing of intelligence importance exists in rural areas, but the more complex problems of statecraft will focus more often than not on the cities, lines of communication, and frontiers where a majority of the population, most of the industrial capacity, most military targets, the main trade routes, and the places of contact with other nations are found.

Shared Responsibilities and Other Relationships

Many intelligence sectors and components of the intelligence community contribute to or are served by geographic intelligence. The web of intra-sector and outside links is particularly complex in the field of mapping. Here the main organizational relationships are "understood," but not always in exactly the same way by all interested agencies and individuals. Theoretically, all U.S. official interests in the maps and mapping of foreign countries should be connected to the stem of geographic intelligence, the better to serve the allpurpose intelligence picture of "what the land is." This view has general, if not universal, acceptance as a goal or ideal. There are differences of opinion, however, on the extent to which the goal has been or can be attained.

The very broad field of "maps and mapping of foreign countries" has two main components--foreign products (maps, mapping data, and mixed data), and U.S. products (maps and some related data). We have pointed out how geographic intelligence monitors foreign programs, procures foreign maps and data, and processes these and makes them available to end users from its depositories. But the situation is less cleancut with respect to the other category, maps of foreign areas produced by U.S. agencies, particularly with respect to topographic and general maps. Since U.S. access to many foreign areas is less than free, preparing topographic maps of these is largely a matter of adapting foreign maps and data and correcting or updating them from current field reports and

photography, a process that falls within the very essence of the geographic intelligence function. Because the preparation of topographic maps of foreign countries has long been a traditional activity of U.S. military agencies, however, the affinity of this work to the geographic sector of U.S. intelligence is not universally recognized.

With respect to special-subject maps of foreign areas produced by U.S. agencies, the role of geographic intelligence can be fairly well sorted out; many of the participating units are clearly identifiable as operating within the purview of this sector. The specialty map may be initiated within one sector, developed with data from another or others, and executed--compiled, drafted, checked, and edited--by one of these or a third. A number of specialty maps to which geographic intelligence contributes are the products of other sectors, the geographic intelligence contribution being mainly one of cartographic support. To clarify, there are listed below the titles of some specialty maps with an indication of the sector or sectors into which the content of each mainly falls and the sectors of the actual cartographic executor, chief data supplier, and initiator.

Short title	Sectors	Cartographic Executor	Data Supplier(s)	Initiator
Bloc Air Defense Districts	military scientific	military	military	military
Administrative Economic Regions of the USSR	political economic	military	economic geographic	military
Bloc Participation in International Trade Fairs	economic political	geographic	economic	economic
Netherlands Realm Rumania:	political	geographic	political geographic	geographi

Physiographic Regions	geographic	geographic	geographic	geographic
Boundary Adjustments				
Near Zalew Wislany	geographic political	geographic	geographic political	geographic
Soviet Drifting Stations in the Arctic Basin	scientific	geographic	scientific geographic	geographic
Landform Regions of Central Europe	geographic	military	geographic	military

Important to all U.S. mapping of foreign areas are the contributions of geographic intelligence to coordinated, interagency studies in which all available maps of an area (usually a country) are weighed against each other qualitatively to identify the one giving the best coverage in a subject field. All maps likely to be of interest in connection with foreseeable policy problems are normally examined, and they are considered in the context of background factors such as availability of fundamental mapping data (surveys, statistics, etc.) and mapping capabilities and plans and programs.

Inter-sector relationships can be reviewed more systematically by taking each sector in turn and summarizing its associations with geographic intelligence.

Biographic. This sector alone has negligible links with geographic intelligence. It does, however, get geographic help in ironing out biographic data such as birth places and other facts recorded in terms of obsolete civil divisions or defunct place names, and the two have a common interest in biographic data on foreign geographers and other earth scientists.

Political. Geographic intelligence often contributes in a support role to political intelligence, particularly where the latter gets deeply involved in

locational aspects, as in analysis of territorial claims and transfers, in problems relating to international and administrative boundaries, and in the mapping of political patterns and relationships of all kinds, for example election returns.

Sociological. The frequent overlap between sociological and geographic intelligence is especially apparent in the mapping of population distribution and characteristics. Other subjects of common interest include settlement patterns, the distribution of ethnic and religious groups, and culture regions, to name but a few. Geographic intelligence takes leave of the sociological at the point (never easy to identify) where locational aspects cease to figure importantly.

Military. Geographic intelligence has much in common with the military when the latter focuses on environment, as in "military geography" or "terrain intelligence," although it does not share the military geographers' limitation of their concern mainly to the influence of the environmental phenomena on the use and functioning of particular weapon systems or types of forces. This difference of viewpoint disappears only at the top of the intelligence pyramid, where as we have noted the boundaries between sectors fade out and all intelligence becomes strategic, or politico-military.

Economic. Geographic intelligence is frequently a supporting contributor to economic intelligence, particularly in locating and mapping production centers, transportation features, and physical relationships that influence productive activity. Civil divisions, which figure prominently in many statistical analyses, are another subject in which the two have strong common interests. Other important common ground includes the mapping of major traffic and commodity flow patterns. Location is the key; where it ceases to figure, geographic intelligence leaves the economic intelligence track.

Scientific. Geographic intelligence shares with the scientific an interest in the basic earth sciences such as geophysics, geodesy, geology, oceanography, climatology, meteorology, and seismology. Their exploration in depth is the province of scientific intelligence; the geographic intelligence task is not infrequently to synthesize selected data from several or all of the earth sciences and often to incorporate it into mixed equations with political and military as well as geographic and other elements.

To these one might add, not as a separate sector, an "historical intelligence" to reflect the fact that all sectors of the spectrum are to some extent articulating history to current and future policy problems. In this articulating, geography, the where of history, is often inextricably entwined.

The complex links between geographic intelligence and components which operate horizontally across the spectrum, particularly current and basic intelligence and the specialty of photo interpretation, can be set forth best by representing them graphically on the intelligence spectrum as in Figure 2. Here it can be seen that all three concern themselves to some extent with geographic intelligence. For purposes of current and basic intelligence there is both original geographic intelligence production and the processing or coordinating of contributions from other sectors.

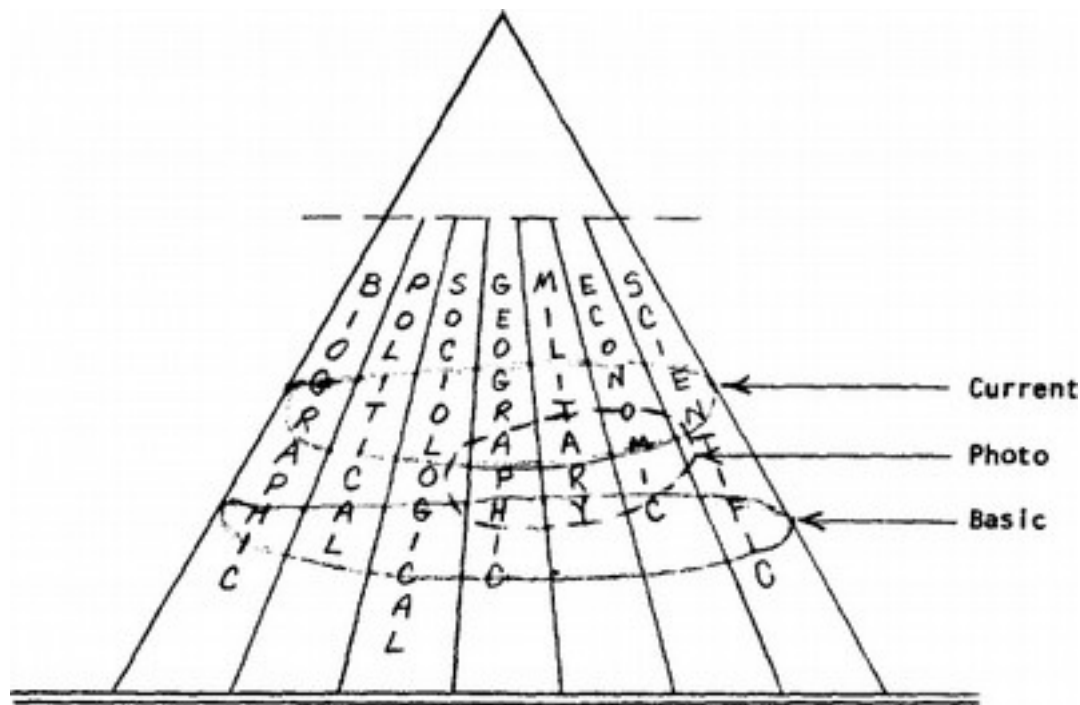


Figure 2. Some 'Horizontals' in Relation to the Sectors.

The relationship between geographic intelligence and the geographic aspect of photo interpretation is unique and warrants special comment. Photo interpreters produce reports that include substantive geographic intelligence, sometimes in a pure state and sometimes mixed with data from other sectors, as do practitioners of geographic intelligence. The difference is that between an all-source approach and one relying mainly on photography. The division between the two is not now and in this writer's opinion should never be mutually exclusive. Which is to say

that those in geographic intelligence sometimes interpret photos for their own purposes and sometimes incorporate into their studies the findings of photo interpretation specialists, while photo interpreters in turn use maps and other geographic reference materials to aid their interpretive work. The question of who concentrates on what and for what purpose is often decided by source (photo and other) availability patterns. The allsource approach permits geographic intelligence to speak in some way to any area analysis problem, whereas photo interpretation can contribute only if photography of suitable date and quality is available. Geographic intelligence and photo interpretation in the geographic field complement each other; functional boundaries between them are still evolving.

Practitioners

A practitioner of geographic intelligence is one who regularly devotes the bulk of his time to one or more activities of geographic intelligence—procurement, processing, hold and retrieve functions, analysis, or presentation. This broad definition includes technicians at lower levels who perform quasi-mechanical tasks and accomplished specialists and generalists who concentrate on analysis (the focusing of data on problems) and presentation (the end product). Some at all levels will devote their time almost exclusively to aspects of mapping, whereas others will be concerned mainly with data in text form. Many will have something to do with both.

Some misunderstandings regarding the role of geographic intelligence and its place in different organizational frameworks revolves around the training of its practitioners. Most of them are schooled mainly in geography and cartography, but such schooling does not of itself make one a practitioner. A person with identical training may be practicing in another functional sector of the intelligence spectrum, for example a geographer working mainly in the sphere of military intelligence. On the other hand, one trained in fields other than geography may actually be practicing in geographic intelligence, for example a linguist working exclusively on problems associated with geographic names. The test of practitioner status is the activity to which the bulk of one's time is devoted.

Another source of uncertainty about who is laboring in what vineyard lies in the numerous lines that cross sector boundaries in the execution of special tasks. A practitioner of geographic intelligence, for the purpose of a particular task that is mainly geographic, may delve deeply into scientific matters or various economic, social, and political relationships. When this happens, it does not mean that basic responsibilities of the scientific, economic, sociological, and political sectors have been picked up and conveyed to the house of geographic intelligence, but merely that one whose normal activity is geographic intelligence has gone afield to round out the unique information requirements of a particular task, and that the detour has been taken without changing the practitioner status of the voyager. Similarly, if one who is normally a practitioner of political intelligence comes to the geographic intelligence sector to round out the information requirements of a task, his practitioner status does not change, nor has the basic responsibility for earth environment intelligence been shifted to the political sector.

Practitioners of geographic intelligence are widely dispersed throughout the U.S. intelligence community. Units in which they operate sometimes have names including such words as "geographic," "map," "mapping," "cartographic," or "environmental," whereas others have regional designations. In general, however, names are not a reliable clue to the existence or absence of geographic intelligence activity. Such government-wide unity of geographic intelligence as exists is maintained by inter-unit cooperation on specific tasks, by representation on committees, boards, etc., devoted to one or another phase of geographic intelligence, and through professional organizations. A general directorate responsible on a nationwide basis for geographic intelligence, broadly interpreted, does not now exist.

Products

The products of geographic intelligence comprise maps alone, text alone, and quite often combinations of maps and text augmented by photographs, graphs, and sketches. Sometimes they issue in oral form as orientation lectures and briefings illustrated with maps and other graphics. Some issuances are mainline products of the geographic

intelligence production track, whereas others are supply or support items for other components.

A mainline product may be a world survey presenting a few relationships for each country, the study of a large region, a country survey, or an intensive all-subject survey focusing on a small area. Maps may or may not be the main vehicles. Areas worked may conform neatly with national or civil division boundaries or may take in parts of several sovereign states and conform with no political boundaries. Some products, especially in the field of mapping and related earth sciences, are functionally designed, not uncommonly reducing technical matters to generalizations suitable for supporting policy decisions.

The operational guidance products are many and varied. Some are limited in scope to very specific operations or phases of operations, e.g., a study weighing the relative merits of drop sites or the detailed description of a particular drop site and its environs. Products of this sort, essentially tools for the execution of policy, might be represented as an additional inverted triangle above the policy apex of the intelligence pyramid. Others are broader in scope and of dual potential use; they can contribute to policy formation as well as guide operations in the execution of policy. An example would be a summary of the geographic background of a problem situation in a theater such as Laos.

U.S.-produced topographic maps portraying foreign areas, which we have noted are prepared mainly by military agencies, are not usually thought of as geographic intelligence products, although some of them may deserve to be so regarded on theoretical grounds. In practice there seems to be at present little need for rigid lines separating topographic maps that are products of the geographic intelligence sector from those that are products of the military intelligence sector and still others that are military products outside the purview of intelligence, strictly interpreted. Eventually some line-drawing in this sphere may become necessary, however, if only to aid management of the ever-growing map bulk and to focus intelligence attention on sensitive source items.

Some Problems

The problems of geographic intelligence are by and large those of

intelligence as a whole with a few distinctive variations. The main exception concerns its status as a sector of the intelligence spectrum. This status has been obscured by geographic intelligence's dual role as an important province of inquiry in its own right and as an often essential aspect in the work of other sectors. A parallel duality has given rise to contention among academicians over the status of geography. Some academic critics would break up the subject and have problems now investigated at advance levels in departments of geography studied in departments of geology, economics, political science, sociology, history, etc. Geographers have many objections to this proposal. Most significant from the intelligence point of view is their argument that if geography's discrete tasks were scattered among other disciplines the vital whole would be lost, the rounded picture of "what the land is."

In general, where mission and function lines have developed empirically in the U.S. intelligence community since the start of World War II, geography has not wanted for a place. It is true, however, that the precise configuration of its place remains in some respects to be defined. One open boundary faces geopolitics, the broad weighing of international power patterns in which geographic factors sometimes figure importantly. Some social scientists hold that in this field the voice of geography is not as loud as it could and should be.¹

On internal lines geographic intelligence is thought by some observers to be in danger of becoming "map intelligence"; maps are of such central importance that there is a tendency to focus on them rather than to keep in mind the whole inquiry into facts and relationships which they symbolically represent.

Geographic intelligence shares with other sectors and even with strategic intelligence at the top of the pyramid the problem of using its capabilities to best advantage of policy, of directing its finite resources to the most important ends. It cannot follow all relationships everywhere; areas of particular importance must be selected, energies focused. In theory, the consumer should tell what needs to be done and to what end; in practice, geographic intelligence must often tell itself. Some are satisfied with this situation; others want more immediate and specific direction from the consumer. Since it breeds doubt and disagreement, the interplay of views on this question is itself a fairly persistent problem for geographic intelligence.

What to retain in the information reserve is a pervasive problem in

intelligence, but to geographic intelligence, which must maintain an inventory of sorts of the surface of the earth, the keeping of the huge store of maps required is often an irksome burden, sometimes impinging on production capabilities. Fast and inexpensive reproduction techniques, while they have simplified and made more flexible the handling and dissemination of geographic data, also threaten to bury geographic intelligence under a deluge of paper. Machine storage and retrieval methods under development promise relief, but it remains to be seen whether these will solve the basic problem.

Because of its numerous ties with different elements of the intelligence spectrum, geographic intelligence encounters a full quota of inter-sector and inter-component relationship difficulties. These often center on awkward 50-50 tasks reposing squarely astride sector boundaries, for example a study of the political status of an area wherein political considerations and precise location are about equally important. Characteristically, birds of mixed feather have much more difficulty getting off the ground than pure-bred types.

In connection with intramural responsibility boundaries, of which there are many within the house of geographic intelligence, the overlap problem is as often one of too little as of too much. Units attached to the same administrative stem shy away from anything that might be viewed as an invasion of neighboring pastures, sometimes to the detriment of coverage along critical boundaries. Even if such coverage is adequate in a monitoring sense, thinking from both sides has a tendency to stop too abruptly at the barrier.

A Look Ahead

There is a trend toward greater overlap between geographic intelligence, military intelligence, and scientific intelligence as military equations become more complex and require consideration of an ever-widening range of earth-related phenomena.

Geographic intelligence must now look ahead with a possible-in-our-time attitude to scientific and technological breakthroughs that may alter long-established evaluations of the potential use to man of extensive parts of the earth and thus create suddenly new geographic

patterns with implications of a most far-reaching sort for statecraft. Prominent among the developments of this kind that might occur are effective climate control and the economical desalting of sea water.

The founding of some thirty-nine new states since World War II, most of them relatively undeveloped former colonies, has added new facets to world political geography that will influence conditions within the new states and also the affairs of other nations for years to come. Many of the developments that can be foreseen will be very much within the scope of geographic intelligence, for example new foreign mapping programs, new patterns of factionalism, civil division changes, international boundary problems, and economic development programs in which locational aspects figure importantly.

Improved communications have greatly increased the number and complexity of locational patterns of which statecraft must take cognizance. Not long ago the precise distribution of the speakers of an obscure dialect in Central Asia was largely academic from the viewpoint of U.S. foreign policy interests. But now that some of them can be reached by radio in a political context that makes reaching them desirable, their geographic distribution and normal patterns of movement warrant examination in detail.

In response to changes in warfare and weaponry also, the gears of geographic intelligence have shifted and are still shifting to new combinations and patterns of emphasis. Not so many years ago, terrain evaluation for intelligence purposes focused almost entirely on the ease with which mass armies could move over the land. These judgments are still necessary; but the land must now be assessed, among other respects, as to its suitability for the activities of small groups bent on mixed politico-military operations, a dimension requiring criteria quite different from those of the mass army movement.

Stepped-up scientific investigation of earth phenomena and improved access to remote areas have served in concert to upgrade generally the standards of acceptable geographic intelligence. Everywhere more detail is needed and wanted, and more is expected in the way of accuracy, currency, and completeness.

The earth environment enters decision-making equations only as it is perceived by the decision maker and included in his deliberations. It is for geographic intelligence to see that this perception is clear, keeping

pace with technological change and the ever-increasing need for accuracy and completeness. To this task it brings geography's own peculiar and still evolving perspective, a perspective likely to come into greater use with the foreseeable crowding of the earth's surface. The widening outreach of communications and expanding scientific horizons do not themselves solve the vexatious problems associated with man's adjustment to his earth environment; they alleviate a few, create new ones, and aggravate others. Thus an end to the work of geographic intelligence cannot now be foreseen. Its frames of reference, tools, techniques, and approaches will change, but the basic function seems destined to be carried out somewhere, in some way, under some organizational arrangement as long as there are statesmen who need to know "what the land is."

1 Sprout, Harold and Margaret, Man-Milieu Relationship Hypotheses in the Context of International Politics, Center of International Studies, Princeton University, 1955 (p. 2-3).

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