

MAPS FOR THE FEW ?

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During the past quarter-century, cartographers have placed an increasing emphasis on map communication. This interest in the communicative aspects of cartography developed largely from the realization that most maps are made with the objective of communication and therefore must be designed to promote the rapid and accurate transmission of visual information (Olson, p. 156). Cartographers, thus, have argued for the necessity of carrying on research in cartographic design to (1) improve map task execution time, (2) improve the accuracy of map reading and map comparison and (3) find new ways of presenting geographic information (Robinson, p. 164). Concurrent with this increased interest in map communication and design has been the phenomenal development of graphics. Since the mid-sixties we have witnessed what might be called a "graphic revolution" with colorful graphics appearing in magazines, encyclopedias and other printed publications. The graphic principles underlying this development have also been successfully applied to maps, for example, as illustrations in popular weekly magazines such as TIME. Max Hann, Cartographic Director of Karl Wenschow GmbH in Germany, has called this development "Kartografik" (pronounced KARTOGRAHFeeK) and notes that such highly graphic maps are becoming increasingly popular and replacing traditional cartography in many areas (Hann, p. 194). Hann suggests further that traditional road and landform maps are leaving the lifestyles of the great majority of people. If Hann is correct, then

Kartografik presents cartographers with the ironic situation that, while they are emphasizing map communication in their research, their maps may be communicating to fewer and fewer people.

"Maps for the Few" is more than simply a title - it represents the state of modern cartography. It indicates that the products of cartography may be intended for use by very few. This paper first discusses the peculiar nature of the relationship between maps and people and then reviews some of the thoughts of Max Hann concerning cartography and Kartografik. Finally, cartography is seen as being faced with a dilemma, and a comment is made on the special nature of the study of cartographic communication emphasizing that such research must contain a human/social aspect.

I. A PRECARIOUS RELATIONSHIP

The relationship between maps and people has always been a precarious one. Although our day to day existence is dependent upon mental maps that guide us through our world, our relationship with cartographic maps is not nearly as intimate. The map contains information that can be conveyed in no other way and yet, even in our state of advancement, we strive to find ways of obtaining spatial information through ways other than the map. This general avoidance of maps is apparent at different levels. The public, finding maps too complex and perhaps suffering from a certain amount of "map anxiety," have various ways of avoiding them. For problems of movement they rely on a multitude of road signs and some sort of logical system of road designations or street numbers. They may ask directions or, more commonly, they simply avoid putting themselves in an unfamiliar place. In fact, it might be argued that an avoidance of maps leads to an avoidance of movement. For questions of location and distribution,

most people rely on verbal descriptions or remain uninformed about even very basic distributions. Geographers and other academicians, on the other hand, perhaps finding maps too crude, have been known to search for mathematical expressions to approximate a mapped representation. Cartographers, having perhaps formed a special relationship with their products, fail to realize that there may be a popular aversion to maps.

The general avoidance of maps exists for several reasons. Balchin, in defining "Graphicacy" as the visual spatial aspect of human intelligence and communication, comments that students in our schools are denied the opportunity to develop their graphic skills (Balchin, p. 34). Cartographers have been increasingly arguing for the basic education of map readers (Olson, p. 151; Morrison, p. 97). In response, Hann has commented that we should not be so engrossed in our profession that we demand that other people know the things we know (Hann, personal communication). We cannot expect to teach all elements of graphicacy just as we cannot force people to make use of our maps. In the end, much of the problem of map avoidance may be placed on the medium itself. Ultimately, it is the cartographer or map author who must assume responsibility for this situation.

II. THOUGHTS OF MAX HANN

In his article "Grafik in der Karte - Karte in der Grafik," Hann makes some interesting observations about modern cartography. Hann notes that the

"...role of the cartographer has changed from the earlier, pure artistic to the technical artistic. ...Past artistic influences are still affecting the map author of today but modern cartography is making attempts to free itself from the past, tries to avoid artistic

symbolization and moves towards the other extreme. This push towards abstraction and greater perfection often does not help the user of the map. ...People are turned off by the modern products of cartography because they don't understand them. Cartographers should not make maps more complicated so that even colleagues have a hard time interpreting them." (Hann, pp. 142-143, translation mine).

Hann places the blame of map avoidance on cartographers' insistence on increased abstraction and resultant map complexity. This insistence has led to the development of Kartografik as an alternative.

As an example of Kartografik, Hann mentions the very artistic landform depictions of Berann but he also includes in this category all types of graphic maps found in magazines, travel guides and other popular publications. Kartografik makes use of simple shapes, many colors, needs little explanation but conveys a concise message. Kartografik is popular cartography.

Hann then argues that

"...we cannot dismiss this (Kartografik) as cheap commercialism and regard the result of artistic cartographic work as a short-lived fad because we don't want to recognize it. ...Because this product has found a place not only in ads but also in other practical maps. ...The cartographer must realize this situation and find a key within it. With the advancement of daily business life, the will and accommodation of people to decipher maps decreases. ...The modern person wants to be easily informed of

activities outside his interests. He certainly does not want to solve puzzles or decipher complex maps. ...He is fully informed with the Kartografik and his interest is excited and supported." (Hann, p. 195, translation mine).

III. THE DILEMMA

Kartografik not only represents a new and powerful form of communication but it also presents cartographers concerned about the problems of map communication with an interesting dilemma. While they continue to focus on map element characteristics and pursue a trend towards objectification in the analysis of map design (Petchenik, 1974), the maps cartographers produce may be reaching a smaller audience. The situation is indeed ironic. At the same time that cartographers emphasize the importance of communication, their maps are communicating to fewer and fewer people.

How have cartographers gotten themselves into this predicament of emphasizing communication and yet seemingly communicating to fewer people? The answer may be found in our approach towards research. As Muehrcke comments:

"...in recent decades there was a rapid 'scientification' of disciplines most associated with the use of maps. ...Emphasis quickly changed from a qualitative to a quantitative approach with the assumption that subjective map analysis is not sufficiently rigorous to provide the foundations of a scientific discipline... . Cartographers have been forced to evaluate their methodology and adjust to a more sophisticated approach to research." (Muehrcke, p.2).

In addition, cartography has always had a mathematical character so it is not surprising that cartographers chose a quantitative approach and attempted to objectify the study of map communication. Mathematics had been so useful in solving the problems of representational cartography, why could it not also be used to solve the problems of cartographic communication? The assumption seemed reasonable and yet it had one shortcoming: It overlooked the importance of people in the process of communication. In our pursuit of objectivity, we seem to have forgotten the most important element of map communication - the person.

It may be questioned in what way we have forgotten the person. It would seem that subject testing, the major cartographic methodology in the study of map communication, reflects a concern for the person, but is this really so? Does subject testing reflect a concern for the map user? The experimental design usually involves a testing program with carefully structured tests followed by statistical analysis of the results. The tests usually attempt to determine some limitations of perception or may be concerned with peculiarities of the eye-brain system. The interest is predominantly with physical characteristics of the perceptual process. Research cartographers, have shown greater concern for the physical limitations of the eye-brain system than with maps or the people that use them. We have forgotten the person in our blind pursuit of quantifiable variables in map design.

IV. THE HUMAN/SOCIAL ASPECT

The ultimate mistake cartographers have made is that they have not recognized an important dichotomy within their field. It is one thing to construct a map, it is quite another to evaluate its use. The latter involves a concern

with the map reader and therefore, has a human aspect. This human element pertains not only to individual map readers but to map readers in general and therefore the study of map communication has a social character. The dichotomy is between traditional cartography on one side - presenting spatial information in an intended readable form with all the transformations involved in that process and on the other side - the evaluation of maps and determining how maps are used by people. From this latter stand-point, cartography may be seen as a humanistic/social science.

Map communication presents a new component to the field of cartography - a human component. The study of map communication is humanistic in (1) being concerned with the relationship between maps and people; (2) striving for map symbolization which is understandable and meaningful to all people; (3) determining current likes and dislikes of people towards different graphic symbolization techniques; (4) making maps a viable form of communication; and (5) conveying a more cohesive and unified image of the world to people. These are the elements of a humanistic/social cartography.

Cartography has thus both a scientific and a human/social character and this is an important dichotomy. Ordinarily, it can only be detrimental to expound on such differences within a discipline. The benefit arises if we recognize that such a dichotomy may logically lead to a different approach towards research - a separate methodology. The question is: How is information obtained in regards to map communication? If we admit that there exists a human/social element in this question, then the answer is not easy. Social scientists have been arguing for decades about the character and limitations of their explanatory goals. How is information determined in the social sciences?

Many social scientists are becoming increasingly aware that their study necessitates a concern for the subjective states of men, a concern with interpreting and understanding men's motives and cognitions (Truzzi, p. 1). But how can we achieve such an understanding? For "humanistic" social scientists such understanding can only be achieved through an empathetic identification with the values and meanings examined in the minds of people. This is the process of empathetic understanding or verstehen as it is referred to formally (verstehen is a German word which implies an understanding applicable primarily to human behavior). The basic assumption of this subjective approach is that the data of the social sciences (human minds) are given since we are part of what we perceive (Truzzi, p. 8). It is within himself that the social scientist is to find the key to the social world.

The humanistic/subjective approach is the object of much debate in the social sciences and it is not the intention here to present it as a methodological alternative in the study of map communication. The contribution of a humanistic cartography is to (1) promote an understanding of the map user through empathetic identification, (2) constantly re-affirm the importance of map communication, (3) evaluate current research goals and corresponding methodology and (4) disclose any possible ambiguities that might exist between goals and methods used to achieve them.

If we truly desire that maps communicate to people, then cartographers must possess an empathetic understanding of potential map users. This necessitates that we make every effort to view the problems of map communication not from our own perspective, but from the map readers' frame of reference; not

from the perspective of how some theory says the individual ought to perceive maps, but from the position of how he actually does so. All cartographic research involving psychophysics, pattern recognition and cognition will mean nothing if we do not also possess an understanding of the map user. Verstehen is not a methodological alternative, it is a methodological necessity in the study of map communication.

Maps play a vital role in understanding our world. But, in order for maps to be used and to communicate effectively, cartographers must possess an empathetic understanding (verstehen) of the map user. Let us use this understanding to create a new cartography. Let us look towards the day when maps will no longer be considered an oddity but rather a necessity in understanding our surroundings, in understanding our world and thus in understanding ourselves. Maps can play a vital role in this process. Let us not, as cartographers, distract from this role.

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