

GERMAN JOURNALISTIC CARTOGRAPHY  
THE FIRST READER'S POLL ON MAPS IN NEWSPAPERS

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**Abstract**

As the final part of a scientific research program on journalistic cartography in Germany a representative poll was executed in 1992/93 to get information about the reader's opinion concerning maps in newspapers. Although since about 15 years there had been increasing activities in the cartographic field of „short-time maps“<sup>1</sup> this opinion poll had been the first one in Germany - and perhaps in Europe and elsewhere - on this subject. The most important result of the poll seems to be the fact that most readers notice the maps in a receptive way - they „see“ the maps - , but not in a cognitive way - they do not keep the map information in mind, they do not learn from the maps, they are not really influenced by the maps.

**1. Introduction**

1988-1993 the first German methodologic and comprehensive research program „Journalistic Cartography“<sup>2</sup> had been carried out at the Cartographic Institute, Free University of Berlin [24]. Two very different general experiences gave reason to start a project like this. History of cartography obviously demonstrates that knowledge about spatial information systems, their components and their use are means of power throughout the ages irrespective of the military, political or economic nature of power [22, p. 174]. Apparently contrary to this tradition day by day a greater part of people faces maps concerning topical events spread by mass-media.

These experiences led to the fundamental question:

Do the nowadays permanent circulation of a lot of „short-time maps“ in mass-media democratize spatial information systems

or

do these maps really influence a considerable part of the population ?

The research program „Journalistic Cartography“ was financially supported by the „German Research Commission“<sup>3</sup> and comprised four parts:

- the development of a cartographic methodology to analyze journalistic maps;
- the analysis of about 2,000 maps published during the first six months of 1986 in 34 German newspapers representatively selected by journalistic scholars;
- systematic inquiries of the editorial staffs and graphic departments of these newspapers as well as of journalistic graphic services;
- a representative reader's poll on maps in newspapers executed by the German polling agency „infas“.

This program had been very clearly limited to newspapers on the one hand and to „reference maps“<sup>4</sup> on the other by this limitation consciously excluding maps in magazines and television as well as weather maps and maps in advertising. This strict limitation was justified by the fact that the conditions of

1 Kurzzeit-Karten.

2 Presse-Karten.

3 Deutsche Forschungsgemeinschaft.

4 Ereignisraum-Karten.

map-making in newspapers are very different to those in magazines and television; in the same line the parameters to create a „reference map“ differ from those to design a weather map or an advertising map image. Otherwise the support conditions of the „German Research Commission“ included a clear limitation of the research range.

Partly the gaps necessarily left in connection with this limitation of the research program could be filled by diploma thesis research especially on weather maps, their main features and their public acceptance [2, 3]. In addition to the research program „Journalistic Cartography“ these diploma thesis opened new door-ways in regard to the fact that these „vulgar“ and graphically rather simple types of maps had almost totally been neglected by scientific and professional cartography.

Furthermore, the introduction and later on the extension of the concept „short-time maps“ to a certain map area - a process of understanding and cognition that is not finally fixed, but still in motion - make room for new questions and extended research fields.

## 2. What is the frequency of newspaper maps ?

On account of the fact that about ten years ago in Germany nobody could give a reliable answer to this question it was a very central point of the program to clear this problem in the first stage. The total of 34 newspapers that had been analyzed contained almost 2,000 maps. If one calculates the number of maps printed in German newspapers per day according to this ratio the total is about 5-6 million for the former Federal Republic in 1986 or about 8 million for Germany of today. This total does not comprise any weather maps or maps in advertising. Adding weather maps to the „reference maps“ would double the total of daily printed newspaper maps.

The daily total of spectators that face reference maps and weather maps presented in German television especially during the evening news reaches the same dimensions as mentioned above in regard to daily printed newspaper maps.

## 3. Who are the map makers ?

According to the analysis of about 2,000 maps we can distinguish three main groups of map makers.



Figure 1: Monochrome shot by a no-name photographer (map original much larger and multicolored)  
[Rhein-Neckar-Zeitung 14. 4. 1986]

### 3.1 The anonymous

With about 40 % the no-name group is the biggest one. Here we can find large scale maps originating from official cartographic institutions as well as other maps with graphically very complex and difficult structures like large polychrome planning maps reproduced on the base of a photographer's monochrome shot or via a rigorous reduction of size and scale. In a relatively high percentage procedures of reproduction and printing used in newspapers in 1986 destroyed a lot of details and contrasts of these maps. But still today the general reason of the uselessness of a certain amount of these maps - they are not produced under the special newspapers technical conditions - did not change.

### 3.2 Journalistic graphic services

The journalistic graphic services that regularly and constantly produce and circulate graphics like diagrams, charts and maps partly together with more or less detailed articles rank second with about 37 % of the maps (see Figures 3,4,5). These maps are based with regard to the contents on research by special editors and graphically on the skills and the experience of graphicicians. Generally the graphicicians replaced a special cartographic education or training by „learning by doing“. These services use a lot of sophisticated cartographic sources.

The advantage of maps of this group is the strict consideration of newspapers' technical conditions; they can loose their usefulness only if their size is reduced to such an extent that lines are destroyed and names become illegible. Problems can arise if the respective newspaper takes the map from a graphic service and the corresponding article from a news agency without comparative check of the topographic details and names that might differ for idiomatic reasons.

### 3.3 Newspapers' graphic departments

About 14 % of those 2,000 maps originated from newspapers' in-house graphic departments. In 1986 only three „elite newspapers“ and one regional newspaper regularly published maps of their own whereas some regional newspapers printed maps like this as exceptions only.

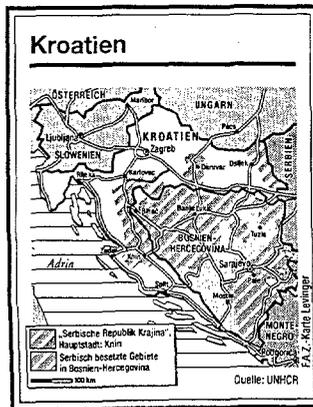


Figure 2: Map produced by the newspaper's graphician/cartographer Levinger  
[Frankfurter Allgemeine Zeitung 26. 4. 1995]

These maps are based on a close cooperation between the editorial staffs and the graphic departments and, moreover, can express a cartographic individualism according to the respective graphic standard of the newspaper.

#### 4. Types of journalistic maps

The general types of maps spread by newspapers, magazines as well as television are „reference maps“ or „locator maps“<sup>5</sup>, weather maps and maps in advertising imagery. The topical cartographic interest is focussed on the „reference map“ and the weather map.

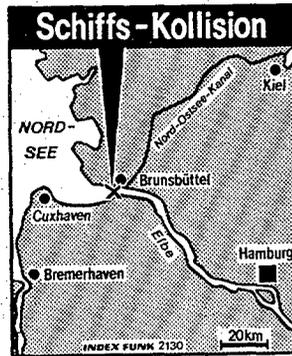


Figure 3: Reference map (a ships' accident) - Index Funk service [Westfälische Nachrichten 4. 1. 1986]

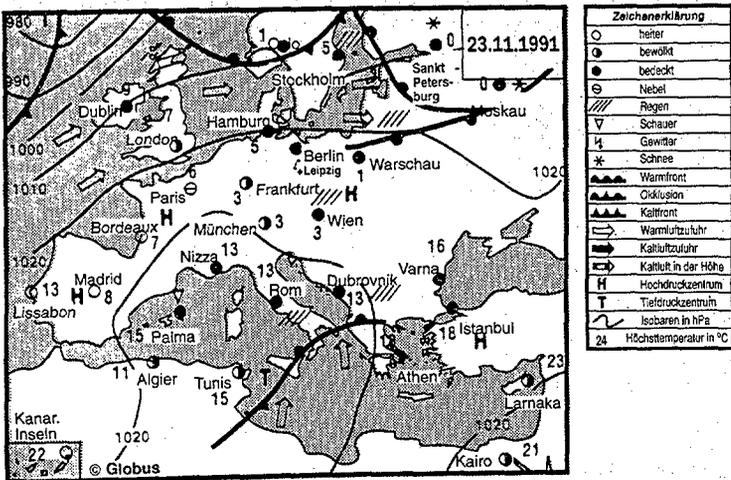


Figure 4: Weather map - Globus service [Leipziger Volkszeitung 23./24. 11. 1991]

<sup>5</sup> French: carte de nomenclature - German: Ereignisraum-Karte.

A „reference map“ cartographically shows the topographic scene or geographic surroundings where the event took place that is explained by the article the map belongs to. With regard to the subject shown by a „reference map“ we can distinguish a „topographic type“ from a „thematic type“. In general the „topographic type“ contains topographic features only like coast lines, borders, settlements, and traffic lines as well as a reduced set of topographic names. Sometimes the „topographic map“ is completed by an inset in a minor scale to give a more distinct impression of the general geographic situation<sup>6</sup> or by an arrow (or a cross) marking the place of interest. For the most part the signs used in this type of maps must not be explained by a legend. „Thematic maps“, however, graphically focus on the pattern of distribution of special features that generally have to be explained by a legend. As a matter of fact „thematic maps“ are graphically much more delicate and by this reason larger sized than the „topographic type“ of journalistic maps.

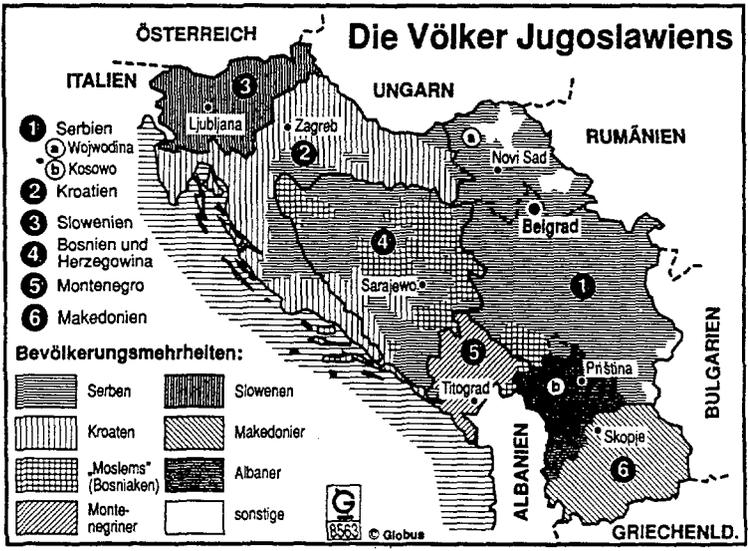


Figure 5: Thematic map (Yugoslavia's people) - Globus service [Der Tagesspiegel 19. 10. 1990]

Otherwise the way of graphic fashion of a newspaper map can vary between a strict „cartographic style“ - a characteristic of maps in „elite“ newspapers - and a more „graphic style“. „Graphically styled“ maps show non-map features and picture-like elements that might be added to loosen the exacting and rigorous impression of purely „cartographic“ maps.

**5. Effects of journalistic maps - first approaches**

With regard to journalistic cartography in Germany one cannot point out any real consciousness during the first period that came to an end about 1975. The articles of Martin Zippel [26] and Volkhard Gaebler [4, 5] claimed for standard cartographic methods (in the sense of „long-time maps“) in journalistic cartography. Both contributions were not based on representative studies and did not take into account that journalism is following principles very different from those of scientific „long-time“ cartography.

<sup>6</sup> „Lupen-Prinzip“.

The second period started in 1976 when the second edition of Günter Hake's well known text book „Kartographie“ [10, p. 11, 245] for the first time contained a more reliable approach to these „topical maps“<sup>7</sup> as they were called by Hake at that time. This approach clearly revealed the problems to treat this field especially by the uncertainty to find an appropriate and striking concept for „maps in the media“. Hake, however, regarded these maps as tools that quickly disseminate information about natural events and political, military, economic, and cultural facts from all over the world via newspapers, magazines and television. Moreover, Hake supposed that many people would gain their knowledge about topical facts with spatial relevance without any exception or almost exclusively by these „topical maps“<sup>8</sup>. For this reason cartographers should care about the design of maps like this. One year later Hake again discussed the problem to find a striking concept finally coming to a conclusion by creating the concept „short-time map“ [11, p. 130]. Moreover, in this paper he stressed the psychological barrier many traditional cartographers have concerning their idea that a real map has to have a certain graphic elegance and should be considered as an artistic object with a long expectation of life. In this sense consequently maps printed in newspapers would be of minor importance, not presenting high graphic elegance and artistic effort and being characterized by a very short expectation of life - just being an article of consumption: a short-time map.

In 1979 Werner Witt published his „Dictionary of Cartography“ [25] strictly avoiding the concepts of Hake, however, mentioning this field by using the catchwords „politics, media“ and characterizing his opinion as follows: „Often the primitiveness of those maps cannot be exceeded and the newspapers' illustrators at least once should look over a cartographer's shoulder. On the other hand cartographers could learn several things by advertising specialists, above all to use the graphics in a psychologically and propagandistically effective way.“ [25, p. 268]

Among the German language manuals the „abc Kartenkunde“ [18] was the first one to dedicate a special entry to the „journalistic map“ characterizing the features and the possible information effect of this type of map in a rather objective way.

The studies which during this period had been published in Great Britain, the United States, the Netherlands, and Poland [1, 7, 9, 16, 17, 19] mainly tried to demonstrate the pitiable situation of journalistic cartography that - of course - should be improved by traditional cartographic means in the sense of „long-time map“ methods. The ignorance of traditional cartographers in regard to journalistic working was quite adequate to the ignorance of journalists and the communication sciences in regard to the map as an element of its own among the family of „graphic representations“.

About 1985 the third and present period started that can be characterized by a considerable increase in activities and consciousness with regard to journalistic cartography. In 1986 the national Canadian cartographic conference dedicated a special session to this subject with contributors from both sides - cartography and journalism - and from several countries [6].

The same year saw the first step in preparing our Berlin research program by finishing the diploma thesis of Dieter Jung [15]. He presented a first complex methodologic approach to a cartographic analysis of journalistic maps. Moreover, this thesis very clearly showed that

- any approach had to distinguish between newspapers, magazines and television,
- a simple cartographic approach would lead to a stalemate, and
- the analysis instruments had to be improved by a wide range study including a representative set of newspapers.

The first parts of the research program (analysis, inquiries of editorial staffs, graphic departments, and journalistic graphic services) unambiguously made led to the (possible) map effects „information carrier“ and „reference map“. Thereby the map could be regarded as an information that takes the same rank as the text as well as an addition of minor importance to the information of the text. The editors generally denied Hake's supposition that journalistic maps have an educational effect. Moreover, the publicist Winfried Göpfert analyzed a media turn from educational to service features that pushed the learning effect to the rear [8]. Nevertheless, there had been no doubt that information could be understood much better and much faster via a graphic image than via any text.

<sup>7</sup> Aktuelle Karten.

<sup>8</sup> This assumption is repeated in [12, p. 343].

On the other hand a second and obvious effect of the graphic image „map“ is to be „eye-catcher“ amidst the graphic „lead desert“ - how it is called in German journalism - of the newspaper's text. But to achieve this effect journalists and graphicians in the first place use photos, second diagrams or charts; maps rank only third in this line. This effect is strictly graphically based and does not depend on the cartographic map content. As a matter of fact American graphicians are clearly conscious in using the „eye-catcher effect“ to focus on those articles that the reader should take notice of and read with priority. German journalists know about this possibility without doing the same. The real effects of journalistic maps on the newspapers' readers, however, remained uncertain at that time because no readers' polls had been carried out by anyone and the readers' reactions with regard to journalistic maps generally were rather seldom.

**6. What is the readers' opinion of journalistic cartography ?**

During the preparation and the first stages of the project our astonishment grew when we realized that in the intensively communicating and inquiring world of journalism nobody had cared about the readers' opinion of journalistic maps. In Germany as well as abroad the respective discussions took place leaving the readers out of consideration whereas newspapers, magazines and scientific journalistic institutions spent a lot of money in consumers' research in a lot of other fields.

*6.1 Objectives*

The poll had been prepared on consultations and discussions with journalists, publicists, psychologists, and polling specialists - most of them had never before been in contact with the cartographic world. Finally we decided to consider five general objectives:

- (i) Does the reader take notice of maps in newspapers ?
- (ii) What are the effects of maps with regard to newspapers' information ?
- (iii) Does the reader wish to change maps in newspapers ?
- (iv) Does the reader either prefer or refuse special types of maps ?
- (v) Do the A-D answers correspond with sociodemographic features ?

*6.2 Questionnaire*

The poll had been organized by the German polling agency „infas“ using the frame of an „omnibus“ poll that contained several different questionnaire topics and considering the answers of 1,000 representatively selected adults.

Our poll was based on a special questionnaire which comprised a total of 11 questions, an article with three different maps (split-sample method), and a comparative set of three maps.

- (o) General characteristics concerning readers' habits

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# 1	How often do you read a newspaper ?
	<input type="radio"/> daily
	<input type="radio"/> almost every day
	<input type="radio"/> several times a week
	<input type="radio"/> once a week
	<input type="radio"/> hardly ever
	<input type="radio"/> never

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# 2	Which newspaper do you read ? .....
	(if several newspapers, please name the most important)

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# 3	How many minutes per day do you make for reading your newspaper (average) ? .....minutes
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- (i) Does the reader take notice of maps in newspapers ?

# 4	Which parts of a newspaper do you read ?	regularly	often	seldom	never
	General news/politics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Regional/local news	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Travels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Official Announcements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Announcements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# 5	If you read an article you are interested in	high	medium	low	don't know
	what happened ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	who was involved ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	where things happened ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- (ii) What are the effects of maps with regard to newspapers' information ?

We prepared three information models each comprising the same article about a terrorist bomb attack on a tourist train near Cuzco (Peru)<sup>9</sup> but different maps (A, B, C) showing the same part of South America. Maps A and B had an inset with the topographic names „Peru“ and „Südamerika“ (South America) whereas - at the same place - map C contained the name „Pazifischer Ozean“ (Pacific Ocean).

The maps A, B, and C are representatives of different types of reference maps:

A	poor content	low graphic contrast <sup>10</sup>
B	poor content	high graphic contrast <sup>11</sup>
C	complex content	rather complex graphic <sup>12</sup>

The respective information model (A, B, or C) was presented to the asked person.

<sup>9</sup> Shortened version of an article from dpa (= Deutsche Presse Agentur/German journalistic agency) that had been published by several German newspapers June 27th, 1986. Ten tourists were killed by the bomb, among them a German family.

<sup>10</sup> A product of the journalistic graphic service CARPRESS, No. 90.78; published by „Westdeutsche Allgemeine“, June 21st, 1986.

<sup>11</sup> A product of the journalistic graphic service INDEX FUNK, No. 2299; published by „Bergedorfer Zeitung“, „Badisches Tageblatt“, „Rheinische Post“, „Ruhr-Nachrichten“ (and perhaps other newspapers) June 27th, 1986.

<sup>12</sup> A product of the cartographer Sturm, „Frankfurter Allgemeine Zeitung“; published in this newspaper only June 27th, 1986.

# Zehn Tote bei Anschlag auf Zug in Peru

## Deutsche unter Opfern

LIMA (dpa)

Bei der Explosion einer Bombe in einem Touristenzug in der peruanischen Hochlandstadt Cuzco sind am Mittwoch mindestens zehn Menschen getötet worden, darunter ein deutsches Ehepaar mit seinem 19jährigen Sohn.

Die Bombe explodierte in der Toilette des Triebwagens, mit dem 65 Touristen zu den Inka-Ruinen von Machu Picchu fahren wollten.



Figure 6: Information model B - map by Index Funk service

# 6	What is your opinion of the map attached to the article ?	1	2	3	4	5	
	pleasing	<input type="radio"/>	not pleasing				
	helpful	<input type="radio"/>	useless				
	clear	<input type="radio"/>	hard to follow up				
	understandable	<input type="radio"/>	confusing				
	letters legible	<input type="radio"/>	letters illegible				
	place of event discernible	<input type="radio"/>	not discernible				
	I learned something	<input type="radio"/>	I did not learn anything				
	suitable to the article	<input type="radio"/>	not suitable				

Take away the information model.

# 7	a)	Is Cuzco situated at the ocean ?	<input type="radio"/>	yes	<input type="radio"/>	no	<input type="radio"/>	don't know					
	b)	On which continent Peru is situated ?	.....					don't know					
	c)	At which ocean Peru is situated ?	.....					don't know					
	d)	Which countries are situated North (above) of Peru ?											
		<input type="radio"/>	don't know	<input type="radio"/>	Bolivia	<input type="radio"/>	Brazil	<input type="radio"/>	Ecuador	<input type="radio"/>	Columbia	<input type="radio"/>	.....

# 8 How often - do you think - maps are published in your newspaper ?

- daily
- almost every day
- once a week
- hardly ever
- never
- don't know

# 9 Why - do you think - maps are published in newspapers ?  
(You may tick several answers)

<input type="radio"/> to loosen the text	<input type="radio"/> to fill gaps
<input type="radio"/> to disseminate knowledge	<input type="radio"/> to pretend objectivity
<input type="radio"/> to serve as an eye-catcher	<input type="radio"/> to advertise for the presented region
<input type="radio"/> to give a spatial impression	<input type="radio"/> other:.....
<input type="radio"/> to complete the text	<input type="radio"/> don't know
<input type="radio"/> to increase the number of newspaper's copies	

- (iii) Does the reader wish to change maps in newspapers ?

# 10 Are you satisfied with your newspaper ?

- Yes, I am content - no change.
- Although I am content I would like to improve:  
.....
- On the whole I am content, but the following must be improved:  
.....

- (iv) Do the reader either prefer or refuse special types of maps ?

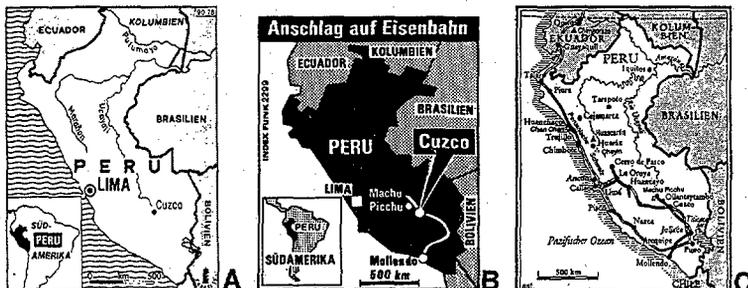


Figure 7: Maps presented to the asked persons (maps by Carpress service, Index Funk service and cartographer Sturm „Frankfurter Allgemeine Zeitung“)

The maps A, B, and C were presented to the asked person.

# 11 Which of the maps do you prefer and why do you prefer this map ?  
O A O B O C

.....  
.....  
.....

- (v) Do the A-D answers correspond with sociodemographic features ?

The answer can be given by the analysis and interpretation of the statistic results of the poll.

### 6.3 Results of the poll

This paper presents results that exceed confirmations of already well-known facts like the importance of newspapers among the mass media (about 75 % of the German adults read newspapers daily or almost every day; about 60 % of the German adults generally or partly read the newspaper in a selective manner).

- (1) The readers of newspapers are well aware of the fact that maps are published in newspapers. Most of the maps - about 70 % - regularly appear among the newspapers' parts „Regional and local news“ and „General news and politics“. About 80 % of the readers generally pay attention to these parts. Obviously maps printed in newspapers have an extremely good chance to be noticed by most of the readers.
- (2) Maps as newspapers' elements are generally noticed with high acceptance. This acceptance concerns aspects of the general impression (# 6: „pleasing“, „helpfull“) as well as aspects of the content („understandable“, „letters legible“, „place of event discernible“).
- (3) The readers prefer the B-type of maps characterized by a few cartographic information elements only and a clear contrast of the graphic map image. Thereby most readers prefer a reduced, but quickly understandable set of cartographic information to a multitude of cartographic details. The clear graphic contrast of the map image helps the reader to select the map among the text and other newspapers' elements. A minority of the readers only gives preference to a „long-time map“ image: detailed content and complex graphic imagery.
- (4) Most readers notice the maps in a receptive way - they „see“ the maps - ,but not in a cognitive way - they do not keep the map information in mind, they do not learn from the maps, they are not really influenced by the maps. Contrary to the general acceptance of the maps the readers refused the aspect of learning by maps (# 6: „I learned something“). This result obviously corresponds with the „infotainment“ attitude accepting the offer of map information and avoiding the process of learning as an act of labor and effort. The receptive way to notice the maps might be the main reason for the tiny number of readers' reactions on maps in newspapers.
- (5) The readers' opinions of the maps' effects mainly tend towards information aspects (# 9: „dissemination of knowledge“, „completing the text“ - 50-52 %) as well as formal aspects („loosening the text“, „eye-catcher“ - 36-39 %). A minority of answers, however, stood for effects like „filling

gaps" (17 %), „pretension of objectivity" (15 %), and „increasing the number of newspaper's copies" (6 %).

Moreover, the analysis clearly showed that people tending to the supposition that maps would disseminate knowledge did not consequently take advantage of this effect of maps with regard to the poll's questionnaire.

• (6) Contrary to several general results the readers that belong to the „elite" with regard to income, education, qualification, and profession show particular attitudes. They have an exceptional high knowledge of or a respective approach to the use of map information (probably of any information) and they regularly read „elite" newspapers showing quantitatively and qualitatively (in the sense of „long-time maps" - C-type maps) the best map equipment. The average length of time spent on reading a newspaper culminates in „elite" newspapers although the readers spending a maximum of time on reading a newspaper belong to the elder generation of socially inferior groups.

In contrast to the „elite" these socially inferior groups are predominantly linked with the so-called „boulevard" newspapers as well as a low standard of knowledge or understanding and using map information. The average length of time spent on reading and the map equipment is least with regard to „boulevard" newspapers.

As a matter of fact the main group of readers concerns regional and local newspapers (77 %) showing a wide range of map equipment mostly somewhere between the „elite" and the „boulevard" newspapers. This group of readers determined the general results of the poll, and by this first approach to the readers' opinions we had no opportunity to divide into subgroups characterized by special manners of behaviour with regard to map use or map acceptance.

The sociodemographic data collected in the close compass of the poll are mainly hierarchically structured by means of hierarchically social and educational inquiry approaches. Moreover, this hierarchic structure dominates the relations between the answers to special questions and the sociodemographic data. Of course, these conditions limit the general range of importance of the poll and its results. It should be mentioned that the social hierarchy tools were insufficient to clear the reasons why the different types of maps (A, B, or C) had been preferred.

In general, but certainly restricted by the few numbers of questions and the hierarchically sociodemographic approach the most important result of the poll seems to be that most readers are not really influenced by maps in newspapers in the sense that they keep map information in mind. Consequently, the tradition that the history of cartography obviously demonstrates is continued with respect to journalistic cartography. Maps in newspapers do not democratize spatial information systems.

## 7. Conclusion

Between the start (1986/88) and the end (1993) of our project journalistic cartography in Germany underwent a considerable change mainly concerning the way of information flow and map production as well as the increase of media competition, but also the editors' consciousness about the significance and the effect of maps in newspapers. Digital data lines and desktop mapping became general tools to produce quickly and to manipulate individually map images on reasonable price levels. Moreover, a new profession has been created: the „info-graphician" who shall be able to use the new tools with optimal effects. By these conditions several newspapers established graphic departments of their own. In the same line the intensified media competition forced several newspapers to improve their graphic outfit by means like this.

The effect of graphics as well as maps being able to transport an information much better and much faster to the reader than any text could be a phantom in the sense that they could replace the text information in any case. As a matter of fact in Germany the weather report - without any doubt a „high involvement" information - in newspapers with 10 % as primary information rank third behind radio and television and the weather newspaper map with 31 % rank second behind the newspapers' textual weather report (51 %).

The nowadays stage of change and uncertainty about the further development of journalistic cartography in Germany will encourage our team to repeat this study within the next few years to give an analysis and a documentation about this development. Moreover, together with other European teams we will try to establish a multinational and comparative research on the conditions and the social impact of journalistic cartography.

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