

The Social Importance of Geocartography in the Spanish Media

The lines which follow, try to synthesise the work done in the last few years to analyse the social impact that the systematic publication of geocartographic material in newspapers has had on Spain.

The evolution and development of the media in Spain, especially in the press, has been conditioned by the different political fluctuations which have occurred since the beginning of this century. The most important of these was during the dictatorship of Franco (1940-1975), which exercised a strong control over the means of communication, maintaining them in isolation from the democratic influences of Occidental Europe. This conditioned the productive structures of Spain's media which remained isolated from the first technological and commercial changes which happened in Europe in the second half of the twentieth century, before the great technological revolution of the eighties.

When, in 1976, the transition towards democracy began, a period of hope and transition began which didn't end until the mid-eighties. In this period, new forms of media appeared, such as audiovisuals (autonomous television stations, new radiophonic formulas, etc.) and press (*El País*, *Diari 16*, *Avui* etc.) which took advantage of the political changes and the good feeling generated by the new trends to find their niches.

A second transition appeared towards the end of the eighties, when the consequences of the media crisis of the previous decade reached Spain and fundamentally affected the articulation and the production and organisational structures of the media. The strategies to follow were clear, but not all of the means could opt for them, for ideological reasons or economic problems. Thus we entered the nineties with the disappearance of some of the publications created in the previous decade (*El Sol*, *El Independiente*, *El Observador*).

The strategy of the media that succeeded in remaining is clear: on one hand modernisation of the general image of newspapers, adjusting them to the aesthetic of the new audio-visual means and a clear move in favour of new computer technologies. On the other hand there was a unification of strengths with other media in order to survive the crisis and the continuous increases in the price of newsprint.

The situation nowadays shows us a diverse and contradictory panorama, unthinkable twenty years ago. The local and regional press is currently enjoying a degree of resurgence, after having managed to get over a difficult moment which endangered its survival. It has looked for new managerial strategies and alternatives in order to remain competitive, these are almost always linked to the unification of forces between different media which permits, while maintaining the independence of expression, the sharing of costs and infrastructure.

As to the press on a national scale, it is generally connected to large enterprises which manage and distribute other products, apart from newspapers, generally connected to information (TV, cinema, radio, books, magazines, multimedia and so on). This diversity allows them not only to remain in the field and improve the products that they offer, but also to control large social sectors and manipulate the flow of information in line with their own interests. In the last few years the weakening of the socialist government, followed by the arrival of the right wing party in 1996, have led to important confrontations between two groups which maintain divergent positions. The continual use of sensational exclusives by one of the less scrupulous newspapers, which manipulates information in favour of certain political parties and economic interests, has resulted in a controversy, not yet resolved, of the „War of the Decoders“, one of its most important focus points, creating a worrying situation in the Spanish press.

Although no more than 36% of the population read a newspaper every day and 22% never read one (*El País* 20.04.97, p. 31, according to a study by „Centro de Investigaciones Sociológicas“ - CSIC), the press is well looked upon in Spain, and is recognised as the most adequate vehicle with which to transmit economic and socio-cultural ideas as well as becoming a vehicle for more general news. In spite of the index of consumption being far less than the audio-visual media, the influence is wider and more relevant. This consideration was determining when we opted for this means of communication, when it was proposed that we study the social impact of geocartographic products on potential users.

The idea is to examine the period from 1990-1996 and to analyse the maps that appear principally in two of the most important Spanish newspapers (*El País* and *La Vanguardia*), and formally evaluate them and the quality of their cartogeographical contents. Our primary objective is through constructive criticism to foresee systematic errors and conceptual problems, which arise when working with spatial information in the world of journalism, and to try as much as possible to correct limitations and mistakes above all those which affect the dissemination of ideas and incorrect geocartographic concepts.

In order to do this research 4000 documents have been analysed (maps and the news that surrounds them) from newspapers all over the country. Above all we have concentrated on *El País*, founded in 1976 and undisputed leader of the modernising and democratic trends in Spain, and *La Vanguardia*, over one hundred years old and with a recognised international prestige, and which furthermore initiated an important process of productive and commercial transformation coinciding with the start of the period studied.

The first, *El País*, goes for the diversification of its newspapers, which enables part of the newspaper to be the same in all editions (the international, cultural, communication sections etc.) and another, exclusively for each part of the country where it is edited. This fact attracts new readers, interested on one hand by the rigour of the newspaper and the professionals who

collaborate, and on the other, and this is the novelty, they also find regional information which newspapers on a national level generally cannot cover.

La Vanguardia in 1989 opted for an important remodelisation of the image of the newspaper. In order to do so they contracted the American designers Walter Bernard and Milton Glaser who advised them to give the old newspaper a new look, making it more modern and attractive. The front and back pages are now printed in colour and a separate section is now included in between the central pages with monographs on different subjects every day. This part is identified by its sepia colour. Coinciding with this change process, a department of infography was created, which has since done all of the graphics and maps which the newspaper publishes.

All of these changes were made possible within the enormous productive transformation which generated the incorporation of the computerised technology in the press rooms, and which facilitates and reduces some of the most boring day to day jobs. Also the great influx of personal computers gives a flexibility and versatility to the creative process of the newspaper which brings it closer and closer to the audio-visual media. Really the objective of these is to get as near as possible to the formal characteristics of the other, without losing its own recognised informative standpoint.

This period of change, which coincides with the start of the nineties is what we have studied intensively and the final objective is to analyse in which way the eruption of new technologies has affected the use, diffusion and evaluation of geocartographic concepts in maps that are published in newspapers, how they reach the reader and how the reader assimilates this information.

Basically documents which appeared between 1990-1992 have been analysed, a period in which both newspapers had already undergone fundamental changes, but also earlier documents (1982-1989) and later ones (1993-1996) have been looked at to reach conclusions with respect to the differences which the lack of computerised technology in the first and the systematic and/or experimental use in the second, influences in the published results.

The appearance of maps in newspapers in Spain was initially associated with the war conflicts and the weather maps:

- The first have two important moments in the first half of the twentieth century, with the two world wars,
- the second appear regularly since meteorological information was considered to be of interest to the reader and that the possibility of offering them this information on a daily basis became a reality.

The difficulty of producing a map through a media as ephemeral as a newspaper meant that they were very few and far between in the first part of the twentieth century, given the difficulties which existed as much in aspects of formal design as in finding and using appropriate

information sources. At the beginning of the second half, some of the technological advances in the field of graphic arts made it possible to increase the appearance of maps in Spanish newspapers. However, not until we entered the seventies these did begin to appear on a regular basis, although they were generally linked to news articles of special importance.

At the end of the eighties producing a map didn't imply any sort of problem, given the ease with which the computerised processes were incorporated into the press rooms. That moment signalled the start of a significant increase in the number of maps published in the Spanish media. The commercial necessity to create ever more attractive newspapers, which allowed easy access to information, is the reason for this increase. The use of a wide range of languages appears as one of the strategies used by the press to maintain and increase their commercial potential. This fact means that nowadays one of the principal problems is that the quality of the maps published is in question and moreover, maps are being used as a form of decoration rather than as a source of information.

It is observed in the analysis carried out that the lack of difficulties in the creation of a press map has created, to some extent, a relaxation in the compliance with basic norms of geocartographic creation. That's to say that not only the map is a resource subjected almost always to the arbitrary nature of the computer application that is used and to the space reserved within the page it is assigned to; but also the methods and cartographic concepts and the themes within the map don't always adjust to the information given in the text.

When the work started we were interested in:

- evaluating the way in which geospatial concepts are diffused,
- what the role of the paper was in this sense, given its credibility,
- if it lived up to the basic relation between the support illustrated and the text which referred to it, and
- if the spatial information once consolidated was treated correctly.

Analysing the contents of the maps we tried to determine the biased use of the graphic and formal attributes which could facilitate the manipulation in a part or all of the spatial information.

Once the documents for studying had been collected and sorted, they were classified in very general groups (metaphors, ecopolitical, health, physical media etc.) and within these categories broken down into more concrete terms (fig. 1). In parallel a file was created, which with 27 items was used for qualitative and quantitative evaluation of each map (fig. 2). This information was introduced into a data base, which enabled us to analyse the general characteristics of the maps and extract results, some of which are presented as follows:

List of groups

Group name	Themes	La Vanguardia	El Pais	Other newspapers
Metaphors	Jokes	12	135	4
	Advertisements	110	130	28
	Report	75	23	9
Microgroups	Leizarán main road in the Basque Country	3	8	1
	Kurils Islands	1	4	1
	The Pope's Travels	7	2	
Culture & Sport	The 1992 Events	88	27	5
	Sports	67	102	20
	History & Culture	56	57	13
Economy, Politics & Security	European Community	10	18	7
	Defence	9	17	2
	Social unrest	45	65	9
	Economy	37	75	13
	Socio-political Activities	49	54	18
Underdeveloped countries		64	126	16
Environment	Meteorology & Climate	19	27	20
	Ecology & Environment	91	101	15
Health & Social welfare		14	20	5
Mass media		7	21	1
Communication & Transport		54	61	11
Free time		75	41	16
Town planning & Public works		211	128	29
Geopolitical conflicts	The Gulf War	124	120	73
	Middle East	18	11	7
	Eastern bloc	126	199	23
	total	1372	1572	346

This list does not include maps from the geopolitical conflicts group of years 1993 to 1996.

Figure 1

Index card

1 number of order	10 title	19 colour
2 name	11 coordinates	20 photograph
3 date	12 symbols	21 how many?
4 area	13 key	22 maps
5 theme	14 orientation	23 surface area
6 group	15 illustration	24 surface map
7 scale	16 information	25 surface photograph
8 projection	17 sources	26 relation
9 general map	18 author	27 observations

Figure 2

- Not all news articles that need a map have one, however others, which don't need one, do. This fact is more determined by the formal necessities of the media and not so much for the type of information - a general lack of understanding of the language of cartography and a distrust in its potential as an information resource.
- The number of themes that use maps to back up their information has increased considerably, something which is related to point 1 and which indicates that once the production

problems are resolved and the visual possibilities are recognised, newspapers will opt for their use.

3. It is normal to use maps with news that needs a photograph when one has not been available. In this case maps are considered a very important visual element and something which is always available, in compliance with the space provided, the informative sources and the use made of them. In fact we have observed the use of maps already published in which the news which they cover doesn't appear.
4. The habitual use of maps from foreign graphic news agencies, and those which make a general reference to scientific themes, health or catastrophes in the Third World. Using these maps is fine, as long as they are modified and the specific details which affect each media are brought up to date and the particular idiosyncrasies that affect the area where the map is to be published, and identifying the source of the information, something that is not very common in Spain.
5. The text very seldom refers to the map, showing a lack of appreciation for the map and maintaining the two as separate entities. In some extreme cases, data or toponyms used in the text are different from those used in the map, causing confusion for the reader.

The territorial areas that are mapped are tightly linked to the type of groups worked out and this territorial expansion goes directly opposite to the number of maps published. That's to say that the areas nearest to where the newspaper is edited are those in which a greater number of samples is concentrated (fig. 3).

As to the correct use of cartographic language we have observed:

- a. The incorrect and incomplete use of attributes, symbols and cartographic codes (lack of title, key, appropriate symbols to the size and the type are the most common - fig. 4).
- b. The biased use of some formal resources (colour, shade, form, orientation etc.) to accentuate certain values or ideological attitudes, contrary to accepted geocartographical criteria which are fundamental in the study of the physico-ambiental reactions of the societies to which they are destined.
- c. The toponyms are one of the recurrent problems in press maps. The bad selection, the incorrect positioning, an inadequate use of blocks and letter styles, along with a confused hierarchy, make this element the paradigm of the misplacements that can still be observed in maps nowadays.
- d. The planimetric elements in these maps are generally simple and of a limited number. The coastal delimitation tends to be excessively generalised and the hierarchy of the different categories of the administrative limits and the urban nuclei don't always advise situating the reader gradual in the generally accepted socio-political order. A similar thing happens with the hydrographic and road networks which appear on a number of occasions.

Groups and Territory relationship

	Barce-lona	Cata-lonia	Spain	Europe	North America	South America	Asia	Africa	Oceania	World	Σ groups
Socio-political Activities	15	17	33	12	20					6	103
Jokes			43	19	4	10		3		68	147
Advertisements	44	26	43	34	12					81	240
Reports			22	26	2					48	98
„Leizarán main road“ (Basque country)			11								11
Communication & transport	30	12	42	16			6			9	115
European Community				28							28
The Gulf War				12			214	6		12	244
Social unrest	11	15	48	20	5					11	110
Defence			13	3						10	26
Eastern Bloc conflicts				322	1					2	325
Ecology & Environment		67	49	30	8					38	192
Economy		14	44	21	15		4			14	112
The 1992 Events	99	9	7								115
Sports		41	32	65	11					20	169
History & Culture		30	25	30	5	6	3	2		12	113
Kurils islands							5				5
Meteorology & Climate		16	20	8						2	46
Mass media			12		3				1	12	28
Free time	30	27	19							40	116
Middle East			4		1		24				29
Underdeveloped countries				13	30		71	69		7	190
Health & Social welfare		14	12							8	34
Town planning & Public works	154	155	19	11							339
The Pope's travels						5		4			9
Σ territories	383	443	498	670	117	21	327	84	2	400	2944

Figure 3

The conclusions reached can be summarised as follows:

- The technological possibilities have improved the conditions of productivity for maps, giving them flexibility and diversity that they didn't have in the past. That leads to the increase of published maps and of themes treated, making easier the diffusion of this visual system to newspaper readers who have become used to considering them as part of the information.
- However, the best technologies haven't been able to break definitively with the negative inertia regarding cartographic realisation, in fact on the contrary, sometimes these have helped to consolidate production methods where errors easily appear.
- Also the current facilities haven't taken advantage of the situation to fully realise the formal and informative possibilities of the cartographic language. This fact repercutes that the reader either assumes that incorrect facts are correct, interfering with their geocartographical knowledge or will disregard maps as an informative element, especially if they observe that what is shown in the map doesn't correspond to the rest of the news article.

Finally, it's worth mentioning that until now, no other study or research has been done to evaluate the social role of maps in the press in Spain. The studies which come closest refer to the analysis of the contents and social or political intention of photographs in the press.

Figure 4



Database results

File #2 Events	Scale	Projection	General map	Title	Coordinates	Symbol	Key	Orientation	Illustration	Information	Sources	Photograph	Total surface	Map surface																
Sports	4%	-	48%	20%	83%	70%	4%	25%	78%	75%	56%	40%	-	20%	56%	55%	85%	75%	85%	51%	2%	1%	41%	45%	55%	(4) 36%	(2) 48%	52%	(1)	
History & culture	12%	6%	4%	1%	23%	6%	57%	60%	12%	13%	68%	70%	25%	25%	7%	7%	36%	7%	68%	51%	2%	1%	41%	45%	55%	(4) 36%	(2) 48%	52%	(1)	
European Community	25%	15%	2%	-	33%	22%	31%	67%	14%	78%	48%	67%	25%	20%	29%	12%	29%	44%	44%	33%	67%	4%	-	71%	67%	39%	(4) 38%	(4) 67%	(1) 56%	(1)
Dalence	18%	-	-	-	19%	-	69%	80%	31%	30%	75%	70%	44%	40%	13%	-	13%	30%	38%	80%	10%	-	31%	40%	78%	(4) 50%	(4) 100%	(1) 65%	(1)	
Social unrest	8%	-	-	-	17%	-	82%	33%	8%	33%	50%	-	33%	-	8%	-	50%	66%	92%	33%	25%	-	25%	68%	50%	(4) 50%	(4) 83%	(1) 100%	(1)	
Economy	12%	10%	-	-	42%	40%	61%	60%	8%	10%	20%	83%	7%	50%	7%	5%	68%	63%	85%	67%	7%	13%	64%	64%	61%	(4) 61%	(4) 83%	(1) 50%	(2)	
Socio-political activities	-	-	-	-	5%	-	94%	93%	3%	73%	55%	40%	43%	40%	2%	3%	25%	20%	78%	80%	4%	20%	18%	83%	46%	(4) 66%	(4) 86%	(1) 66%	(2)	
Underdeveloped countries	10%	-	3%	-	23%	-	75%	100%	8%	25%	75%	63%	50%	63%	8%	-	35%	50%	88%	100%	10%	-	20%	25%	68%	(4) 75%	(4) 58%	(1) 75%	(1)	
Meteorology & Climate	52%	29%	-	-	48%	33%	27%	54%	42%	33%	53%	50%	21%	36%	35%	-	16%	-	35%	43%	2%	-	53%	29%	55%	(4) 54%	(4) 55%	(2)	(2)	
Ecology & Environment	33%	-	-	-	46%	60%	48%	80%	17%	40%	71%	80%	25%	60%	17%	20%	33%	-	41%	58%	8%	-	39%	59%	38%	(2) 38%	(4) 60%	(2) 40%	(1)	
Health & social welfare	20%	24%	-	-	25%	41%	61%	78%	18%	71%	63%	76%	57%	47%	18%	-	33%	-	41%	58%	6%	-	39%	59%	48%	(2) 48%	(2) 88%	(1) 94%	(1)	
Mass media	20%	-	-	-	80%	100%	-	40%	80%	50%	60%	50%	60%	50%	20%	-	10%	-	30%	60%	30%	30%	40%	30%	70%	(4) 60%	(4) 80%	(1) 90%	(4)	
Communication & transport	5%	-	-	-	5%	-	70%	100%	5%	63%	40%	100%	25%	63%	-	-	75%	38%	70%	50%	5%	50%	20%	50%	40%	(2) 60%	(2) 70%	(1) 100%	(1)	
Free time	16%	14%	-	-	32%	-	52%	86%	20%	29%	55%	43%	27%	28%	9%	-	64%	63%	73%	71%	5%	14%	55%	57%	39%	(2) 80%	(4) 88%	(1) 92%	(1)	
Town planning & public works	4%	32%	-	11%	23%	5%	31%	26%	8%	26%	58%	58%	31%	32%	-	11	35%	26%	38%	42%	-	11	54%	47%	58%	(4) 63%	(4) 89%	(1) 63%	(1)	
The Gulf War	3%	2%	-	-	24%	14%	89%	88%	1%	47%	89%	82%	59%	47%	5%	3%	29%	20%	73%	82%	2%	1%	30%	34%	61%	(3) 50%	(3) 87%	(1) 88%	(1)	
Eastern Bloc (The Balkan War)	38%	25%	-	-	25%	34%	68%	66%	34%	74%	92%	83%	18%	60%	31%	4%	61%	32%	75%	68%	8%	4%	32%	30%	78%	(4) 75%	(4) 44%	(1) 40%	(1)	
Eastern Bloc conflicts	40%	14%	-	-	36%	25%	36%	66%	27%	80%	70%	85%	37%	60%	17%	3%	9%	17%	29%	60%	6%	3%	64%	70%	50%	(4) 62%	(4) 90%	(1) 72%	(1)	
	48%	8%	-	-	42%	28%	43%	48%	25%	64%	81%	33%	30%	30%	26%	1%	14%	3%	51%	45%	9%	3%	64%	47%	46%	(4) 66%	(4) 84%	(1) 68%	(1)	

Note: For each cell the first value corresponds to "EI Pale" maps, the second to "La Vanguardia" maps. Some groups are not included in this table because their special features.

In the column of the surface only the more important value of each group appears. In the surface column only the % for the biggest category represented appears. Total surface categories : 1. 0 to 300 cm2

- 2. 300 to 500 cm2
- 3. 500 to 800 cm2
- 4. more than 800 cm2

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