S31 Mass media and demographic behaviour

The 6 billion day: an Italian Survey on Public Opinion and Mass Media

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Introduction[1]

After a brief overview of the complex relationship between the media and public opinion, I will try to focus attention on some of the problems attendant on that relationship. My field of observation will be the relationship between public opinion and demographic information, and then I will consider how the information is transmitted by the media. Questions of evaluation, of how to measure the effects of the media on the attitudes and behaviour of their audiences, of individuals and social groups are still open. Those who study communication from various angles and academic disciplines are carrying on a lively debate which has not arrived at hard and fast conclusions. It is also impossible to close discussion at the moment because communication technology is evolving so fast and is reaching a wider segment of the public, while the media, both technically advanced and traditional, are fast reaching global proportions. There is therefore a great deal of literature on the subject and it offers many hypotheses and interpretations[2].

From studies on population we have acquired knowledge about the relationship between attitudes, perceptions and values in demographic behaviour (Leete, 1999; Moors and Palomba, 1995, 1998). We have also learned more about the relationship between demographic transition and the post-modern evolution of society. In addition the diffusion of knowledge about population issues (Baccaini and Van Peer, 1999; Menniti *et al*., 1997) has been studied among specific segments of the population, as has the gap between ideals and real behaviour with regard to the fertility rate (Moors and Palomba, 1995; 1998; Bonifazi et al., 1998, Futuribles, 1995). There is one question particularly, which I would like to emphasize: most people have a very scarce and uneven knowledge about demographic problems, because our society has not developed a solid

[2] The relationship between public opinion and the media intuitively seems very simple. It quickly becomes complicated however when we try to conceptualise it or force it into a rigorous and clear relation. First of all, we are talking about two categories which are familiar to most people, but which are rather vaguely defined. We therefore have to attempt a definition, however approximate. We will use public opinion to mean the opinions expressed in sample surveys carried out on specific groups of people. This is in any case the meaning of the phrase in current use, and one which reduces the social complexity for us. In addition, this extremely synthetic definition of public opinion is particularly appropriate for an analysis of the relationship between public opinion and the media because it offers a means for representing "a generalized public, spectator and actor in a mass society in the full space of rapid change". The term "media" will be used for the full gamut of communication systems. The most important of these are printed matter (books, newspapers, magazines), and television/radio, followed by new means such as multimedia, computers, internet. This second category compound and intersect information available by traditional means. In our presentation

demographic culture able to communicate and support knowledge in this field. This is true, even though the attitudes, strategies and choices connected to these facts touch the lives of all of us. In addition, the sources of information available to the general public are generic articles and programs distributed by the media. Only scholars and students have access to more articulate information.

There are two types of problems related to this state of general knowledge. The first concerns the communication of information which is complete and correct, while the other concerns the form in which the information is communicated. Another way of saying this is that we need to consider both the contents and the language of an article or a broadcast. A third question concerns how the information is received and understood. We want to understand what effects the information transmitted by the media has on those who read it or hear it. We want to see how individual values are formed, evolve and develop. We want to know how these values operate in the family and in the social context. Finally, we want to understand how the process of compromise between the individual and society is affected by the incessant stimuli of communications systems.

The results of a survey carried out by IRP occasioned by the birth of the earth's 6 billionth inhabitant are used in this paper to discuss a few specific concerns, which are only a part of all the problems raised by our research. We intend to evaluate the impact of the media on knowledge about the event, to discuss the ways in which people put the information to use, their learning strategies, and finally to identify the characteristics of the various segments of the population which participated in the survey.

The last part of this paper concerns the other side of the coin. We wanted to know what information is communicated, how the media treat demographic information, what emphasis they add, the balance given to articles and broadcasts, how deeply questions are probed. A textual analysis of press articles on "day 6 billion" completes this paper, with the hope that in a small way it will clarify the mechanisms which inform the complex relationship between public opinion and the media.

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of the results of our survey, we will limit our comments to daily newspapers and magazines on the one hand, and to television on the other.

1. Public opinion and demographic problems

The demographic changes in western countries over the past 20 – 25 years, described as *the second demographic transition* (van de Kaa, 1988), have contributed to a new demographic regime characterized by a stable fertility rate below replacement level, by a large ageing population, and, in the longer term, by the decline of population size. It is generally agreed that the demographic changes taking place are to a large extent the result of social changes. At the root of these changes is a progressive shift in values and social rules towards greater individualism, with increasing emphasis on individual rights and self-fulfilment (Lesthaeghe, 1992). Naturally, although the demographic trends and their causes are similar throughout Europe, there are differences between European countries, so we cannot talk about demographic uniformity. In fact, numerous surveys demonstrate that demographic models differ among countries, as does the way in which they are distributed. This is true also above all for the norms and values which underpin these models (Palomba and Moors, 1998; de Moor, 1995).

As is to be expected, the researchers have held discussions on these changes, and governments periodically express their opinions, usually because some crisis caused by population problems rallies them to do so. Very rarely however does anyone ask the average person what he or she thinks about them. National surveys, often coordinated across Europe, now allow us to compare public opinion with government policies or with the opinion of scholars, and this comparison offers us a new prospective for studying and analysing demographic phenomena.

The results of the PPA survey allow us to know and compare what ordinary people think about present and future population trends, about how the composition of the population will change, and about foreigners in their country. Very briefly, those who worked on the survey agree that there is a close relationship between a country's own demographic history, its government policies, and the opinions expressed by those interviewed. It is not surprising therefore that countries like France with a long tradition of public intervention on population matters, consider the natural birth rate of 4 per thousand too low, and would like to have it higher, while countries like Italy, Spain, and Austria, which experienced population policies under totalitarian regimes, approve a birth rate under 1 per thousand (Bonifazi and Kamaràs, 1998).

The important demographic changes which have affected all of Europe have not yet produced a uniform reaction, a single government policy, or a common public opinion. National differences remain related to the recent past of the single countries. In order to explain the persistence of these differences, we must remember that there are important diversities of culture, history, and tradition, not only between countries, but also within single countries. European

unification is still far too recent to effect these sectors, especially because the process of unification has been much more concerned with economic unity than with social or cultural integration.

The European Value Survey (EVS) carried out in European countries in 1981 and 1990, investigated the fundamental values of European culture and followed their evolution in time. The idea was to use opinion surveys to identify a European system of values. This approach uses both psychological and sociological prospectives and considers individuals' desires and attitudes towards important present-day problems of institutions and norms. What interests demographers is the connection between cultural models, their evolution in time, their relationship to behaviour, particularly behaviour connected to fertility – marriage, relations within the couple, parenting – that is to say the very stuff of demographic studies.

Analysis of the results has given rise to a great deal of literature, which I can only give very brief account of here, especially since many different interpretations have been offered. I want to point out that one of the elements which emerges from an analysis of the data is discontinuity – the relationship between values, opinions, and behaviour. This lack of consistency seems particularly relevant when we talk about values related to the family, marriage, childbearing, and the sphere of sexual relations. L. Roussel commented on the results of the two surveys aimed at identifying uniformity, similarities and divergences among European countries. He suggests that there is a long term trend towards uniformity with regard to general patterns of family behaviour, but also notes that it is impossible to know what direction it will take, what model will dominate, or to predict behaviour (Roussel, 1995). Other studies on the same data confirm that there is inconsistency between the values individuals express and those which define the social norm. An example comes from Mediterranean countries where divorce and cohabitation are infrequent, but individuals take very permissive positions on sexual freedom that are distant from a European mean and from the opinions expressed in Northern Europe. Simons brought different analytical instruments and a different point of view to bear on the same surveys. He believes that at a national level "the cultural determinants of non-conformist sexual behaviour were not the same as the determinants of fertility, that ideas about forms of partnership could vary independently of ideas about parenthood, and, that, although there had been a shift towards pragmatism, fundamentalist ideas about childbearing remained influential in most countries" (Simons, 1999).

So there is still much discussion about the mechanisms which connect opinions, values, and behaviour. Research has not been able to clarify completely how changes in values and traditions affect behaviour. It has proved difficult to define a theory or a model to resolve the question of how values influence social behaviour, especially because it is also influenced by economic circumstances and interpersonal relationships (Tchernia, 1995; Roussel, 1995).

The problem becomes even more complicated if we introduce another variable: the mechanisms which bring about a change in values. We are used to explaining change in terms of socio-economic variables, but how important are cultural factors? How important is mass communication for interpersonal relationships in the family? In general, the function of mass communications and the media in the transmission of values and life styles, and in the formation of opinions is a very relevant question which opens up new areas for analysis and interpretation, but which at the same time compounds the difficulties.

2: Opinions, knowledge, sources of knowledge, and information

Until recently population was considered a 'political' objective, and even today demographic policies do not seem to be based on exact knowledge (PPA, Palomba R., Righi A. 1993, Rand, 2000). Recent European surveys among high school students show that young people know very little about demographic facts, nor do they have the information they would need for a critical interpretation of demographic data (Baccaini and van PEER, 1999; Menniti *et al*., 1997, Rossi, 1995). For fifteen years IRP has been carrying out scientific research into what Italians know and what they think about various areas connected to population. On some questions, like the decline of fertility and the general dynamics of population, ordinary people have access to quite good information, while on other more emotionally involving questions, like the presence of foreigners and the decline in population in Italy, they are influenced by ideological bias which suggests a lack of knowledge (Bonifazi *et al*., 1998, Palomba , 1987, Palomba R. 1991).

Virtually the only source of information and knowledge that people have about demographic issues is mass media. Even the political decision-makers show that they lack regular access to scientific information, in so far as their policies are not informed by correct and complete data regarding important questions like ageing, immigration, and more generally the dynamics of demographic change. Newspapers, radio, and television have become the most important sources of information on these questions, even though by definition journalists have to be concerned with news rather than information. And of course, even when the news is accurately reported, it has to be interesting, captivating, and closely enough connected to specific events to justify the space it occupies. Certainly the Italian media have become quite interested in demographic issues, particularly on highly visible questions like the arrival of numbers of immigrants in Italy, the impending pension crisis, and the progressive decline in fertility. It is therefore important to see whether this increase in coverage is synonymous with an increase in effective communication.

However, behaviour in the couple, in the family, and as parents are questions which do not require a particular approach or scientific support, since these situations are part of our daily lives. They are the daily bread of magazines and radio and television programs, whether information programs, or soap operas, serials, and the columns of women's magazines, which share many of the interests of those who study population questions. Later on we will see if or how the messages broadcast are received, transformed, and assimilated by the consumers of every single medium. The convergence of interest between researchers and popular programs has received very little attention, but it can contribute important information. During the last 40 years, women's magazines have certainly helped to change behaviour patterns in the family and to introduce new attitudes towards parenting in Italy. They have communicated new values and behaviour to a vast female audience. They have helped to disseminate these values which were informed by laws inspired by feminist and youth movements. (Palomba, 1994).

Mass media can play a role in conveying messages about family planning. This is a new role, which rightly belongs to this field of enquiry. This is well shown by the Westoff experience in developing countries (Westoff, 1999). Even the private sector produces radio and television soap operas designed "to motivate individuals to adopt new attitudes and behaviours that foster reproductive and sexual health, gender equality, and environmental protection" (Population Communication International).

Studies on the recent demographic transition in Brazil point up the strategic role played by television institutions - most of them private companies - produce radio and television soap operas, in particular by the famous telenovelas, in disseminating, reinforcing, and institutionalising new patterns of value orientation and behavioural norms related to family size and preferences and to fertility control (Faria and Porter, 1999).

We find then a diversified gamma of roles and effects exercised by the various media: from journalistic information to messages directed at influencing life styles to still more profound and emotional messages. Each mean of communication has its particular specific target in the information market, with messages calibrated for the chosen audience and transmitted in the specific language of the medium.

2.1 The role of the media as a source of knowledge and information

Among those important changes which characterize our period, the change in communications is certainly very significant, not only because transformations and innovations are happening so rapidly in this sector, but especially because its social impact is so great. Given the global scale mass communication has assumed, this impact has been and will be very great in the west, but also in other societies, distant from our own. Developments in the media during the last part of the 20th century have profoundly changed the way we communicate and interact socially. Means of communication create new ways of acting and interacting socially, new types of relationships, and new ways of presenting ourselves. We are passing from face to face dialogue to asymmetrical mass media communication (Thompson, 1995). The most recent theories no longer hold with the common-place belief that the viewing public is totally passive and unable to make critical evaluations. This model was recently re-proposed in Italy during the debate about the political influence of television, and is still widely believed to be accurate. During the course of the 20th century, the critical definition of the public as passive and irrational has been refined and developed by a school of thought which includes Adorno, Horkeimer, and Popper (Ortoleva,2000).

Sociology of the media, psychology, semiotics, anthropology, and ethnology have all contributed to a field now crowded with theories. Models of the effect of communications have been proposed and administrative research on quantitative data and audience analysis has also made its contribution. Very briefly, the tendency now is to reject the idea of a linear relationship between transmission and reception. In fact the recipient of the message is more and more seen as playing an active role. Viewing is, first and foremost for 'cultural studies scholars', an active and social process. Television audiences actively and creatively construct their own meanings rather than passively absorbing pre-packaged meanings imposed upon them (Ang, 1991). Viewers' active interaction with television texts turns reception into a site of struggle and not simply a site of domination.

To simplify a complex and much discussed idea, we could agree with J. B. Thompson that the interaction between the media and the public always includes a creative process of interpretation by which the recipients make sense of the message, using the resources available to them. This process can have effects in the short or in the long term, and may be intentional or unconscious. In addition, every mean of communication acts in a different way, and I will return to this point in a minute. It is also important to consider the combined effects of different types of communication working together.

2.2 Which media

Communication systems proliferated at an astonishing speed in the 20th century, and this trend has become significant and irreversible with the introduction of electronic technologies. The press historically was the first widespread mean of communication , followed by cinema, radio and the television broadcasting. Today we have all sorts of new media (broadband cable TV, the pay TV, mobile phones, the Internet). Our whole system of information is continually being forced to reorganize towards a greater integration of the various types of communication.

Characteristically, both television networks and researchers have tried to define and categorize the viewing audience. This type of study has slowly moved into the area of marketing, and its analytic techniques have become more sophisticated. This process has been due in part to the end of a public monopoly in European television and the subsequent commercialisation of the sector, which has resulted in increased competitiveness. We should be aware that with the arrival of the new media, it has become more difficult still to classify audiences, whatever we may think of the mass-media concept of audience. In fact, we can imagine that in the future individuals will choose the numbers and types of programs they watch. (Andò, 1999). This personalization will invest both new and traditional means of communication. We therefore have to consider the audience no longer in terms of a single type of communication, but in terms of many offers.

Television viewing always seems to cause an increase in the consumption of other media, in a sort of "circular process". So the various media are no longer in competition, but actually reinforce each other. The more people watch or read the more they develop interests which can only be satisfied by other types of cultural consumption. (Sorice, 2000).

If we look at the Italian situation, for example, recent data from ISTAT show that there are various "multimedia diets" (Andò,1999) even though the cultural development here with pronounced differences along geographic fault lines, is not typical of Europe as a whole. We can imagine a "consumption pyramid" with 5% of the population which does not use communication systems at all, 25% which relies exclusively on television, 30% which uses two different systems (TV/radio or TV/printed matter), and 40% which uses at least three types of media (TV, films or radio or TV, printed matter and radio) and up to 3 traditional types of media plus new technologies (Morcellini, 1988).

Although audiences are complex and diversified, it is still possible to identify the outstanding characteristics of the users of the main media like television and newspapers, which continue to dominate the market, even in the presence of new technologies.

2.3 The press

Daily newspapers were the first easily reproduced form of mass communication, and until the arrival of the radio and then television, they dominated the field. The neat division between the 'popular press' and the daily newspapers of the élite typical of English speaking countries is less clear-cut Italy. Here the great daily newspapers have historically been addressed to a public which in theory is universal ("public opinion"), but in practice is highly selective on the basis of level of education (Ortoleva, 2000).

In these countries politically oriented newspapers, with their mixture of propaganda and education, have played a parallel role. In Italy, the function of the penny press in English speaking countries has partly been absorbed by "gossip" magazines, one of the specialized types of magazines aimed at a particular audience of consumers. If we look at the graphic designs used by the press, we can easily understand that it is divided for men and women. The daily newspapers generally cater to men, while magazines are aimed at women. ISTAT surveys give us a profile of the average male reader, who has a high school or university degree and is middle-aged. This consumer base has not changed much over the years, so although the number of readers is going down in Italy, this hard core remains.
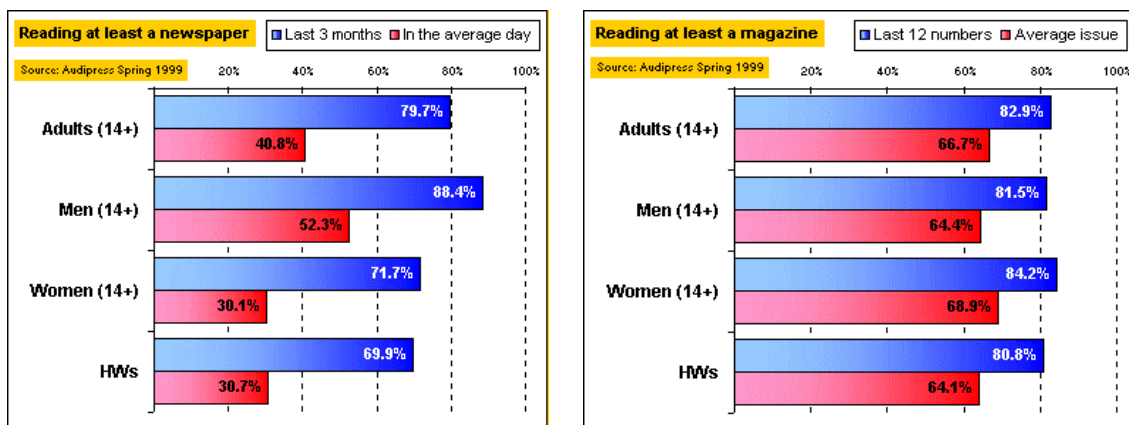
2.4 The television

The wide distribution of television and its broadcasting system have defined a new type of public (audience) and use, and have also brought about a specific organization of messages, "the flow" (Williams, 1974). The advent of television altered the way in which cultural contents (information, entertainment, education) are structured. Consequently it has become necessary to calculate the audience available for any given program, using sophisticated instruments to identify the target audience. In the US and Europe radio and television were not immediately available in

all countries and to all sectors of society, but they spread extremely rapidly. Television in particular reached the vast majority of households in these countries within ten years. It quickly became the central and symbolic medium for entire national cultures (Ortoleva, 2000). The following graphs give some data on the spread and use of television in Italy. They really require no further comment.

The most typical group among all those possible is made up of people whose only source of information is television. This is the TV hard core made up of the elderly, housewives (always referred to in audience analyses because they watch a lot of television), people with little formal education, and the poor.
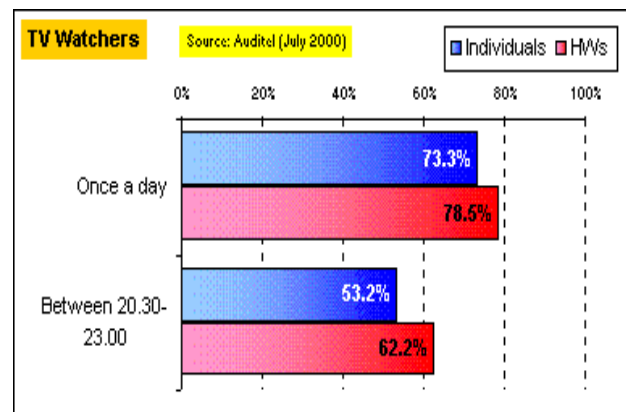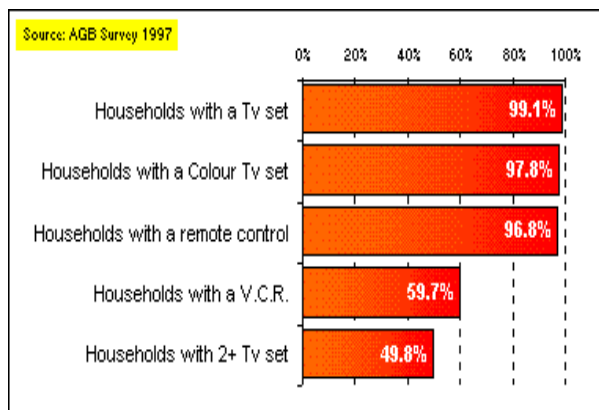
From the early days of broadcasting this group has had a unique relationship to television. They are the audience of soap operas, tv films, and entertainment programs. Their fidelity to specific programs has been eroded by competition, and in addition members of this group are becoming less stereotypical and more interested in constructing their own personal TV flows. This type of "traditional" TV is in a moment of transition. It is unable to attract the young (15-24 years old), whom television is in danger of losing to other alternative cultural attractions. The older segment of the viewing audience of the "traditional" TV is also dwindling, as competition among networks renders programs more similar and more mediocre.

In this situation it is difficult to understand what impact television has on the formation of public opinion, personal values and behaviour, considering how changeable audiences have become. On the other hand there is no doubt that television continues to have an enormous potential for influencing opinion. In the 1960s television played an essential role in the construction of an Italian identity, by spreading a national language, making cultural phenomena known, and promoting reading and writing (Morcellini, 2000). Later, but still in a monopoly position, it served an educational function in line with the dominant Roman Catholic culture.

Throughout western Europe the advent of competing television networks and the fixation on ratings spelled an end to the pedagogical principles which originally characterized public television. This situation means that broadcasting companies prefer to offer stereotypical programs with a broad appeal rather than riskier innovative programs with less appeal. Entertainment programs dominate all other types, in order to keep the public tuned in. Finally television has to reflect the average values of society, according to the Lop principle (Least Objectionable Program) (Menduni, 1996). If this is the logic that governs television programming, especially in Italy, then the images broadcast by television with reference to sexual behaviour, the family, and parenthood are shared, socially accepted models. At this time then, the role of traditional (non-specialized) television is neither very stimulating nor innovative. In other words, television tends to reassure its audience and validate their existing values and behaviour. New forms of television (satellite, pay TV, broadband cable TV) which are aimed at particular consumer niches, and are therefore less tied to average values, open new possibilities for television . Communication advertising also tends to be more flexible and open to new ideas, although its aims are always commercial.

3. A Case Study: the IRP survey on 6 billion day

It is fairly difficult to determine how much influence the media have on public opinion and on the individual value systems, unless we can measure the impact of a particular piece of limited and circumscribed information. The case study we look at here began with a public opinion survey carried out by IRP in the autumn of 1999. We wanted to find out how much people knew about population issues and what their opinions were in conjunction with the birth of earth's 6 billionth inhabitant, an event which the United Nations had said would occur on 12 October 1999. Interviews were conducted both before and after 12 October, in order to find out how much impact the media had on knowledge about demographic questions. We also collected a portfolio of articles on the event in the Italian press, the texts of newscasts broadcast has been collected as well, in order to analyse the contents of the articles and have a way of evaluating the information which appeared in the Italian press and television.

Our analysis of the survey combined with a textual analysis is aimed at reconstructing certain phases of the communication process: transmission (by measuring coverage of the event), its impact on knowledge (the cognitive processing of information on the superficial level of storing, but not of elaborating it), analysis of the contents of a text (in order to identify the structure of the message). Naturally, this type of textual analysis will not tell us anything about the objectives or the resources of the people who produced it, nor about how it was received, used, or understood. Although, as we have seen, there are limits to this type of analysis, these were

compensated by the fact that we were dealing with a unique event, which was very much of the moment and symbolically significant. It afforded us the opportunity to follow an event and make a coherent analysis of it. It offered us a partial, but important, illustration of a communication sequence.

We know that this approach focuses on a mere fragment of the complex learning process, but we also thought it was important to take advantage of the rare and interesting opportunity of this symbolic celebration of the birth of the 6 billionth inhabitant of the earth, because we know so little about the ability of pure demographic information to capture the public imagination.

3.1 The survey

In the period around 12 October media coverage of "the birth of the world's 6 billionth inhabitant" was high all over the world, especially since this event coincided with presentation of the UNFPA Report, and in Italy with publication of the IRP Survey results.

By comparing the number of correct answers to the question about the world population before and after the information about *day-6 billion* appeared on television and on newspapers , we were able to evaluate the impact of the media broadcasts. In this report we will consider only some of the results of our survey, specifically those concerning how well the information was understood. We then relate these data to the particular sources of information, various attitudes and behaviour of the people interviewed, and to some other characteristics which help us understand why some people find it easier to remember certain types of information. Various surveys (Baccaini and Van Peer, 1999; Menniti *et al.*, 1997; Moors and Palomba, 1995; 1998; Bonifazi et al., 1998; Adamson *et al.*, 2000) show that, on the average, people do not know much about demographic facts, and that only a small well-educated segment of the population is relatively well informed. As a consequence, only a small minority (11%) of Italians answered the question correctly. Therefore our data are fairly representative of how well informed people are about basic facts on any given day. Newspapers and broadcasting networks gave ample space to the news. All the Italian newscasts broadcast the information and commented on it. The following table contains data regarding prime time news casts around 12 October. Data regarding newspapers and magazines appears in paragraph 4.

Date	Time	Channel	Title	Duration (")
09/10/99	8:18 pm	Mediaset TG5	6 Billion People on Earth	128
11/10/99	8:28 pm	Mediaset TG4	UN says baby born tomorrow in Belgrade brings world population to 6 billion	117
12/10/99	8:31 pm	RAI/TG1	6 billionth inhabitant of the world born in Sarajevo	47
12/10/99	8:53 pm	RAI/TG2	Earth's 6 billionth inhabitant born	30
12/10/99	7:27 pm	RAI/TG3	6 billion people in the world according to demographic estimate	21
12/10/99	7:20 pm	Mediaset TG5	A baby born in Sarajevo brings the world's inhabitants to 6 billion	125
12/10/99	7:27 pm	Mediaset TG4	Interviews on the future of the world	99

3. 2 The impact of media on knowledge

As we can see in graph 1 the media communication had an effect, since the number of correct answers went up by 12 points. The newscasts and the newspapers helped focus attention on the correct figure and corrected wrong information for those people who already had some idea about the world population. The media information had no effect however on those people who knew nothing or could remember nothing about the world population. This result is interesting because it demonstrates that people who are already aware of a problem acquire specific information about it, while people who are unaware of a problem, or not interested in remembering Information, are unaffected. We will return to this aspect when we examine the combined effect of the different sources of information.

Graph 1: Knowledge about the world population: first and second wave

Legend:
- ☐ 1° Wave
- ▨ 2° Wave

Bar chart values:
- less or equal to 3,5 mld: 8 / 6
- 3,6-5,9 mld: 15 / 9
- 6,0 mld: 11 / 23
- 6,1-8,5 mld: 5 / 4
- over 8,6 mld: 6 / 3
- Don't Know: 55 / 55

Source: IRP,1999
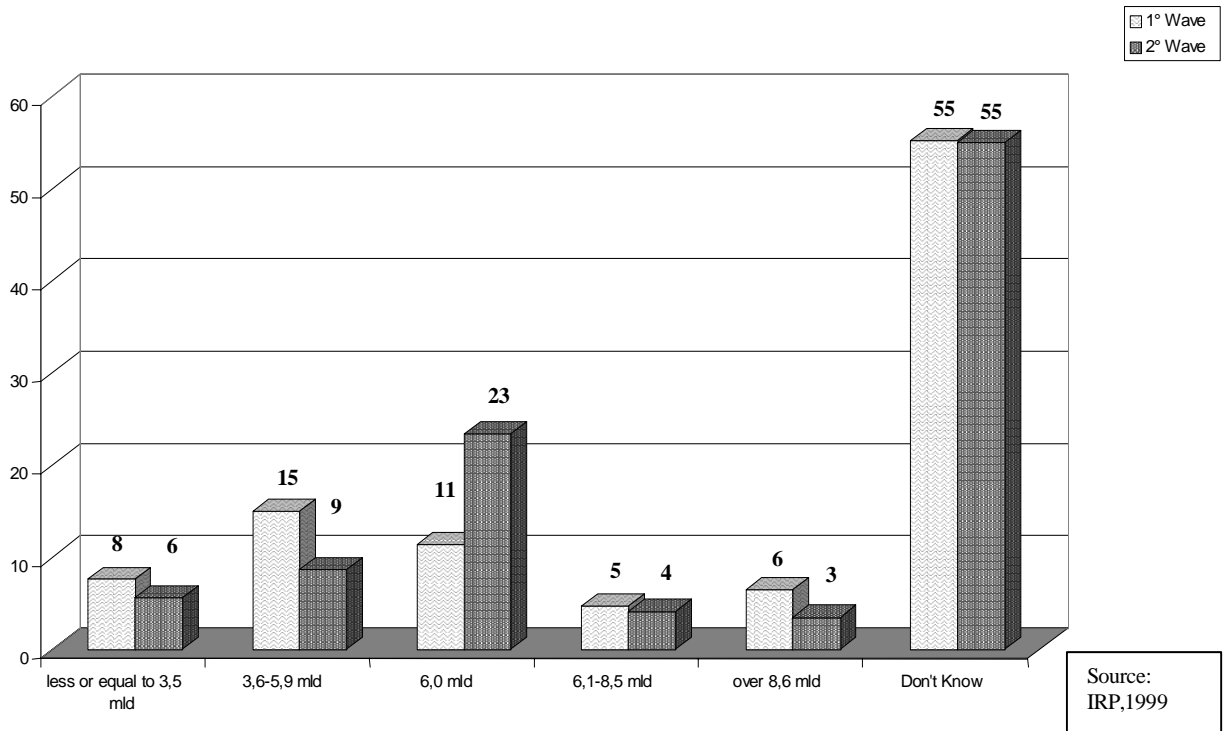
3.3 Sources

Television and newspapers are the main sources of information for a basic knowledge about a population issue like the birth of the 6 billionth person, which has important implications for the present and the future, even as a mere statistic. Schools seem to play a very limited role, though this is no surprise since it confirms the results of the EOPEI survey (Baccaini, van Peer, 1999). Internet as an information source is not relevant as its use is still strictly limited to specific segments of the population.

It's obvious that the information about the 6 billionth person was broadcast in the main by newscasts and commentaries (78% and 15%). Other types of programs, including entertainment programs (8%), also referred to the information, though perhaps more superficially. It is worth noting that 10% of the people interviewed did not remember which television program had broadcast the information, and this is typical of television viewers.

Among the publications we considered, daily newspapers were the main sources of information for most people (85%), due to their wide distribution, while magazines covered a more limited market segment (35%).

How do people combine what they see or read with information they have already acquired in order to arrive at their own personalised and complex position on an issue? One of our questions was designed to bring the plain fact together with problematic aspects which are often related to

population problems. The answers (spontaneous) covered a range from stereotypes and/or simplifications like "world hunger" (27%) to more articulate complex expressions like "the unbalance between rich and poor countries" (13%). Further down the scale we find concern about over-population ("there are too many of us"), to a more neutral interest in the world population growth, to the relation with increased poverty. Fewer people made a connection with aspects of our own reality like ageing (2.6%), or unemployment (2.4%), although these problems were noted. Small percentages noted connections with policies of family planning and support for the economies of less developed countries. The attention concentrated on the platitude about world hunger indicates a superficial approach to the information. On the other hand, the wide range of responses is positive, especially because they include answers which indicate that some people thought about the bare statistics, even when they did not delve further into the questions raised. A high percentage of people (87%) indicated that they were "very or quite interested" in the news item. They need more information and identify television and newspapers as the most appropriate sources to obtain it. There seems to be a need for information, which has not yet been met. This may mean that people would be receptive to more information about demographic issues, or about scientific issues generally. Since our survey focused on people who learned about world population through television and the press, we also wanted to know more about how these two sources worked together to give information. We felt that this was an important consideration because today people tend to combine information from various sources to reach a personal position on issues. The survey shows that most people (62%) had not heard or read anything about the 6 billion. This is similar to the percentage (55%) who answered "I don't know". Among those who had heard or read about the issue 18% heard it on television alone, 13.5% from both television and the press, and 6.4% from newspapers only. The characteristics of these four sub-groups can help us define our target for future information campaigns to improve knowledge about population issues or specific policies.

The first group (neither television nor newspapers) is made up for the most part of women between 51 and 65, without much education, living in the south. Those who learned about the issue from television alone are younger (20 – 24), have a medium level education, and live mostly in the north-east of Italy, and include men and women. The groups of those who got their information from newspapers or from a combination of television and newspapers are made up mainly of men, between 35 and 50, with a university degree. The former group is concentrated in the north-west, while the latter extends to central Italy.

Graph 2 - Sources of information about the world population (in percentages)

Source	Value
Television	68,7
Newspapers	44,1
No Sources	6,0
Radio	6,0
Personal Background	5,1
School - University	4,4
Relatives, Friends	3,8
Don't Remember	0,4
Web	0,2

Source: IRP, 1999
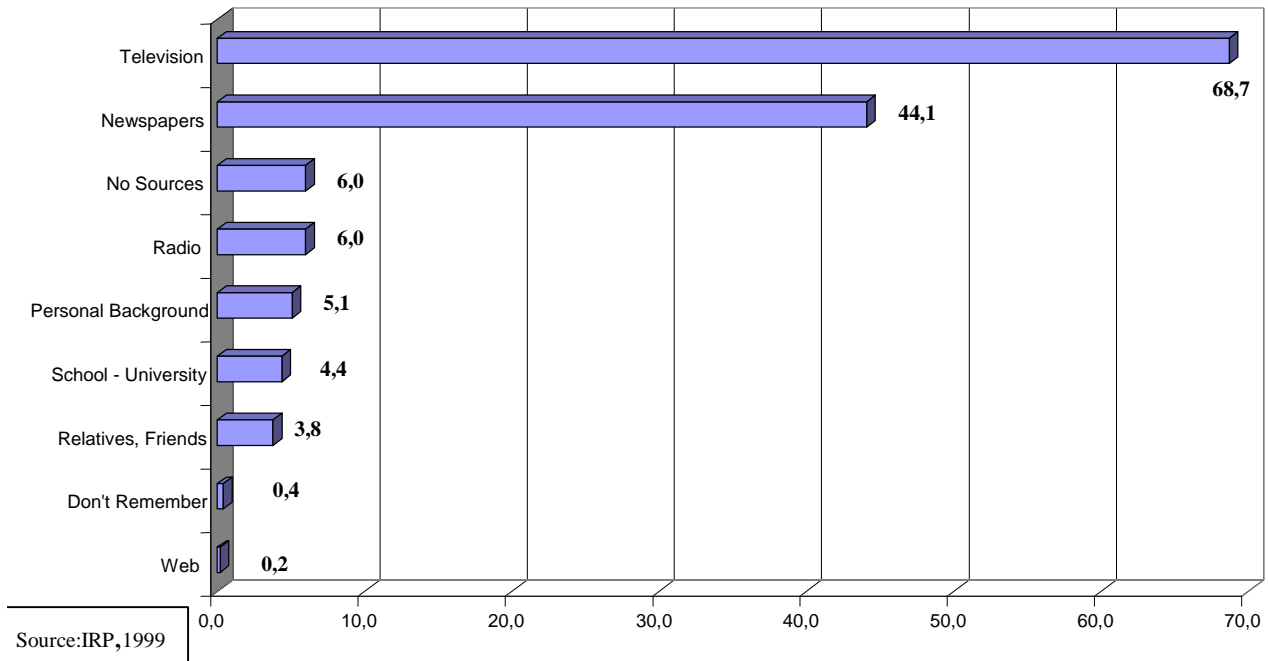
3.4 Profiles and path of knowledge: Answer trees technique

Besides routine analysis based on the frequency of responses, we can extend our study of the data derived from opinion surveys by the use of answer trees. This is a technique which uses particular algorithms to subdivide data, thus allowing us to identify those people interviewed who share certain pre-selected characteristics (Kass, 1980). As we will see later, the technique calls for us to choose a variable from among those we are most interested in, called *the target variable*, and a set of variables that we believe determinant for interpreting the results of the objective variable, called *predictors*. The algorithm produces a result in the shape of a tree, where the nodes represent the possible subdivisions determined by the predictor variables of the people from homogeneous groups interviewed. The leaves of the tree contain the data on the objective variable within the group which is represented by the leaf itself. The tree allows us to identify the most interesting profiles rapidly. We will not mention all the possible applications that answer trees might have for our data, in order to save time, but there are at least two very interesting results. The first uses a target variable constructed ad hoc which allows us to distinguish between those who answered the question about the size of the world population correctly, and those who answered incorrectly, or who did not answer at all. The predictors chosen are the following:

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- a variable indicator that permits us to identify the people interviewed who claim that they got their information regarding the size of the world population from newspapers or magazines;
- a variable indicator that permits us to identify the people interviewed who claim that they got their information regarding the size of the world population from television;
- the level of education of the people interviewed.

Naturally the first two variables are not mutually exclusive, since it is possible that some of the people interviewed got information about the world population from more than one source, and indeed this did happen. See Figure 1 for the results, which are quite interesting.

Figure 1 - Answer tree on Knowledge about World Population, Sources and Education

Knowledge on World Population Amount

Correct	23,4	234
Uncorrect	21,7	217
Don't know	54,9	549
Total	100,0	1000

A)

Yes

Correct	57,8	182
Uncorrect	42,2	133
Don't know	0,0	0
Total	31,5	315

No

Correct	7,6	52
Uncorrect	12,3	84
Don't know	80,1	549
Total	68,5	685

B) (left)   **B)** (right)

Yes

Correct	**70,4**	**95**
Uncorrect	**29,6**	**40**
Don't know	**0,0**	**0**
Total	**13,5**	**135**

No

Correct	48,3	87
Uncorrect	51,7	93
Don't know	0,0	0
Total	18,0	180

Yes

Correct	48,4	31
Uncorrect	51,6	33
Don't know	0,0	0
Total	6,4	64

No

Correct	*3,4*	*21*
Uncorrect	*8,2*	*51*
Don't know	*88,4*	*549*
Total	*62,1*	*621*

C)

Medium-Low

Correct	38,6	27
Uncorrect	61,4	43
Don't know	0,0	0
Total	7,0	70

High

Correct	**54,6**	**60**
Uncorrect	**45,4**	**50**
Don't know	**0,0**	**0**
Total	**11,0**	**110**

A) Radio/tv as source of information on amount of world population

B) Newspapers as source of information on amount of world population

C) Level of education

The predictors on the source of information are among the most important variables in so far as they give us a profile of the answers in a certain set. In fact, the first and second level subdivisions are determined by these answers, and immediately group the people interviewed according to whether they got their information from 1) printed sources, 2) television, 3) both, or 4) no source. These groups are very different from a structural point of view. The leaf representing those people who had more than one source of information has a much higher percentage of right answers than the overall average of right answers (70% against 23%). The two leaves that represent people with one of the two sources of information considered have very similar answer

profiles, in line with the overall average, as long as no one in these two groups refuses to answer the question. Finally, the leaf that represents those people who claim that their information does not come from either of the two sources has a very high percentage of no answers, as might be expected. Level of education is a useful predictor only at the last level, and only for those people who claim that they only heard about the world population on television. Among these people, the percentage of error was very high for those with few years of schooling.

These easy-to-read results do not contradict the hypothesis already stated in the previous paragraph, which says that today information comes about as the result of different components acting simultaneously. This technique tells us what kind of impact a particular source of information makes, and how accurate the information itself is. People who are interested in a particular piece of information will tend to turn to various sources and in the end will be able to form quite an accurate opinion. On the other hand, people who do not delve more deeply into a particular piece of information, will continue to harbor ideas similar to the general average opinion. The group of people most interested is largely made up of rather well educated men, while the group of people who got their information exclusively from television has more women than men. Among those people who had no information at all about the question there is a particularly large group of elderly women, especially from South Italy, which indicates the low level of education and the general backwardness so prevalent among that social group.
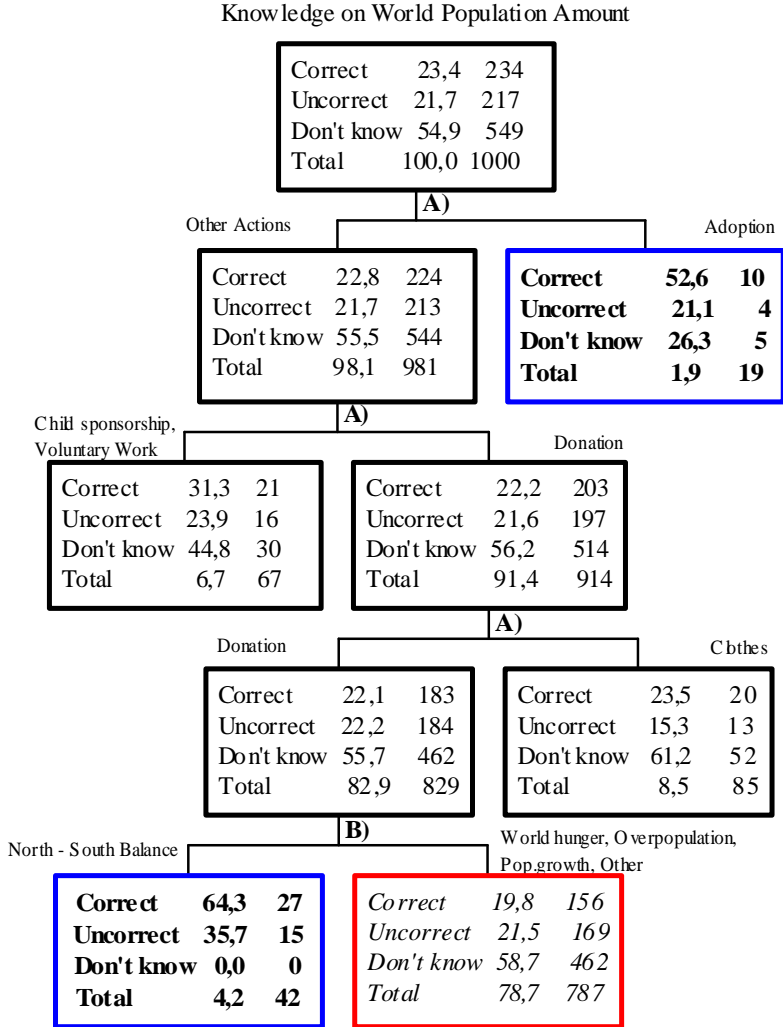
Figure 2 illustrates the results of the second answer tree which I want to discuss. The target variable is the same as in the preceding tree, while the predictors were chosen so as to verify the relation between knowledge, willingness to act, and perception of the demographic phenomena which are the object of this study. The following predictors were chosen:

- a variable which specifies the actions taken by the people interviewed in order to face the problems resulting from world population growth;
- a variable to identify the general problem connected to world population growth which the person interviewed felt most strongly about.

At the very lowest level of the tree a small group separates from the trunk. This is the small percentage of people interviewed who have considered adoption in the past. Characteristically a much higher percentage of people in this group gave the correct answer to the question on world population than was true for the interviewees as a whole. The left-hand side of the tree includes those people who have undertaken some specific commitment. They responded correctly to the question on world population in approximately the same percentage as the overall group. Even among this group however, we can distinguish between a less committed group whose information about the world population is not very precise, and a much more committed group. This second group identifies the imbalance between rich and poor countries as one of today's most important

problems, and is made up of informed, involved individuals, who refer to a specific problem and do not share common prejudices.

Figure 2 - Answer tree on Knowledge about World Population and Commitments

Knowledge on World Population Amount

Correct	23,4	234
Uncorrect	21,7	217
Don't know	54,9	549
Total	100,0	1000

A)

Other Actions

Correct	22,8	224
Uncorrect	21,7	213
Don't know	55,5	544
Total	98,1	981

Adoption

Correct	**52,6**	**10**
Uncorrect	**21,1**	**4**
Don't know	**26,3**	**5**
Total	**1,9**	**19**

A)

Child sponsorship, Voluntary Work

Correct	31,3	21
Uncorrect	23,9	16
Don't know	44,8	30
Total	6,7	67

Donation

Correct	22,2	203
Uncorrect	21,6	197
Don't know	56,2	514
Total	91,4	914

A)

Donation

Correct	22,1	183
Uncorrect	22,2	184
Don't know	55,7	462
Total	82,9	829

Clothes

Correct	23,5	20
Uncorrect	15,3	13
Don't know	61,2	52
Total	8,5	85

B)

North - South Balance

Correct	**64,3**	**27**
Uncorrect	**35,7**	**15**
Don't know	**0,0**	**0**
Total	**4,2**	**42**

World hunger, Overpopulation, Pop.growth, Other

Correct	*19,8*	*156*
Uncorrect	*21,5*	*169*
Don't know	*58,7*	*462*
Total	*78,7*	*787*

A) Committed actions

B) Major issue related to world population

* Child Sponsorship, Voluntary Work, Donation, Clothes

The number of people in this last group who correctly answer the question about the world population is naturally much higher than the overall average. We can therefore confirm that there is a close relationship between knowledge, committed action, and the perception of problems and phenomena connected to the population problem. More aware and accurate answers correspond to committed action and an awareness of related problems, based on appropriate information. In this sense we come back to the question of how correct our information is, since these results

demonstrate that awareness of the extent and gravity of the question can only develop as a result of correct information. It is likewise true that people need correct information before they can decide what actions to take in order to better the world and lessen the gap between rich and poor.

4: What information

Most people get their information on this subject from newspapers and television, and demographic information is easily manipulated, so it is important to find out how well people understand the information from these sources. In this instance we are going to look at the language of the press and the television, important sources of information. It is fairly easy to study newspapers, magazines and news broadcasting using the techniques of the statistical linguistic analysis, although we should remember that while we can study the approach, language, and "message" of the writer, we cannot formulate hypotheses about how well the message is received. Following the very interesting results of the statistical approach of textual data (Bolasco, 1999; Bolasco, Lebart, Salem, 1995; Lebart and Salem, 1994) and the positive results the Institute has had with analysis of demographic information (Misiti and Iezzi, 2000; Misiti, 1999), we decided to apply the same techniques of textual analysis to collected articles, published just before and just after 12 October.

The articles were first grouped according to type of publication (press agencies, local and national newspapers, news magazines, women's magazines), and according to political color. Local newspapers were subdivided according to the geographical area where they were published, and the transcripts of television news broadcasts have been added, so that our results would be easier to read and so that we could identify language typical of the group considered and consequently also the particular message transmitted (see below).

Number of articles, occurrences and graphic forms

Newspapers Magazines and Newscasts	Articles (number)	Occurrences (total number of words)	/1000	Graphic Forms (Distinct words)	Vocabulary (% distinct words/occ.s)
Independent papers	8	4195	119,8	1619	38,6
Local papers (north)	7	3432	98,0	1164	33,9
Local papers (centre)	8	3845	109,8	1236	32,1
Local papers (south)	8	3903	111,4	1292	33,1
Left papers	3	1527	43,6	669	43,8
Centre papers	5	2907	83,0	1223	42,1
Right papers	2	824	23,5	446	54,1
Catholic papers and mag.	7	6838	195,2	2346	34,3
Women's magazines	1	609	17,4	353	58,0
Magazines	4	3160	90,2	1288	40,8
Press agencies	5	2425	69,2	954	39,3
Newscast	7	1360	38,8	625	46,0
TOTAL	65	35025	1000,0	6064	17,3

There are three important results we want to emphasize here: the basic structuring of the news by journalists, the differences and similarities in the way information is treated in the various newspaper groups, the characteristics and typical language of each newspaper group. Each of these results was obtained by means of a specific technique of statistical analysis, analysis of correspondence, cluster analysis, and analysis of the specificity of forms and phrases of a text according to the frequency with which they occur. A comparison with contemporary language complete our analysis in order to identify the "key words" in the corpus of articles by comparing it with a list of words taken from a sample of more than 4 million occurrences in contemporary language.

4.1 Factorial analysis

The overall communication model becomes evident as we read the results of the analysis of correspondence carried out on the texts in question, in particular from an interpretation of the first three factorial axes which emerge from the analysis (60% of the variance explained). We interpret the first axis, responsible for absorbing most of the variability (28%), as an expression of a particular **approach** to the news. On the positive side of the axis, the words indicate reporting from a European or industrialized countries point of view. In this area of the plot we find words like: #only child#, #parents#, #couple#, #family#, #mortality# associated with words like #reduction#, #reproductive health#, #Christians#, #work#, #economic#, #spend#, #poorest fifth#, which emphasize the concerns of the developed world (including the United States and Japan) with regard to world population growth. At the opposite end of the axis, we find a more journalistic approach,

with human interest stories (#billionth baby#, #12 October#, #hospital#, #light#, #earth#, #born#, #Sarajevo#, #UN#), and comment (typical of news magazines which indeed fall into this area of the factorial plot). We also find scientific words (#model#, #forecast#, #increase#, #demographic growth#), but also typically journalistic emphasis like #bomb# and #demographic explosion#.

The second factorial axis represents the **source** of information, with reference to the two research reports presented at the press conferences in conjunction with the UN date of 12 October. The positive side of the axis represents reference to the IRP survey on the level of knowledge about world population issues among Italians. There are technical terms like #response#, #sample#, #interview#, #demography#, #fertility rate#, as well as reference to questions raised, like #retirement pay#, #immigration#, #assistance#. We also find expressions related to Italy as the object of analysis (#Italian population#, #number of inhabitants#), verbs like #consume#, #spend#, #amount to#, #know/not know#) which refer to specific local reception of the information given. Naturally at this end of the axis we find press services which report local Italian news.

On the opposite side of the axis are clear references to the UNFPA report, and is characterized by reference to the UNFPA report, by its #international# dimension, by reference to #developing countries#, by problems raised in the report like #poverty#, #reproductive health#, #human beings#, by verbs like #give#, #do#, #come#, and by words like #choice#, #campaign#, #organizations#, #conference#, #consequences# characteristic of the UNFPA report.

The journalistic style is sober, with little space given to interpretation. The use of adjectives or emphatic expressions is rare.

The third factor we wanted to account for is the contrast between the **North and South** of the world and the attendant problems as presented in the articles we chose. On one side of the axis we find #India# and #China#, the two demographic giants, opposite the #United States#. Associated with these geopolitical connotations, we find words which express problems connected with population increase in each area: #work#, #child#, #woman#, #birth#, #food#, #north and south#, #access#, #assistance#, #war#, #fertility rate# for the first area, and #spend#, #consume#, #dollars#, #reduction#, #campaign#, #reproductive health#, the expression #too much# and the adjective #poor#.

The distribution of groups of newspapers/magazines on the factorial planes chosen show that there are at least three different attitudes towards the news, corresponding to three different types of publication (News broadcast, local papers and press agencies). On the first factorial plane these three groups are clearly distinguished from other groups situated around the center of gravity of the axes. Independent newspapers occupy a specific position for the international slant they brought to the issue. This is the third factor in our analysis. Differences and similarities in the way

different groups of newspapers treated the question are taken up in our analysis of the results of classification below.

The factorial analysis helps us to identify the latent linguistic structure used by the press about a specific demographic event. The first thing we notice, is that the issues raised by the journalists and communicated to their readers are, on the whole, complete and correct. These include the global international aspect of the main issue and its connection to broad local issues. The result is not at all provincial, but reflects a European economic and cultural point of view towards the problems of the southern hemisphere. There is some effort to make a connection between particular events and their geographic, social and economic consequences.

The journalistic style with its restrained use of emphatic adjectives or emotional expressions helps to guarantee an approach which is neither stereotypical nor superficial. The use too of technical words extends the journalistic language to include scientific words which are not easily misunderstood or manipulated.

4.2 Classification and analysis of the specificity

Since we included many different publications, we felt it was important to analyse the way groups of newspapers and magazines treated demographic information. We grouped publications by type and cultural or political orientation. We wanted to find out whether there are differences, biases, or interpretations which translate into a different use of information or a specific type of language. We used two techniques of textual analysis, the analysis of characteristic language and classificatory analysis. By combining these types of analysis we were able to observe any differences and also evaluate our groupings.

As we have already seen, **Press agencies** focus on the human interest of an event, with emphasis on the local or national side. The language tends to be descriptive and connected to the IRP survey (#Irp#, #know#, #interviewed#, #Italians#, #tomorrow#). News agencies use #son/daughter# and #baby# less than the other groups, since these are specifically linked to the global context of the 6 billionth human being. **Newspapers and magazines with a Roman Catholic orientation** use particular words, which sometimes express this link (#Christians#, #Catholic#, #campaign#, #refugee#), and at other times focus on questions of interest to the Roman Catholic church, like the #debt# of developing countries and #contraception# as corollary to a Catholic reading of the problem of demographic growth. The words #symbolic# visit of #Kofi Annan to Sarajevo#, which most publications use, appear much less often in this group. Words

referring to large aggregates like: #population#, #land#, #inhabitants#, #city# do not appear often in this group.

Publications with a leftist orientation prefer to use light-hearted words like #Mr./Miss 6 billionth#, which create appeal, but do not go beyond the surface. However other words like #fertility rate# and #assistance# also appear. **Newspapers of the political center** have an interesting focus. They offer an economic and historical reading of the event. The name #Malthus# appears together with #theories#, and we also find expressions like #over-population# and #policy of control#, as well as #disaster# as a evaluative-emotional element. Since the orientation of these publications is towards analysis, they give less space to the human interest aspect and so use words like #6 billionth, baby#, #UNFPA#, and #Italians# less than other types of publications.

Right newspapers stressed the national dimension of the issue since the most used words are #Italians# and #Italian reality#, meanwhile #world# or #Sarajevo# as well #child# are under-represented.

The group of widely distributed **Independent newspaper** with national coverage pointed up the global implications of the problem. They made a connection between population growth and problematic international policies. Words which appeared in these papers more frequently than in the others are: #child# together with the specification #Chinese# and #Indian#, #war#, and the adjective #fatal# which emphasizes the dramatic aspect of the issue.

Women's magazines concentrated on the question of #fertility rate#, on the future implications of population growth by #projections# and compared #Italy# with its demographic "oddity" to countries of the southern hemisphere and their high birth rates and over-population.

As we already saw when we looked at the factorial axes, **News Magazines** took a broad view of the issue. They conveyed the information and offered an analysis, using technical and scientific words like #dynamic#, #demographic#, and #birth rate#. This is an interesting characteristic, due to the type of publication, with their particular attitude to the news as a phenomenon subject to interpretation. **Local Newspapers** show a last stable relationship along all axes, which demonstrates the affinity among local newspapers, whatever their geographic area of origin, they all treated the news as a media event "constructed" by the UN. In fact we find frequent use of words describing the visit of #Kofi Annan# to the #hospital# in #Sarajevo#. They gave much less space to problematic aspects of the issue, including any connection to Italy. They described the event, but did not interpret it. **News Broadcasts** have a peculiar journalistic style which tends to toward simple description: the #6 billionth baby# was #born# in a #hospital# in #Sarajevo# at #midnight#. Words which were under-used, or "missing" from newscasts were those needed for an interpretation of the economic and social implications of the event: #water#,

#development#, #humanity#, #fertility#, #aging#, as well as those needed for a national (#Italy#) and #world# context.

The results of cluster analysis give us indications which are coherent with the analyses we have already considered. They confirm that some groups of news papers and magazines gave a specific slant to the information. On the other hand they also show that other groups chose to describe the same points and used similar language in doing so. Three of the five clusters selected show a high degree of similarity with three groups of newspapers: press agencies and cluster 2, all the local papers and cluster 5, the newscasts and cluster 5 (see Figures 3,4,5). We have already seen how each of these is characterized by particular language, choice of theme, and source of information. Together these elements equal a very clear position on the factorial graphs, that is to say, in relation to the three factorial axes chosen.

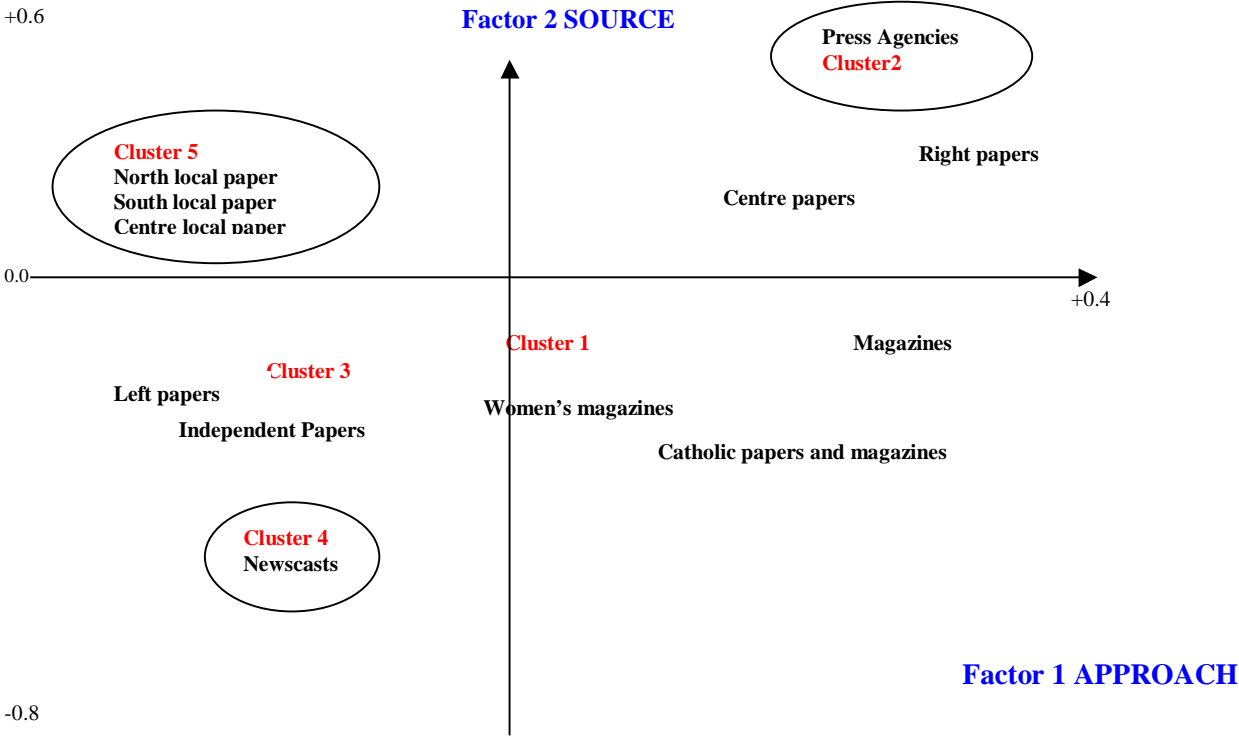**Figure 3 - Factor Plot: Clusters and Papers - Factor 1 and 2**
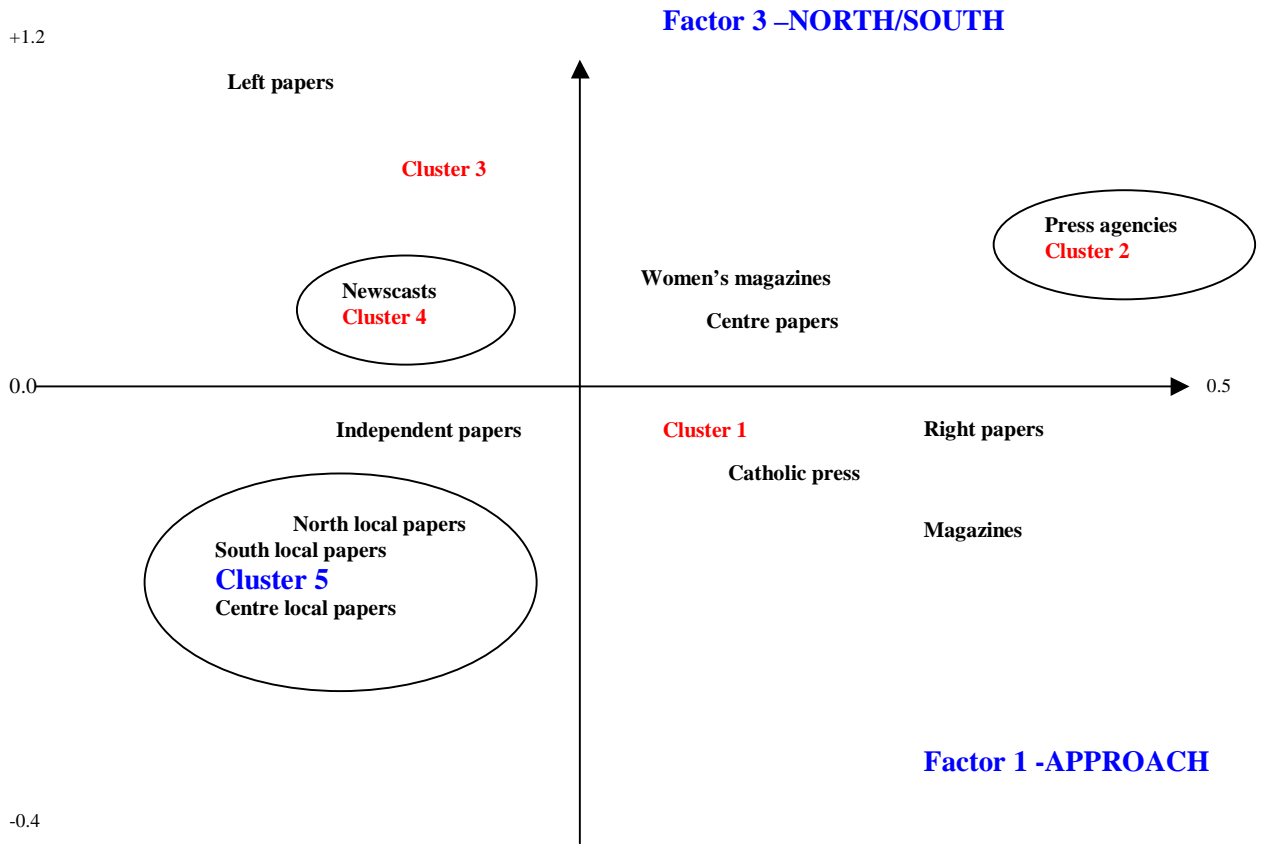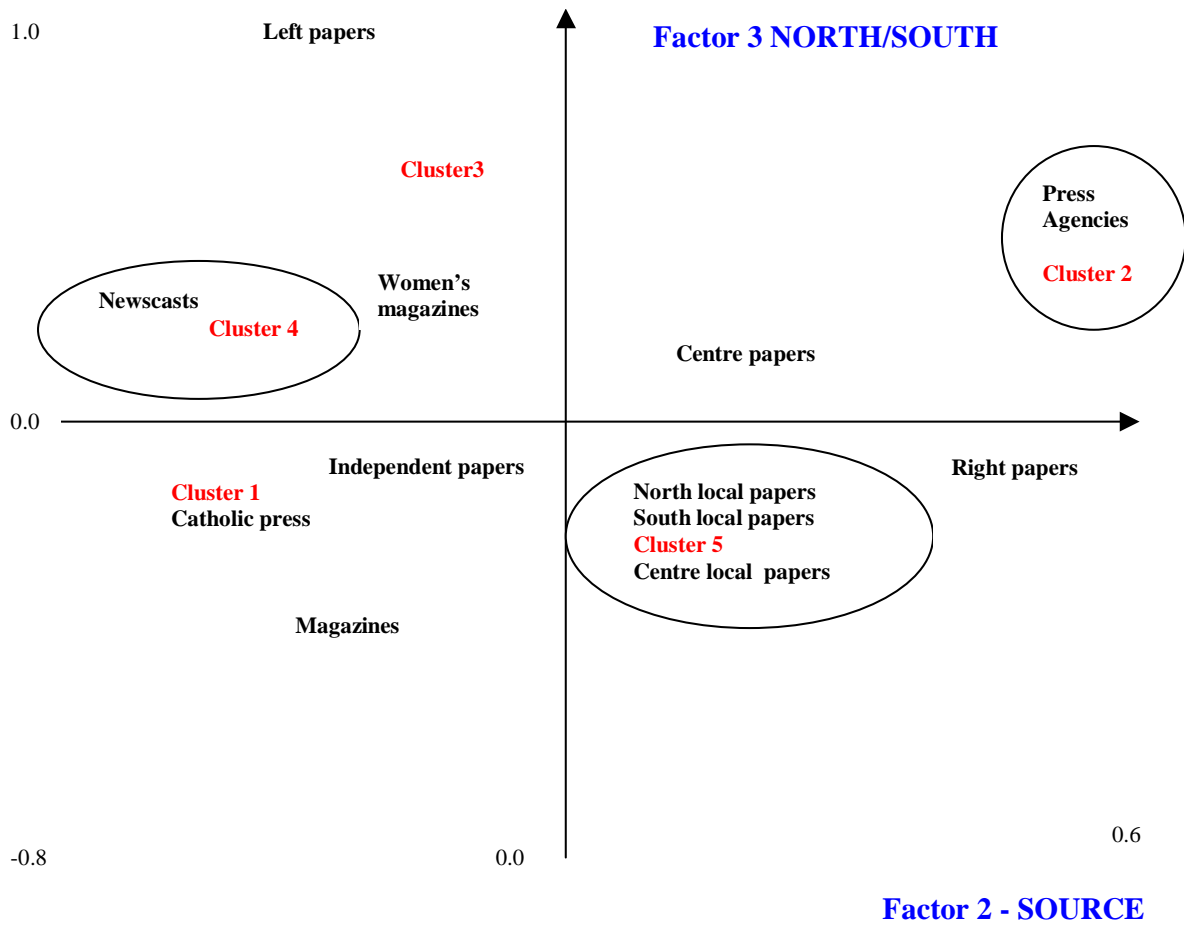
Figure 4 – Factor Plot : Clusters and papers – Factor 1 and 3

Factor 3 –NORTH/SOUTH

+1.2

Left papers

Cluster 3

Press agencies
Cluster 2

Women's magazines

Newscasts
Cluster 4

Centre papers

0.0 ——— 0.5

Independent papers

Cluster 1

Right papers

Catholic press

North local papers

South local papers

Magazines

Cluster 5

Centre local papers

Factor 1 -APPROACH

-0.4

Figure 5 – Factor plot : Clusters and Papers – Factor 2 and 3

4.3 Comparison with contemporary language

The terminology used in the articles was compared with POLIF[3], in order to identify the "key words" in the corpus of articles, that is to say, the words in the articles which are used in a specific and unusual way, or more or less frequently than in the language of reference.The two vocabularies were compared using the normalised difference per 1,000,000 occurrences of the same word in the two groups.

The standardised difference measures the specificity of a word, based on the relative difference between normalised frequency of words in the two text groups. This difference allows us to select the discrete words with the greatest differences of use in absolute terms. Differences with a positive value indicate that a word is used more frequently in the articles than in the control text group, while differences with a negative value indicate that a word is used less frequently in

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[3] POLIF is a list of words taken from a sample of more than 4 million occurrences in contemporary language (Bolasco S., Morrone A. (1998).

the articles than it is in the control text group. A word used frequently in a text group indicates a specialised subject matter, while a word used infrequently indicates an esoteric subject matter. The analysis was carried out on discrete words, since the POLIF list is available in that form. For words occurring in the list common to both groups, in all the variations in which they occur in the group of articles, we calculated the difference with respect to normalised use based on the simple form of the word. Specific terms which are used more frequently in the articles than in contemporary language proved to be related to the subject matter of the articles.

The greatest difference of frequency between specialised and normal word use occurs with the word #demographic#, in all its variations.

Other technical words occurring with a markedly different frequency in contemporary language and the articles include: #birth rate#, #fertility#, #aging#, #mortality rate#, as well as words which refer to problems connected to population growth: #epidemics#, #food#, #water#, #infectious#, #birth-control#, #diseases#, #future#.

The descriptive journalistic approach noted in the preceding analysis is evident here in words like: #UN#, #baby#, #miss#, #mister#, #symbolic#, #midnight#, #event#, #hospital#, used in an unusual way compared to their use in contemporary language.

Words connected to UNFPA and IRP research reports proved to be key words: #demography#, #interviewed#, #survey#, #data#, #sample#, as did also scientific words: #growth#, #increase#.

Words which were found to be less frequent in the articles than in the POLIF list include: #work#, #house#, #society#, #school#, #church#, as well as words connected to the organisation of life in the West: #government#, #politics#, #society#, which are not used in discourse about world population growth.

5. Conclusions

It may be obvious to say that the mass media in general, and television in particular, have a huge cultural significance, since television is the most popular and ubiquitous popular medium, offering a diversity and availability unmatched by the press. The way in which the audiences of mass media and television interpret the world shapes their existence and their participation in society. Television can be considered "the site of convergence that joins the private world of the home with the larger public worlds beyond the front door" (Moores, 1993).

Along with this increased importance we find it also increasingly difficult to identify the effects and to define the audiences. Our job is not only to consider and analyse the changing characteristics of media consumers, in a sector which is itself in constant mutation, but also to

consider the global aspect of the communications system (the global village) and the implications of "westernisation" for culture and for non-western populations.[4]

From the point of view of people who do research into population questions, there are several interesting elements here, including the influence of media on family behaviour, and the use of the media to disseminate values, messages, and knowledge. Another way of expressing this last idea would be to say that the media could spread "policies" inherent in the population.

We will need to modify our approach according to what we want to find out. With regard to the first type of problem, we surely have to enlarge our theoretical field of vision and the type of analysis we use, in concert with disciplines that study communications and their effects. If instead we want to use media for specific communications questions, we must understand the mechanisms specific to each type of medium, so that we can gather information about the ways information is received and the impact of communications. These mechanisms will include such things as targeting user/consumers, content analysis, and linguistic analysis. Our experience at IRP and the process we followed in presenting the case study on Italy and the 6 billion day survey indeed goes in this direction.

Obviously it is largely the job of the media to spread information about the world population, but the role of population specialists is also indispensable, since they can see to it that information is detailed and accurate. Their role is particularly important since the school system has so far neglected to foster interest in and sensitivity to these questions. Two types of intervention are needed: on the one hand we need to raise the consciousness of people working in the various media so that they will give this information the emphasis it deserves. They also have to insure that it reaches segments of the population, which have so far been indifferent to the population question, and so have not really become fully aware of it. On the other hand we have to act at the very basis of culture by introducing these issues into the school program.

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[4] Although there is a lot of talk about the progressive "globalization" of communications, there are still important differences between western countries and developing countries. For example, in developing countries (Westoff , 1999; Faria, 1999) substantially linear relationships have been observed between exposure to the media and reproductive behaviour, while western audiences display more complexity in the ways they receive, metabolise, and elaborate the messages and the information broadcast by the media. Undoubtedly, at the root of these differences are differences in the structures and technologies of the communications systems, as well as cultural and educational differences. All of these differences taken together mean that the programs produced and the reception they are given by their audiences differ decidedly from the "evolved" consumer experience of the west. But we can also suppose that the educational function of popular media will tend to evolve toward commercial programming, even more rapidly than was the case in the west. At that point networks will be less interested in educational programs, and will be subject to the same mechanisms we observe in our own television. Actually, the processes of appropriation and personalisation of media messages is already taking place in the "fourth world". The reactions are complex and articulated, and in order to interpret them we have to go beyond the idea that everything is being homogenised into a sort of westernised culture. We have to understand how non-western viewers are redefining their own cultural identity through their interaction with the media products they consume (S. Pack, 2000).

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