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Postprint / Postprint

Zeitschriftenartikel / journal article

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Empfohlene Zitierung / Suggested Citation:

Pitrelli, N., Manzoli, F., & Montolli, B. (2006). Science in advertising: uses and consumptions in the Italian press. *Public Understanding of Science*, 15(2), 207-220. <https://doi.org/10.1177/0963662506061126>

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Science in advertising: uses and consumptions in the Italian press

Nico Pitrelli, Federica Manzoli and Barbara Montolli

Among the social practices that the world of advertising draws upon in order to convey its message, science is used to convince the target audience of the effectiveness of the product it is promoting. The study of the presence and use of science to encourage consumer spending provides information on the public perception of science itself. The present work analyzes these aspects with reference to the Italian press. A quantitative study was carried out on a sample of daily, weekly and monthly publications throughout 2002 and 2003, using a coding frame that enabled the identification of the frequency of scientific messages in advertising, the occurrence of scientific content in the images, the context in which they are set and the type of language used. The results demonstrate that science has a consistent presence in advertising and the image of science that derives from this is a positive one.

1. Introduction

Nowadays, advertising is one of the most widespread forms of communication and is therefore particularly significant in the formation of the collective imagination. It plays a fundamental role in the consumer economy, since it reflects ideologies and lifestyles. Its promises encompass the fashions, trends and attitudes of the social target at which it is directed (e.g., see Douglas and Isherwood, 1979; Baudrillard, 1994; Fabris, 2002). Because of its persuasive ends, the agent responsible for the advertising message must constantly seek the most effective narrative methods (in the form of a story, product description, information), so as to obtain as much cooperation, participation and connection with the target public group as possible. In fact, in order to be successful, the advertisers have to use their imagination and apply their target group's system of values, beliefs and desires to the message (e.g., see Eco, 1979; Dyer, 1982; Myers, 1999; Floch, 2000).

Because of this, the images and texts used in advertising can also provide a significant indication of what sort of image of science is constructed and conveyed by the mass media. The most obvious example of this is the use of the "scientific expert" (a scientist) as an effective tool for selling goods through advertising. As several studies on rhetoric have explored, the figure of the "expert" guarantees the legitimacy and credibility of the product (Battistini, 1981, Mortara Garavelli, 2000). Recent studies have also shown that the members of society who inspire the most trust in European citizens are scientists, doctors and engineers (Eurobarometer 55.2, 2001: 43). Therefore it is not surprising that science and scientists are used for promotional purposes and in marketing strategies.

Such usage should, however, be considered within the current context of the media's role in constructing links between science and society. Recent studies have shown that mass media and television in particular are the general public's main source of information regarding science and technology (e.g., see House of Lords Select Committee on Science and Technology, 2000; Eurobarometer 55.2, 2001; British Association for the Advancement of Science, 2005). Research into the transmission of science through the mass media has shown the importance of the latter in raising public awareness of scientific and biomedical matters and also in setting the ground rules for debate surrounding controversial aspects regarding the social impact of scientific and technological development (e.g., see Nelkin, 1995; Lewenstein, 1995; Gregory and Miller, 1998; European Commission, 2002; Bauer and Gaskell, 2002).

Nowadays, the possible functions and interpretations of the role that the media has to play in science communication need to be evaluated in the light of current discussions regarding science and society. Many authors and institutional organizations have criticized what has come to be known as the "deficit model" from several points of view, and they have suggested that a move towards a communicative model that promotes increased public participation and dialogue could reduce tensions between science and society (Kass, 2001; Miller, 2001; House of Lords Select Committee on Science and Technology, 2000).

According to the deficit model, the origins of public misconceptions about specialist matters lie mainly in a lack of basic knowledge and understanding of scientific concepts. In this frame, science communication follows a one-way process whereby scientific information is translated by the media for an uninformed public. It is therefore the media's inaccurate presentation of scientific content that explains the distortion of scientific information. The belief that the media give an inaccurate picture of science, since they are incapable of accurately translating scientific and technological information, still has a lot of weight and as a result, a great deal of research has been carried out in this field (e.g., see Gregory and Miller, 1998: 104–8; Chavot and Masseran, 2003: 118–20).

On the other hand, criticism of the formulation of the deficit model, in its assumptions and its normative and epistemological implications, has focused overall on the role and function of scientific research and of the media and their public (see amongst others Myers, 2003; Yearly, 2000; Peters, 2000; Wynne, 1995).

For the aims of our study, it is relevant to mention that this criticism has brought about a reconsideration of the role of the media (e.g., see Moirand, 2003) insofar as they represent "an important cultural arena, where scientific knowledge is not just mediated but constructed" (van Dijk, 2003: 183), "a kind of frontier, interacting with all other fields of activity related to scientific and technical popularisation (museums, institutions, universities, NGOs, etc.)" (Chavot and Masseran, 2003: 118), as well as constituting the place where "science meets the public" (Gibbons, 1999: C83).

In this way, given the discursive nature of advertising and its ability to introduce scientific concepts and share them with the general public, advertisements constitute an important opportunity for research into how science is experienced in the public sphere or, in other words, a relevant indicator of the non-specialist public's image of science and technology. Despite these aspects, and despite the fact that public understanding of science (PUS) studies have emphasized the importance of research that encourages reflection on the role of advertising in the promotion of PUS (European Commission, 2002: 150), to date, very little attention has been paid by media scholars to this matter.

One of the reasons for underestimating the importance of the advertising medium in relation to science lies in the relatively recent interest in the study of advertising in general. The first systematic studies on the subject date back to the late 1950s (Packard, 1957) and

were founded on psychological theory. Psychological theory (from behaviorism to psycho-analytical theories) also featured in studies dating from the 1960s and it was from this period that sociology and semiotics came into play (Barthes, 1957; Eco, 1964).

Another reason for the lack of interest in the relationship between science and advertising lies in the tradition of studying the popularization of science. As regards research into the relationship between science and the media, attention has so far been concentrated exclusively on written texts and on the study of how science is handled in newspapers (Myers, 2003: 272). It is a well-known fact that newspapers do not necessarily constitute the most significant source of scientific information, although they are certainly the easiest materials to trace, collect and analyze (Gregory and Miller, 1998: 105).

In any case, studies in advertising carried out as part of research into science and the media have concentrated on the identification of distortions introduced by advertising messages when they refer to science and technology (Guerrero et al., 2004; Taelman, 2004) or on new terminologies used in the language of advertising on the printed page as used by the biotechnology industry (Calsamiglia, 1998). Unlike the direction taken by the aforementioned research, the aims of this paper primarily are to quantify the presence of advertising in the Italian printed media, without evaluating the scientific accuracy of the message itself.

Therefore the following study has sought to identify to what extent scientific references are made in advertising messages in the main Italian daily, weekly and monthly publications throughout 2002 and 2003, the type of goods they are associated with, the scientific message channeled by the advertisements and the context in which they are to be found. Moreover, the following study can also be considered in a wider research field in that it combines results regarding public perceptions of science and technology with those regarding media coverage. It is useful to note here that several studies have shown how, within the European context, the Italian public are among the most favorably disposed towards questions of science and technology, from several points of view (e.g., see Durant et al., 1998; Borgna, 2001; Bauer and Gaskell, 2002; Special Eurobarometer 224/Wave 63.1, 2005).

2. Method

In order to measure these aspects, we referred to the content analysis as a systematic preparatory and data-reducing method with the aim of achieving the highest degree of objectivity possible. For this purpose, a coding frame was developed (see Appendix) and applied to the 2002–3 period by monitoring a sample of the most relevant publications of the Italian press.

Publications analyzed

The following publications were monitored:

- two daily newspapers (the issue printed on the 5th of each month): *La Repubblica* and *Il Piccolo*;
- two weekly publications (the first issue of each month): *L'Espresso* and *Gente*;
- two supplements (the first issue of each month): *Venerdì (La Repubblica)* and *Io Donna (Il Corriere della Sera)*;
- two monthly scientific magazines (all issues): *Le Scienze* and *Focus*.

This sample was chosen so as to provide full coverage of different publication frequencies, readership and contents.

While *La Repubblica* is the second biggest national newspaper in terms of sales, *Il Piccolo* was chosen because it is a regional paper (Friuli Venezia Giulia, north-east Italy). As regards the weekly publications, *L'Espresso* is one of the most widely read generic weekly publications concerned with politics, current affairs, foreign affairs, the economy and health, while *Gente* is one of the most popular current affairs and gossip magazines. The supplements are the generic *Venerdì*, enclosed with the aforementioned *Repubblica*, and *Io Donna*, dedicated to the female readership of *Il Corriere della Sera*, Italy's biggest national newspaper. Lastly, *Focus* and *Le Scienze* are monthly science communication publications. The former is more popular (the most widely read science publication in Italy) than the latter (specialist press, the Italian edition of *Scientific American*).¹

Topics and other features assessed

The advertisements of interest were identified in consideration of a broad definition of science that includes the following disciplines: biomedicine,² biology, chemistry, astrophysics and space, physics, mathematics, neurosciences and social sciences. Moreover, the advertisements chosen for analysis were identified by their use of technical/scientific jargon, their use of quotations, or the presence of charts and explicit references to science in general (even if not in relation to a specific branch), medicine, technology or the environment.

In keeping with the quantitative objectives of the present research, the coding frame therefore assessed:

- The advertisement content type (for all advertisements in the whole sample), on the basis of the product categories being promoted.
- The presence of a scientific reference (either the use of the terms “science” and “scientist” or reference to scientific terms, formulas, images).
- The scientific discipline being referred to, in both the text and the images.³
- The type of message (positive, neutral, negative) conveyed about science. A message through which science is proposed as the bringer of benefits and progress was considered to be “positive”;⁴ a message is “neutral” when the scientific content was used to channel a consumer good without an explicit judgment being made on its positive or negative nature;⁵ while a message was seen as “negative” when science was conveyed as being responsible or partly responsible for a negative or risky result.⁶
- The type of frame in which science is used (progress, risks, benefits, ethics, health, economic benefits, other).

For the purposes of the analysis, nine scientific disciplines (see Figure 1) and 10 product categories (see Figure 2) were identified to be looked for in the filed advertisements which amounted to a total of 6,542. In order to ensure the relevance of the data, internal advertising by the publishing groups that the sample publications belong to was not taken into account.

Coding process

Two coders carried out the data collection. In order to improve the comparability of the coding, the protocol was discussed thoroughly and revised after a trial of different advertisements. This monitoring took place during meetings between coders and other science communication researchers belonging to the ICS (Innovations in the Communication of Science) group at SISSA (International School of Advanced Studies) in Trieste, Italy. In the set-up phase of the coding frame, care was taken to compare the codification types for each of

the items, especially regarding the aspects that were more open to interpretation such as the presence of scientific content, the image of science conveyed and the type of frame.

3. Results and discussion

On the basis of recent research into scientific coverage by the Italian media (Montoli, 2002), it can be supposed that, generally speaking, the amount of science printed in advertisements in daily and weekly publications exceeds the amount of column space dedicated to scientific news.

Excluding self-advertising made by the publishing groups themselves, 1,018 advertisements out of 6,542 contain some scientific reference. So, while scientific references appear in around 16 percent of the total number of advertisements, scientific news accounts for an average of just 1.6 percent of articles in newspapers (monitoring: *Il Corriere della Sera*, *La Repubblica*, *La Stampa*, *Il Sole 24 Ore*, *Il Messaggero*) and an average of 11.3 percent of the total number of articles published by Italy's two main weekly publications: *L'Espresso* and *Panorama* (Montoli, 2002). Despite the fact that newspaper articles and advertisements contain very different amounts of information, and that this could imply that a comparison of the two may lack homogeneity, looking at the two studies together can nevertheless provide an indication of how much space is dedicated to scientific themes in the same form of communication.

As far as the presence of advertising with scientific content in the sample analyzed is concerned, the local newspaper features the fewest scientific references. The ratio between advertising with scientific content and the total of the advertising in the publications grows progressively from the national paper, to the weekly papers and then to the most popular specialist monthly publication (*Focus*). The only exception is *Le Scienze*, where the amount of advertising is much lower than in the other publications, but where the number of scientific references in the advertisements is very high (Table 1).

Sciences most commonly used in advertising

The distribution of the scientific disciplines reflects a primary focus on biomedicine, biology and chemistry (Figure 1), in keeping with the product categories most frequently advertised in Italian publications (Figure 2).

Table 1. How much science appears in advertising (total per individual publication, excluding self-advertising made by the publishing groups themselves)

Publication	Advertising with scientific content	Total advertisements filed	Percentage (%)
<i>La Repubblica</i>	68	633	10.74
<i>Il Piccolo</i>	22	554	3.97
<i>L'Espresso</i>	140	969	14.45
<i>Gente</i>	217	1059	20.49
<i>Venerdì</i>	115	805	14.29
<i>Io Donna</i>	176	1192	14.76
<i>Le Scienze</i>	62	187	33.15
<i>Focus</i>	218	1143	19.07
Total	1018	6542	15.56

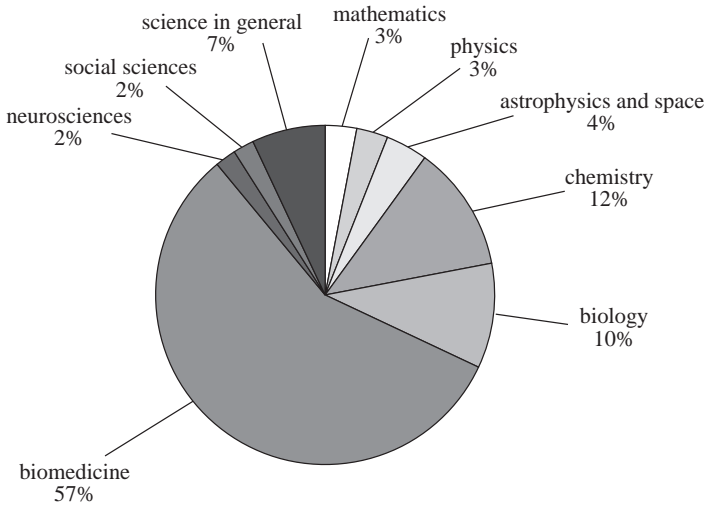


Figure 1. The most commonly featured scientific disciplines in advertising (considering all eight publications and excluding self-advertising).⁷

Regarding the coverage of scientific topics in the media, this result reflects the predominance of stories about illness and general health. As a result, greater attention is given to the biomedical sciences and to those connected to health and well-being. Research in diverse national contexts has shown the media success of topics connected to health and illness. This can be explained by the fact that these subjects are connected to human experiences that people can identify with and compare (e.g., see Einsiedel, 1992; Hansen,

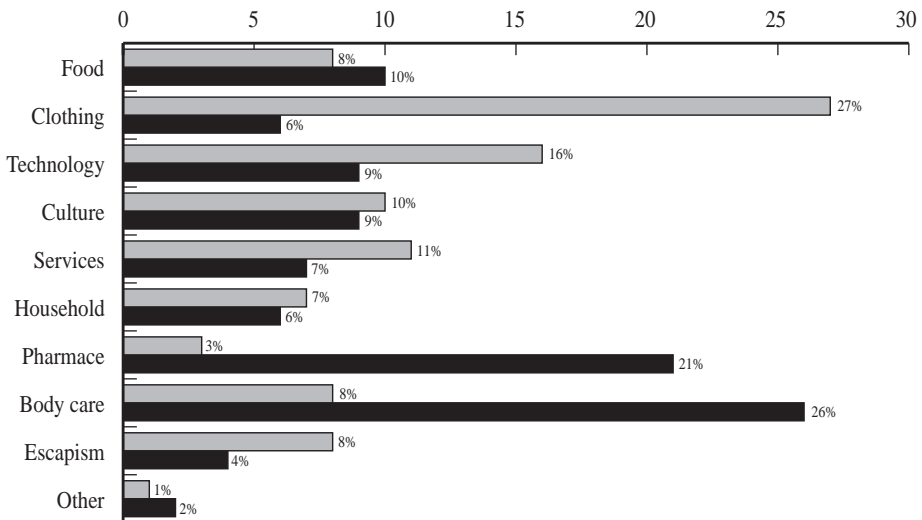


Figure 2. Percentages of the subdivision of the total advertisements by product category (gray); percentages of the subdivision of the sample advertisements with scientific content by product category (black) (total of eight publications, excluding self-advertising).

Table 2. How much science appears in each product category (all advertisements with scientific content, from the eight publications)

Category	Scientific content in product category
Food	19%
Clothing	3%
Technology	9%
Culture and show business	14%
Services	10%
Household	11%
Pharmaceuticals	96%
Body care	55%
Escapism (trips and holidays)	7%
Other	18%

1994; Bauer et al., 1995; Pellechia, 1997; Gregory and Miller, 1998: 117–20; Hargreaves et al., 2003; Bucchi and Mazzolini, 2003 for the Italian context in particular).

The fact that biomedicine is the most directly marketable science (57 percent of the sample), reasserts the reciprocal interest of the public and the communicators within the most uncertain, the most widely published and the most read, the most controversial and the most hotly debated of today’s sciences. On the other hand, the hard sciences accounted for 22 percent of references, grouping physics, mathematics, chemistry and astrophysics (Figure 1).

When comparing all the advertisements subdivided by product category and those that feature scientific references (Table 2), the effectiveness of the topic of health and well-being in the categories of “pharmaceuticals” and “body care” is confirmed yet further. Indeed, the advertisements in the sample that fall into these categories have the greatest number of examples of a rhetorical use of terms, charts and scientific images. On the other hand, it is surprising that explicit scientific content is not used more for technological goods.

The different presence and distribution of scientific disciplines in the various categories reflects the diverse editorial choices. Indeed, each publication is directed towards a different readership and has different investment strategies for advertising. As Table 3 demonstrates, while the biomedicine percentage remains well over half in the daily newspapers and the “generic” supplement (*Repubblica* 58 percent, *Piccolo* 68 percent, *Venerd&igrav;* 60 percent), in the publications dedicated to a predominantly female public the percentage climbs to over 70 percent (*Io Donna* 71 percent, *Gente* 75 percent). Less space is given to advertising with a biomedical content in the generic weekly publication and the popular monthly science magazine (*L’Espresso* and *Focus*, 48 percent), while it falls dramatically in the specialist monthly publication (*Le Scienze*, 14 percent).

Table 3. Distribution of scientific content in advertising in the daily newspaper *La Repubblica* (12 issues), weekly publication *Gente* (12 issues), and monthly publications *Focus* (12 issues) and *Le Scienze* (12 issues)

	Bio- medicine	Neuro- sciences	Social sciences	Science in general	Mathem- atics	Physics	Astrophysics and space	Chemistry	Biology
<i>La Repubblica</i>	58%	0%	3%	2%	4%	8%	3%	13%	9%
<i>Gente</i>	75%	1%	1%	3%	1%	3%	4%	7%	5%
<i>Focus</i>	48%	0%	2%	9%	4%	3%	5%	16%	13%
<i>Le Scienze</i>	14%	14%	3%	9%	11%	8%	10%	15%	16%

Table 4. Distribution of scientific content in the textual and visual parts of the filed advertisements with scientific content

Advertisements with scientific content	1018	100%
Scientific content in the text	993	97%
Scientific content (headline)	298	29%
Scientific content (body copy)	956	94%
Scientific content in the image	379	37%

Text and images

The scientific content (or a simulation of it) in advertising features significantly more in written texts than in images, as shown in Table 4. Moreover, an analysis of the use of scientific language shows that most references to science in advertising make use of isolated scientific *terms*, rather than scientific *speech*. While in 89 percent of cases of scientific content, individual scientific terms are used within the broader rhetorical context of the message, real scientific speech, with sector-specific language, is only developed in 9 percent of cases.⁸

Whether the advertisement contains single scientific terms or a body of text, reference to science is made principally using signs and symbols from sector-specific language (chemistry, medicine, mathematics and so on) that are difficult for a non-expert public to understand. However, it is actually this type of inaccessibility that guarantees the effectiveness and value of the advertised product.

On the other hand, given the strong impact of images in attracting the target group's attention, the weight of visual references to science constitutes an important indicator of its consumption in advertising. While images do not appear as much as scientific terminology since they are more difficult to use (37 percent of the total advertisements), they are far more evocative (e.g., see Barthes, 1964). With respect to scientific terms and language, mainly used referentially, photographs and drawings primarily fulfill the phatic function of communication. In this case, the images simply evoke a scientific atmosphere and make the most of it in order to strengthen the rhetorical arguments behind the message.

The message

On the whole, the scientific message conveyed by the sample is positive (in 59 percent of the advertisements analyzed). Only 2 percent of the advertisements monitored were negative and 39 percent took a neutral stance. From this result we can observe that the image of science communicated by advertising is positive independently of the distortion that may be made of it by the advertisers, who may not necessarily be interested in the accuracy of the message.

As mentioned before, previous research into the presence of science in advertising has focused mainly on the mistakes made by advertisers in their inaccurate use of scientific terms and concepts. Nonetheless, if we can take it for granted that the message itself is markedly positive—given that it aims to persuade—we can not on the other hand deny that advertising plays an important part in the construction of perceptions of science in the public arena. Considering how pervasive advertising is in daily life, it is therefore important to underline how such a powerful tool as advertising—used by communication professionals, but who are not professionals in science communication—nevertheless transmits a wholly positive image of science to their public.

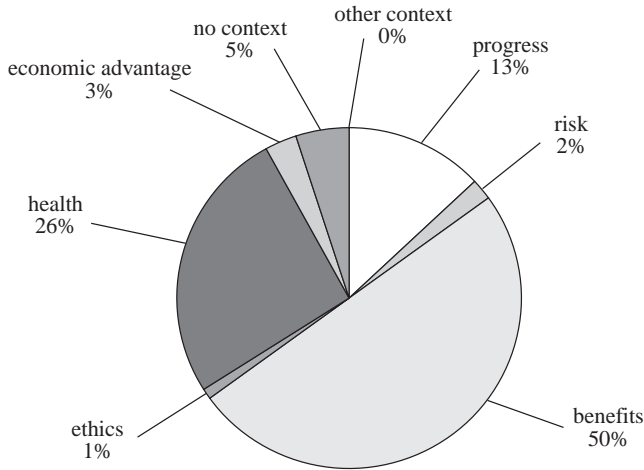


Figure 3. Framing of the scientific message in all the filed advertisements (all eight publications).

The framing of science in advertising

The frame wherein the advertising message is set conforms to the differing presence of the scientific disciplines used, to the product type where there is a greater use of science and to the positivity of the message connected to the product advertised. “Benefits” (50 percent) and “health” (26 percent) are the most frequent frames for scientific words and images and correspond to the use of science for guaranteeing the effectiveness and quality of “body care” products, “pharmaceuticals” and “food,” all linked to the world of health and well-being (Figure 3). The frame of “progress” is observed in 13 percent of cases, confirming the positive use of science in advertising. Similarly, the value associated with the “risk” context (2 percent) reflects information on the negative scientific message exactly.

The frames for the advertisements are distributed in a more or less homogeneous manner among the various categories with a prevalence connected to “progress” and “health.” The only example where this is not the case is in the monthly *Le Scienze*, the Italian edition of *Scientific American*, a magazine with high scientific content (Figure 4).

4. Conclusions

The advertisements that refer to science in the Italian press provide a substantially positive image of science. This is of particular relevance if we consider that these publications are one of the important examples of how perceptions of science are created in the public arena.

Compared with many science communication initiatives set up with the aim of building a more positive image of science, the case of advertising has an interesting peculiarity: advertisers are communication professionals who are not experts in science communication, nor is their aim to communicate science. Yet at the same time, they construct a language rich in scientific terms and metaphors that are often far removed from their original meaning, but whose use bears witness to two important aspects that merit further research and analysis.

The first aspect is connected to the possibility that, more and more, science is becoming a *natural genre*, that is to say an aspect of everyday life, over and beyond the real understanding of scientific results and theories. The second is that a significant part of

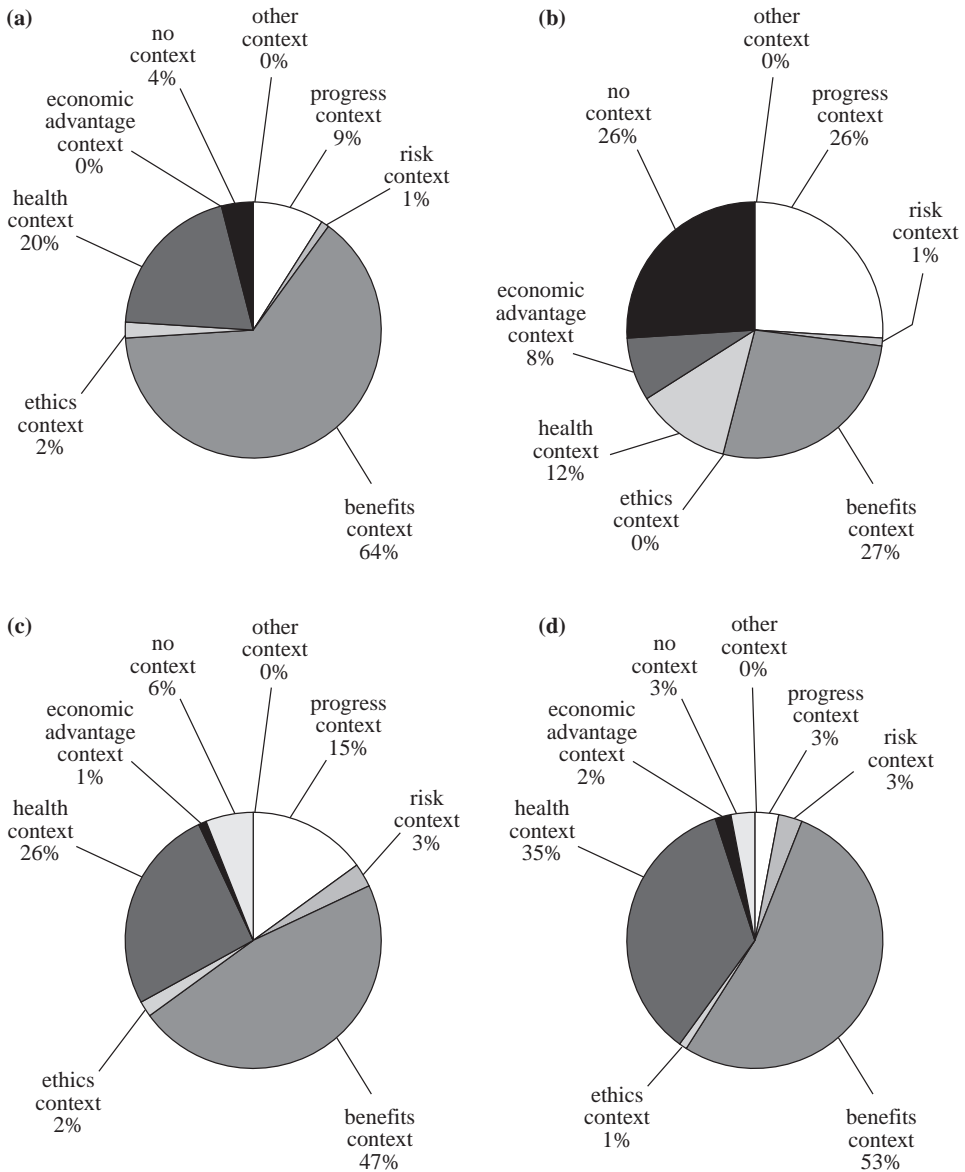


Figure 4. Context for scientific content for advertisements in (a) *Io Donna*, (b) *Le Scienze*, (c) *L'Espresso* and (d) *Gente*.

science communication takes place through hybrid, oblique, non-specialist channels, and the huge presence of science in advertising is a major example of this.

Studying science communication therefore means analyzing not just the ad hoc methods, dedicated to scientific popularization, but also the broader communication processes that include science as a social practice. In order to do so, it is necessary to consider the implicit factors and the channels used by non-specialist advertisers, which all contribute to diffusing an image and creating shared opinions on science.

Advertising is a breeding ground for these images and beliefs and they are

encompassed by a complex communication process. This process can bring about expansion within the group of subjects that are on the receiving end of the science communication flow. These themes are not just discussed by scientists or specialist advertisers; they are also conveyed by non-specialist journalists, teachers, television and radio presenters, artists and advertising agents. All of the above have an important role to play in the diffusion of science in society.

By way of an analogy with the advertising analysis presented in this report, further studies could be devoted to the role of the media and the underlying technology, not just as a method for conveying a more or less distorted version of scientific knowledge, but as a place for discussing and reshaping it as well.

Acknowledgements

This work has been carried out thanks to the support given by the Innovations in the Communication of Science (ICS) group of the International School for Advanced Studies (SISSA) in Trieste. The initial ideas for our research came from Pietro Greco, who gave us his constant help and supervision throughout the duration of the project. We are grateful to him and others including Mila Bottegal and Stefano Fantoni, without whose support the project would not have been possible.

Appendix: Research protocol

1. Publication name
2. Date . . - . . - . . (day-month-year)
3. Page
4. Brand
5. Product category
6. Scientific content yes no
7. Scientific content in the text yes no
 - 7.1. In the headline yes no
 - 7.2. In the body copy yes no
 - 7.3. Scientific discipline referred to
8. Scientific content in the image yes no
9. Message type
 1. positive
 2. neutral
 3. negative
10. Context
 1. progress
 2. risks
 3. benefits
 4. ethics
 5. health
 6. economic advantage
 7. other (please specify):

Notes

- 1 For information on the print runs of the daily newspapers and the weekly and monthly publications mentioned, please consult *Prima Comunicazione* (<http://www.primaonline.it/dati/index.asp>, accessed 24 August 2005).
- 2 We mean biomedicine in the broadest sense of the term, as the science and practice of the prevention and curing of human diseases, and other ailments of the human body and mind.
- 3 The translations of the Italian slogans, headings and texts, in this and following notes, are a literal translation of the meaning of the texts rather than an attempt at a re-formulation of the slogan in English. This is wholly intentional, in order that the reader is able to understand the scientific content conveyed by the advertisement in question. For example for mathematics: “Asus laptop computers give maximum potential in the smallest of terms.” The image shows a hand writing on a board, drawing a graphic $f(N)$ as a function of N , with a delimited and colored region, as if it were calculating the integral, and there is writing on the board that shows the limit as “ n ” that goes to the infinity of $f(N)$, to conclude with “ $2N = ASUS$ ” (*Focus*, July 2002, p. 273). For example for biology: the progress brought by a car insurance policy is represented by the progression of a monkey’s paw to the hand of a human being (*Il Venerdì&igrav;*, 4 October 2002, p. 132). For example for biomedicine: “Elisir di Rochetta Green Tea contains teobromine and teofilina that both have beneficial diuretic effects. As well as this, it is rich in antioxidants that help to fight free radicals, it is rich in vitamin C, oligoelements and zinc which help reinforce the immune system and lower cholesterol levels in the blood” (*Gente*, June 2002, p. 59); “The Nivea Vital line of beauty products, containing Q10 and prerotinol, help to promote the regeneration and renewal of hydrolipid reserves” (*Gente*, May 2002, p. 49).
- 4 Examples of the use of positive messages: “National Cancer Research Day is an opportunity to celebrate the postgenomic era of research. Because the future of research is everybody’s future” (*La Repubblica*, 5 November 2002, p. 36); “In the Dibi centres, the effectiveness and scientific nature of the equipment used combines with the pleasure of health and beauty treatments” (*L’Espresso*, 16 May 2002, p. 258).
- 5 Examples of the use of neutral messages: “Contacta Lens are monthly contact lenses for the short-sighted. Made with biocompatible materials, they allow optimum eye movement and work against dryness” (*L’Espresso*, 16 May 2002, p. 156); “Occasional use of Euchessina CM with Picosulfon can combat constipation problems” (*Gente*, 9 May 2002, p. 145).
- 6 Examples of the use of negative messages: “Genetically modified foods are not child’s play, and until science provides us with more reliable answers, Co-op says ‘no’ to genetically modified products. This is not a question of principles regarding genetic research, but rather a precaution in the face of human health” (*L’Espresso*, 16 May 2002, pp. 150–1); “Hard maple wood charcoal is used outdoors to soften the taste of the whiskey. The scientists said that it was only useful for ashes . . . even the brainboxes at the university were amazed by our methods” (*Focus*, February 2003, p. 101).
- 7 In this case as well, the exclusion of self-advertising in the advertising samples was needed in order to avoid including references to diverse scientific themes and disciplines dealt with in other publications that belong to the same publishing group. For example, the daily *La Repubblica* and the weekly *L’Espresso* are part of the same publishing group. It is common to find advertising for the latter in the former, including cases where the advertisement refers to the publication of a coming issue that deals in depth with astrophysics, biomedicine and so on.
- 8 Example of the use of scientific terms: “D., with xylitol, calcium and fluoride or microparticles”; example of simulation of scientific speech: “M. gel combines the action of two cellular stimulants, Magnesium and Vitamin C. Clinical trials are performed in vivo and subject to dermatological tests.”

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