

MISUSE OF SCIENCE IN ADVERTISING

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Abstract

Many companies use science to bias the opinion of consumers regarding their products. They take advantage of the poor scientific and technological knowledge of the population for their benefit. We analyzed several cases: (a) Medical products and methods (advertisements and articles in a monthly magazine distributed with a newspaper). (b) Dairy desserts based on yogurt pasteurized after fermentation (advertisements and scientific articles). (c) Products of technology (advertisements in newspapers and brochures). (d) A distorted image of scientists.

Key words: advertising, science and technology misuse, public perception of science

Text

Companies may misuse science and technology in different ways to reach their objectives. They can disguise advertisements in the shape of a scientific text; show properties that the products advertised do not have; and emphasize what are the usual properties of products of the same kind. We will comment on several cases we analyzed.

(a) Medical products and methods

Salud & Vida (Health & life) is a monthly magazine distributed with *La Vanguardia*, a newspaper of wide distribution in Catalonia. It comprises

several sections including “Currently”, “Health-prevention”, “The doctor informs you”, “Health leisure”, “Dietary issues”, “Welfare-fitness”, “Welfare-beauty”, “Welfare-tips” and “Flashes”. We analyzed four 2003 issues, of which, full-page advertisements were a mean 22.59% of the total number of pages of the magazine. Each issue included also several half-page or a-quarter-page advertisements. The products advertised were related mostly to beauty; they included dentistry (whitening of teeth), spa, body shapers, plastic surgery and weight control. The “Currently” section, along with some health tips and news items, comprises also advertisements disguised as news. Even more, the section “The doctor informs you” is always an advertisement of some health center, and other sections hide often also advertisements under the shape of information articles.

In the 1990s, *La Vanguardia* used to publish a weekly magazine on science of great quality, and later it published also one on medicine. Those publications were useful tools to improve the public understanding of science. On the contrary, *Salud & vida* is a kind of catalog of products that apparently improve our health or help us to be in good shape and it advertises therapies that do not have a scientific basis.

(b) Dairy desserts based on yogurt pasteurized after fermentation.

Although many studies have reported that probiotic effects of yogurt are due to the presence of live bacteria, some companies started marketing pasteurized yogurt claiming that their products had the same qualities as non-pasteurized yogurt. They disregard the standards approved by the FAO and WHO Codex Alimentarius Commission regarding the nomenclature of yogurt subjected to pasteurization. In addition, they disregard the opinions of experts, and they even fund research to find some results that might support their claim that the nutritional and probiotic properties of yogurt are the same in traditional yogurts that in those pasteurized. By definition of what yogurt is, the lactobacilli that ferment milk into yogurt must be alive in the final product. This is the reason why yogurt must be kept at low temperature. One of the biggest dairy Spanish companies, which produces that yogurt-derived desert, shows pasteurization as an added value for its products (“they do not need

cold nor additives for preservation”, “they keep the whole nutritious values of yogurt”).

In the last times, that company has changed its advertising tactics: Instead of focusing their advertising campaigns on the beneficial effects of the so-called “pasteurized yogurt”, now they insist in the prebiotic properties of other products, such as orange juice and soy drink, which they claim to promote growth of “good” bacteria that are already present in the intestines.

(c) Products of technology

The terminology used to advertise products of technology such as computers, some appliances and cars is often incomprehensible to lay people. Some terms, expressions, as well as abbreviations and acronyms that we found in advertisements of cars were: TDI engine, a maximum torque of 320 Nm, Bi-zone climatronic, Tempomat cruise control, triptonic gear, ABS, SAFE, ASR, ESP. In computer’s advertisements, along with familiar terms and acronyms such as DVD, CDROM, MP3, wireless, firewall, ethernet, we found others such as IEEE1394 port, WLAN, SmartMedia, VGA adapter, GPU, ATI Mobility Radeon, TFT screen, digital BBE processor, and DRC technology. The more incomprehensible the description of cars and computer are, the more advanced and updated they seem to be.

Lay people get the impression that technology is the province of an elite. They are not acquainted with those terms, but do not dare to tell that they see the emperor naked and to ask to have that jargon translated into a comprehensible language.

(d) Scientists as evil intelligence

“We cannot accept that the lack of collaboration of researchers delays discoveries.” That was the sentence at the top of a full-page advertisement in *La Vanguardia* (29 January 2004, p. 7) As a matter of fact, the advertisement was the announcement that drug makers Sanofi-Synthelabo and Aventis were planning to merge to become the largest European pharmaceutical company. Placards in subway stations announced in spring 2003 a play station game whose name was written in tiny characters at the bottom of the advertisement. The text that most attracted the attention of the “metro” travelers stated: “If

you think your baby is a little monster, wait until he or she grows up. If you knew that this baby would become a mad scientist able to create a lethal virus that would erase life from the Earth surface, what would you do?"

Advertisements of these kinds convey a distorted image of scientists, who are seen as monsters capable of destroying the world with their inventions. This image makes it difficult that people realizes that scientists are neither better nor worse than other professionals are, and that society improves due to scientific and technologic development.

Conclusion

Scientific culture would enable people understand the real scope of science and to perceive when science is misused for business purposes.

