LA EFICACIA DE LA PUBLICIDAD SOCIAL EN LAS REDES SOCIALES. UN EXPERIMENTO ONLINE CON USUARIOS JÓVENES
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Abstract
Although many studies have been carried out on advertising effectiveness, there has been little research as yet on the effectiveness of social advertising, and even less in the context of social networks. In this article we aim to discover which models of persuasive communication are most effective in making social media responsive to a young audience. Our starting-point for this purpose was a study of 370 advertising messages from the leading Spanish NGOs. By tabulating these messages statistically we were able to define two models of persuasive communication in networks: a connotative model and a denotative model. These were subsequently validated by a focus group comprising communication managers from various NGOs. Our object was to find out which of these models proved most effective in terms of involvement and virality. To do so, we designed an online experiment based on simulation. First we created a fictitious Facebook page for the NGO Movimiento por la Paz (“Movement for Peace”), having obtained its prior consent. Then we invited a group of young people, heavy users of social networks, to visit this page and interact with it. Finally, we analysed all the activity carried out by the subjects in the sample, using two tools: quantitative analysis of interactions (number of visits, impressions, comments, use of the “Like” button, content published on the Wall, etc.), with the aid of the metrics provided by Facebook Insights, and through analysis of the content of comments posted by users. The results clearly favoured the connotative model.

Keywords
Advertising effectiveness, social advertising, online advertising, social networks, youth, NGO, experiment
1. Background of the study

This article has been produced within the framework of the Research Group “Development of a Model of Effectiveness of Persuasive Communication for the Third Sector on Social Networks”, comprising researchers from the University of Málaga and King Juan Carlos University in Madrid. The project, of three years’ duration, is now culminating in the presentation of the results with respect to measuring effectiveness.

As a preparatory phase for this study, the group examined advertising messages from leading NGOs to define their drafting, stylistic and compositional features in the context of the Internet. We recorded and analysed 370 social advertising messages (from NGOs operating throughout Spain) published on the principal social networks in the second half of 2009. We then developed an analytical model which was applied by a group of twenty assessors, after receiving specific training. Evaluation by means of a group of assessors is common practice in research on organisational communication (Baños, 2001; Arroyo, 2006). Following this analysis, two advertising profiles were defined, characterised by opposing tendencies: one denotative/objective/argumentative and the other connotative/subjective/emotional. The validity of these two models was confirmed in a Focus Group comprising sixteen communication managers from various NGOs and in a battery of in-depth interviews with advertising agency executives who have worked in the field of social advertising.

Subsequently, students at King Juan Carlos University, with the guidance of members of the research team, produced two graphic pieces and two audiovisual spots corresponding to the two proposed models: one piece and one spot for each of the two profiles. This was the preparatory phase for the research we are now presenting, which involves subjecting these four messages to evaluation by an audience familiar with the Internet, through an online experiment, thereby enabling us to gauge the effectiveness of the two profiles in advertising communication for NGOs.

2. Review of the literature on measuring advertising effectiveness

There is a long tradition of published work on measuring advertising effectiveness, but it was in the early 1990s that it came to fruition in a veritable outpouring of scholarship.
Bendixen (1993) established the basic concepts of “effects” and “effectiveness” in the field of advertising and laid down the criteria for measuring the effectiveness of an advertisement. Soon afterwards Bigné and Gómez del Río (1995) defined the models of advertising effectiveness, based on decisions on advertising strategies and techniques aimed at achieving a commercial objective. At the end of the decade Beerli and Martín established a methodology for measuring advertising effectiveness (1998) and also developed a repertoire of measurement techniques applicable to advertising (1999). Finally Paz, Vázquez and Santos (2000) drew together the main contributions made so far and carried out an empirical study on various factors that influence the effectiveness of television advertising: serial position, repetition, advertising style employed, etc.

In the specific area of social advertising, Moliner (1996) was the pioneer in applying the criteria established for measuring effectiveness in commercial marketing to the field of nonprofit marketing. He also proposed a model of “social behaviour” of the individual with a view to defining the most valid criteria and tools for measuring advertising in the social sphere. Subsequently Thakor and Goneau-Lessard (2009) analysed the literature on social advertising aimed at young people and adolescents and developed an interesting scale for measuring the “scepticism” of this target audience when presented with advertisements from NGOs and institutions of a charitable nature. Finally Méndiz, Cristófol and Navas (2010) studied the specific case of advertising effectiveness in campaigns by NGOs: they analysed the structures of appeal, drafting and composition in the principal messages from Spanish NGOs responding to the tragedy in Haiti.

In the sphere of digital advertising, as a preliminary to measuring its effectiveness, the Spectus group (2008) developed a model for creative analysis of online advertising which was tested in a school setting, and Cebrián Herreros (2009) defined the main characteristics of this interactive communication. Flores Vivar (2009), in turn, pointed out the new communication models being generated in social networks.

In the specific field of social networks, the output of published work on the effectiveness of social advertising has been intense in the last few years. A number of studies have been carried out in this area using the concept of “Word of Mouth” (WOM). For example, Smith, Coyle, Lightfoot and Scott (2007) redefined the model of WOM influence operating in social networks, since here the influence does not spring
from an elite with a dense communication network but flows along very different channels in a decentralised pattern. In another study Trusov, Bucklin and Pauwels (2009) established a parallel between the effects of traditional WOM and those that characterise WOM in social networks, and concluded that in the latter its influence gave rise to a larger number of responses, a substantially longer-lasting impact on the audience, and effects that could be calculated in terms of what they called Vector Autoregression (VAR).

Apart from WOM, the effectiveness of social advertising in social networks has also been studied from various other points of view: how it is directed to specific targets (Yang, Dia, Cheng & Lin 2006), the phenomenon of the “friend endorser” (Wen, Tan & Chang 2009), and audience perception of inserted advertising: intrusive marketing versus consent or opt-in marketing (De Salas 2009, Rejón 2011).

Recently the media agency Zenith Media (2011) presented a study on the keys to advertising effectiveness in social networks, both in the various advertising formats used and in the behavioural variables of the audience (behavioural targeting). For this purpose they used laboratory techniques (eye tracking with free browsing: 166 hours of recordings) together with in-depth interviews. The IAB and Elogia (2011), for their part, presented the III Estudio sobre redes sociales en internet (Third Study on Social Networks on the Internet), which confirms the consolidation of their position as the most widely-accepted and fastest-growing advertising medium.

The review of the literature showed that there were many existing studies related to conceptualising and modelling advertising effectiveness, as well as sociological surveys conducted among Internet users. However, we did not find significant published work that attempted to measure the interaction of internauts with a particular advertisement (for example, the number of “Likes” it received, sharing it with contacts, posting the advertisement on the internaut’s Wall, including comments, etc). In addition, we felt that the research conducted on the basis of questionnaires only explored internauts’ general impression of commercial advertising (rarely social advertising), and that the precise and immediate opinions formed by internauts on seeing a specific piece of social advertising had not been measured. That was just what we were proposing to do through an online experiment: to measure the interaction of an audience of “heavy users” of the
Internet with the four advertisements we had created, and thereby to record, assess and measure their spontaneous opinions on viewing these four pieces on social networks.

3. Research methodology

In order to design a laboratory experiment we first considered which social network we should work on. We had two in mind, Twitter and Facebook, since these are the ones most commonly used by young people. A focus group with University of Málaga students helped to reveal the “cultures” implicit in these two networks.

We discovered that Twitter users particularly value the network’s constantly updated content and usability. In general, they are seeking to get beyond a closed circle of friends: they want to communicate with celebrities, leaders and all those they could not reach in any other way. They are therefore not deterred by the disadvantages of a form of communication that is brief and ephemeral and that places excessive emphasis on the quantitative aspect. They also tend to be more technologically minded than users of other networks, more superficial, and even more aggressive, and the content they post there tends to fit that culture.

By contrast, Facebook users turn to that network because they want to contact people they regard as “friends” (former associates, etc) and they devote great attention to constructing their image and their relationships. They particularly value pictures and videos and prefer a more interpersonal kind of communication, similar to e-mail. The lack of immediacy is not perceived negatively (Shiels 2008), but the same is not true of the increasing overcrowding of this platform: an excessive number of “friends”, applications, invitations, etc. This creates the feeling that one is spending too much time on banalities.

From the results of the focus group we concluded that the most suitable social network for our research study was Facebook, and that this was where we should carry out our laboratory research with the four pieces of social advertising designed in advance.
For the experiment we opted for a methodology of an ethnographic character, in the sense of “observation of the cultural practices carried out by a human group” (Martínez 2004, 35). Two practices were to be involved here: interaction with the messages, and opinions produced by those advertisements. And the human group — we were quite clear on this point — had to combine two features: youth and knowledge of advertising. Youth was a requirement of the research project within which we were operating, but also a condition of effectiveness: young people are those most actively involved in social networks (“heavy users”) and therefore the most suitable for a research study on the effectiveness of advertisements in these collaborative media. Knowledge of advertising, though not an essential requirement, increased the value of their observations on viewing those advertisements in an online context. For all these reasons, we decided to select students in the final (fourth) year of the degree course in Advertising and Public Relations at the University of Málaga as our research sample. They combined the three factors outlined above: youth, knowledge of advertising and frequent use of networks. Moreover, our closeness to them, as their teachers, ensured a high level of participation in the experiment.

The next step was to propose the online experiment to the NGO Movimiento por la Paz (Movement for Peace), which was to collaborate with us in the project. We suggested to this organisation, through its Director of Communications, the idea of creating a Facebook page that would purport to be its Fan page, using the logo, symbols and principal details of the organisation to create this impression. Once the fictitious page had been designed, we would upload the four advertisements to be analysed and invite the group of fourth-year Advertising students to visit the page so as to measure and evaluate their actions.

With the NGO’s approval we created the page and uploaded the advertising pieces in September and October 2011. We then invited the 64 students in a fourth-year class to visit the supposed Movimiento por la Paz Fan page, as a routine piece of coursework for the module, and make the appropriate observations (although we would meanwhile be measuring and evaluate their actions: posting comments, inviting contacts, etc). They were given a period of a month to visit the page: from 10 November to 10 December 2011 (extended to 13 December because of the public holiday for the Feast of the Immaculate Conception). At the end of this period we proceeded to carry out a metric
analysis of all the quantitative variables: number of visits, trend of visits over time, number of comments, number of “Likes”, etc. We also analysed the qualitative elements: observations, comments, etc.

4. Results of the Facebook experiment

4.1. Chronological data on the sample

The 64 invited students took part in the experiment. It should be emphasised that 56 of them (87.5%) became “fans” of the Movimiento por la Paz page by clicking on the “Like” option, activated for this purpose by Facebook.

From their interaction with the page during the study period (10/11/11 to 13/12/11) we obtained a total of 1,859 viewings of the graphics and videos we had posted. This figure includes both “fans” and “non-fans” of our Facebook page. They also made a total of 155 comments and clicks on the “Like” button for all the published items (two graphics and two videos) and 203 visits to the “Wall”, which constitutes the main section of the Facebook page.

The following graph shows the trend of active users of our page during the study period, reflecting a consistent progression of activity up to the end of the period.

Figure 1. Active users per month during the period from 10/11/11 to 13/12/11. Source: Facebook.com/insights
On the first day of the prescribed period a total of 33 active users was recorded. Participation steadily increased up to 3 December, when the maximum figure of 74 active users was reached. From this date onwards the number of active users began to fall, reaching a figure of 22 active users on the last day of the study.

4.2. Demographic data on the users

With regard to the demographics of the “fans” of our Facebook page (users who clicked on the “Like” button for Movimiento por la Paz), a noteworthy general statistic was that 64% of the users were female, whilst 32% were male. The figures do not add up to 100% because 4% of the fans had not indicated their sex on their personal Facebook page. These proportions do not signify a specially affinity for social advertising among women, as they are very similar to the sex distribution for the course: 67% female and 33% male.

Of all the users, 66% were young people between the ages of 18 and 24, in line with the age of the students participating in the study. However, 30.7% were recorded from other age brackets: 3.6% of fans were between 13 and 17, 18.1% between 25 and 34, 3.6% between 35 and 44 and 5.4% between 45 and 54.
Figure 2. Demographics of fans of the Facebook page for *Movimiento de la Paz*. Source: Facebook.com/insights

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<th>Sex and age</th>
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These figures reflect a certain degree of propagation of the *Movimiento por la Paz* page beyond the students involved in the study. In other words, their actions on the Fan page were reflected on their Personal page and led their contacts in other age brackets to visit it as well. The figures for access by country confirm this spread, with connections being recorded from the United States, Mexico, Portugal, Colombia, Guatemala, Peru and Paraguay. Although the number of connections is small, it is worth noting, because these accesses took place without any promotional effort. Moreover, accesses were
recorded from external sources such as Google.com.pe (Peru), Google.com.mx (Mexico) and Google.com.gt (Guatemala).

All this information, provided by Facebook Insights, indicates the age of 96.7% of the users registered on our page. The remaining 3.3% corresponds to users who did not provide their date of birth when registering with this social network.

4.3. Trend of visits to the NGO Fan page

The study period began on 10 November. On that day we already started from a figure of 597 impressions (the number of times any content associated with our page was viewed), since some students visited the page before the appointed day. In a single day (10-11 November) the number of impressions increased by 70% to a total of 974. Over the following days the rate of increase declined, although it remained positive, with percentages ranging from 20% to 3%.

On 6 December we reached the maximum figure in terms of number of impressions per month, at 2,167. From 20 November to 6 December the increase amounted to 1,593 impressions: from 597 at the start to 2,167. That day was a turning point, and from then until 13 December the progression was downward, by percentages of between 3% and 21%, from 2,167 to 762 new impressions.

In general terms there was also an increase in the Fan page’s potential audience, that is, the number of our fans’ contacts who could see it. The total number of potential users reached 13,107 on 13 December.

As for the number of users who viewed any content associated with our Fan page (total unique users on each of 28 days), 199 users were recorded on 10 November, 196 on 11 November, and from then on the figure always exceeded 300 users. The maximum was reached on 6 December, with 622 users, and from that point it began to fall: 602 on 7 December, 585 on 8 December, and the decline continued until 13 December, with 350. This is what Facebook defines as the Total Reach of our publications, both on our own page and in the Latest News section and other profiles separate from that of our
organisation. The figure includes fans of our page as well as non-fans. The latter access our page and its contents via the dissemination of our activity among their network of friends.

These figures offer us an indication of the level of reach or virality in the social network. Facebook Insights also provides a figure which it has defined as Viral Reach, the object of which is to count in terms of unique users the number of people who have seen our page or any of its posts from the activity of their network of friends and not directly on the Movimiento por la Paz Fan page. This activity includes messages informing users about Fan pages to which they have subscribed, messages published on our Wall, comments on one of our posts, information on what users share from our page with other friends, and responses to events and mentions or tags of our page.

We can observe the same trend as for the number of users, with a curve in the records that confirms a high degree of dependence of the Total Reach parameter compared with Viral Reach. In this propagation exercise a significant factor is the value known as Page Stories, which enables us to analyse the number of stories to which our page has given rise. In this category the figures are more modest, reaching a total of 29 stories on 9 December 2011. The publication of stories related to a page is the factor which produces an exponential increase in the virality of the page and the information it contains.

4.4. Expansion and virality of the messages

Starting from the 56 student participants, we observed how the activity of our page extended across the network, reaching over 600 users in a range of age brackets and countries. There was also a parallel increase in the figure for potential impact on new users, which reached a total of 13,107.

This dynamic process may produce additional impressions received in stories about our page published by a user (friend). These stories include connecting to our page, publishing on the Wall, clicking on the “Like” button, commenting on or sharing
something published on our page, mentioning the page and even tagging a photograph to our organisation. The maximum number of viral impressions is 2,164.

The following graph shows the number of people who saw something published on the *Movimiento por la Paz* page through the activity of one of their friends.

Figure 3. Graph showing the progression in the number of people who saw a story about this page published by a friend. Source: Facebook Insights.

![Graph showing the progression in the number of people who saw a story about this page published by a friend.](image)


14 Nov 21 Nov 28 Nov 5 Dec 12 Dec

Each point in the line of progression corresponds to a period of a week, so the point of maximum activity corresponds to the week from 10/11/11 to 16/11/11, with 365 people who viewed some story from their friends related to *Movimiento por la Paz*. That week
coincides with the phase of greatest effort in spreading our page among the target audience. Thus we can confirm that viral communication has played a crucial role in disseminating our content.

4.5. Quantitative analysis: comments and evaluation of the pieces

Let us now examine the number and content of the comments made on each of the publications:

Graphic 1 (Connotative):
The first graphic option achieved 35 comments and 18 clicks on the “Like” button (related to the publication). This publication was the one that received the most comments from users and aroused the greatest interest, judging not only from the number of comments but also the opinions expressed in them. For example, many agreed in expressing the view that “its design and message are strong, simple and very clear”, that “the idea is original and appealing” and that “it makes clever use of rhetorical and emotional elements”. It was undoubtedly the more highly commended of the two graphics. The creative concept was favourably assessed, although some drawbacks were pointed out in aspects of the design, such as the smoke, for example, which is confusing and looks as though it is coming from a cigarette rather than a factory.

Graphic 2 (Denotative):
The second graphic option, on the other hand, received 32 comments and only 4 clicks on the “Like” button. Although it was recognised as having positive features in terms of the concept it was trying to convey, this graphic was awarded a large number of negative
assessments. Among other things, these highlighted the fact that it is “saturated with information and visual elements”, creating confusion, and they drew attention to “the use of effects (fading, etc) which make the image difficult to read”. They also pointed out that “it uses an unsuitable type of lettering: you can’t read it properly”.

These drawbacks directly affect people’s ability to grasp the message. Moreover, users highlighted the “lack of connection between the apparent object of this campaign (curbing pollution) and the general aim declared by the NGO (promoting peace)”. To all this must be added the “lack of originality” in the visual approach; according to several students, it is a very hackneyed idea in the tradition of communication and advertising on climate change and pollution.

**Video 1 (Connotative):**

As for the videos, the first option received 27 comments and 16 clicks on the “Like” option. According to the users, this option is perceived as the more successful and the one with the greater emotional force. “An interesting and technically well-executed concept”, as one pointed out. “A direct and effective message”, remarked another. The idea of movement and the appeal to the audience’s feelings were perceived by the subjects in the sample as “elements that can enhance the ability of the advertisement to convey the values of the organisation”. In short, “it is creative and interesting because it relates concepts which stimulate audience involvement”.

Most members of the sample assessed this version favourably, both for its content and treatment and for its technical quality, a feature which is not essential in viral communication but which certainly contributes to its persuasive power.
Video 2 (Denotative):

The second option, the longer of the two, received a total of 26 comments and 5 clicks on the “Like” button. This spot aroused less excitement among users, though not to a very substantial degree. Moreover, although the concepts it conveys were praised — it reflects several aspects of poverty — the “somewhat didactic treatment” seems to have diminished the credibility of the message. Its tone was perceived as “monotonous and slow”, and users also emphasised its “lack of emotional appeal”. The images in the video “do not effectively illustrate the ideas it is trying to put across; the parallelism is too paternalistic”. Here “the excess of information leaves no room for feeling”. Finally, the students suggested that the message should be summarised and emotional music should be used to enhance its potential appeal.

5. Discussion and conclusions

The experiment carried out on the supposed Fan page of Movimiento por la Paz has enabled us to draw the following conclusions on social advertising on social networks:

- **Wide reach**: with 600 unique users from various parts of the world, the figures reflect a widespread dissemination of advertising messages on the network: 1,859 viewings, 155 comments and over 400 impressions for each of the four pieces. Activity was even recorded beyond our borders, in the United States, Mexico, Portugal, Guatemala, Peru and Paraguay. The number of foreign users is not representative, but it is worth emphasising that they were reached without any attempt to advertise. Moreover, Facebook Insight is capable of calculating the potential number of users that a particular page could reach, on the basis of contacts. In this case, in the month of the research study a total of 13,107 potential users was achieved.

- **Effective virality**: this kind of communication played a crucial part in disseminating all the contents. The Viral Reach indicator showed that the
number of viral impressions was 2,164, with clicks on the “Like” button and comments being the tools most frequently used to make the messages viral. Moreover, 365 people saw the NGO’s profile though one of their friends. The Page Stories figure reveals the number of stories generated by this page, including connections to publish on the Wall or share the publication. A total of 29 stories were recorded, potentially capable of enhancing the page’s virality and increasing the number of impressions.

- **Active participation**: Most of the subjects in the sample not only viewed the messages but also interacted with them. Between 20 and 70 active users were found per day, and the trend was one of steady increase. This is important, because in addition to its potential for connectivity, the social network offers the ability to participate in a collective message: the initial advertising message plus the sum of comments, “Likes”, and postings by subjects on their own pages. This participation by users makes them more likely to remember the message and also enhances their degree of commitment to it, a decisive factor in social advertising.

In addition, this experience has enabled us to determine which of the two advertising profiles (denotative or connotative) was more effective in communications by NGOs. In our study the members of the sample clearly displayed their preference for a connotative/persuasive profile (graphic 1, video 1), based on polysemous, emotional messages with a higher degree of rhetoricisation. By contrast, the denotative/informative profile (graphic 2, video 2), characterised by didactic messages overloaded with information, generated very little involvement in the sample as a whole. It is clear that young people, predisposed by the Internet towards indirect messages, interactive play and complicity, perceive at once that those denotative advertising messages merely transfer to the virtual world advertisements conceived for a different medium: the one-directional communication typical of newspapers, magazines and television. In advertising on social networks, what the subjects in the sample most valued was simplicity, rhetoric, interactivity and emotional involvement. It is this type of communication that best facilitates the virality of messages in collaborative environments such as social networks.
6. Support

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