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## WHAT ARE WE TO THINK ABOUT DIRECT-TO-CONSUMER ADVERTISING? A CASE-STUDY IN THE FIELD OF MISINTERPRETED ARGUMENTATION

This paper aims to test the hypothesis of whether direct-to-consumer advertising of prescription medicines presents information framed in potentially misleading argumentative structures. By joining together perspectives from argumentation theory, pragmatics and marketing research, we highlight and discuss the results of a pilot study designed to assess whether readers perceive the arguments as argumentative and, if so, which explicit and implicit elements provide groundings for the inference actually drawn by the target from the ads.

*Keywords:* Direct-to-consumer advertising, argument structure, fallacies, relevance theory, invited inference, elaboration likelihood model, health communication.

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## Introduction

Proponents of direct-to-consumer advertising of prescription drugs (hereafter DTCA) claim that it promotes greater participation in health care by consumers with positive implications for health care outcomes. Research evidence tends, however, to support the negative impact that is feared by those who are in favour of a legislative ban.<sup>1</sup> Recently, a few studies have addressed the issue of how to improve the regulations of the Food and Drug Administration, which has regulatory responsibility for DTCA in the United States. These studies focus mainly on the comprehension level of the information delivered by the ads, on the need for a 'fair-balanced disclosure' between information on risks and benefits and for less superficial information.<sup>2</sup> Although these factors are important for promoting a positive impact on consumers' health literacy, they do not seem to get to the core of the communication problem involved in DTCA, namely that these ads are not simply informative as claimed by the pharmaceutical industry (Bonaccorso & Sturchio 2003), but they present information framed in potentially misleading argumentative structures (Rubinelli 2006). Drawing on argumentation theory, pragmatics, and marketing research, we claim that DTCA can lead readers to make wrong inferences and misunderstand the drugs' characteristics as a result of the fallacious arguments presented in the ads. In this paper, we report a pilot study designed to assess, first, whether consumers indeed recognise DTCA as argumentative, second, what arguments they perceive and, third, what contents of the ads can have a potentially misleading argumentative force.

### 1. Study design

In this pilot study, 72 students from a Southeastern U.S. university, divided randomly into two groups<sup>3</sup> were asked to read an ad. Group 1 was given the ad for *Zoloft* - an anti-depressive medication, while Group 2 read an ad for *Allegra 180mg*—an allergy medicine. Participants then completed a questionnaire on the ad. We obtained data on 1) perceptions

1 See Rubinelli (2005) for a state of the art.

2 Thus see, for example, Jeffors (2004); Kaphingst & DeJong (2004); Riggs et al. (2004); Morgan et al. (2003); Kaphingst et al. (2005); Spence et al. (2005); Maubach & Hoek (2005); Huh & Cude (2004); Chao (2005).

3 Age in years, mean: 20.7 (Group 1); 21.9 (Group 2); Sex: Female 17/ 47.2% (Group 1) and 18/ 50% (Group 2).

of the argumentative structure of the ads and 2) recall of the contents of the ad. Since we could not expect readers to understand argumentation from a technical point of view, we enquired about perceived conclusions of the ads by posing the general question 'What is the ad suggesting that readers do?', with an invitation to leave the space blank in case they did not see any suggestions. By asking the question 'What are the reasons given in the ad for doing this?' we aimed at coding what could count as premises of the arguments. For assessing people's recall of the contents, we created boxes containing sentences that really appear in the ads (referred as T = Truth), and statement that do not appear (referred as F = False), and asked readers to indicate which sentences were/were not in the ad on a scale from -3 to 3 (where -3 = I am sure it is not in the ad; 0 = I do not know; 3 = I am sure it is in the ad). In creating this section, we were careful in selecting sentences that appear both in the front page and in the patient information in the next page of the ad. As for the false sentences, we inserted contents which, as we shall show, would facilitate the individuation of wrong inferences. Such wrong inferences would suggest that implicit premises are picked by individuals in order to ground their conclusions about the drugs, that these premises are implicitly recovered, that they can be known such at various degrees of confidence and awareness.

## 2. Results

The *Zoloft* ad is perceived by all 36 respondents in Group 1 as having an argumentative structure. Similarly, 35 people out of 36 in Group 2 (one person included in the 'not so well informed group' did not answer) recognized an argumentative structure in the *Allegra 180mg* ad. The conclusions pointed out by readers have been categorised as follows:

*Table I. Conclusions in the Zoloft advertisement*

Type of answers	N	%
If you are depressed, you must get <i>Zoloft</i>	14	38.9
Ask your doctor about <i>Zoloft</i>	13	36.1
Make research on <i>Zoloft</i>	3	8.3
Stop being depressed	2	5.6
Other conclusions	4	11.1

*Table II. Conclusions in the Allegra180mg advertisement*

Type of answers	N	%
If you have allergy, you must get <i>Allegra 180mg</i>	10	28.6
Chose <i>Allegra 180mg</i> over the other brands	10	28.6
Ask you doctor to prescribe <i>Allegra 180mg</i>	4	11.4
Take one dose of <i>A.</i> for longer relief	4	11.4
Other conclusions	7	20

Frequently reported reasons in support of the first two above conclusions for each ad can be categorized as follows (multiple answers allowed):

*Table III. Reasons for getting/asking the doctor about Zoloft*

Type of answers	Occurrences
<i>Zoloft</i> will help you in life generally/make life happy	10
You get one performance. Why do it with depression?	10
<i>Z.</i> is number one prescribed brand/ many people use it	8

*Table IV. Reason for getting/choosing Allegra 180mg*

Type of answers	Occurrences
<i>Allegra180mg</i> lasts longer than other drugs	25
The company wants to earn money	2
<i>A.</i> has long lasting relief	1

Most interesting are data concerning recall of those sentences that were/were not in the ads. In the Zoloft ad, 60% (N= 21 out of 35 of the people) wrongly believe that the ad contains the sentence 'Taking *Zoloft* will make your life happy', while 80.5% (N = 29 out of 36) correctly recall that the sentence 'Doctors prescribe *Zoloft* more than any other

antidepressant' appears in the ad. Similarly, 72.2% correctly think that the sentence 'Zoloft has treated more people with more types of depression and anxiety than any other brand of its kind' is included in the ad.

*Table V. Recall of the contents of the Zoloft Advisement*

Group 1 (%)									
	T/F	-3	-2	-1	0	1	2	3	N=
Taking <i>Zoloft</i> will make your life happy	F	17	17	3	3	11.4	17.2	31.4	35
Doctors prescribe <i>Zoloft</i> more than any other antidepressant	V	2..8	5..6	-	11.1	8.3	27.8	44.4	36
<i>Zoloft</i> has treated more people ....than any other brand of its kind	V	2.8	2.8	2.8	19.4	19.4	13.9	38.9	36

In the *Allegra180mg* ad, 86.1% (N= 31 out of 36) of the people correctly recall that the sentence '*Allegra180mg* lasts up to 4 times longer than one dose of most OTC allergy medicines' is written in the ad, but 68.8% (N = 16) wrongly consider the sentence 'Doctors prescribe *Allegra180mg* more than any other brand of its kind' as included in the ad. 50% (N = 18 out of 36) of the sample wrongly think that the sentence '*Allegra180mg* is better than any brand of its kind because it lasts longer' is part of the sample, while only 16.7% (N = 6 out of 36) of the people correctly say that the ad contains the sentence 'A dose of *Allegra* of 60mg per day is recommended as the starting dose for patients with decreased renal function'.

*Table VI. Recall of the contents of the Allegra Advisement*

Group 2 (%)									
	T/F	-3	-2	-1	0	1	2	3	N=
<i>Allegra180mg</i> lasts up to 4 times longer ...	V	2.8	-	2.8	8.3	2.8	16.8	66.5	35
Doctors prescribe <i>Allegra 180mg</i> more than ...	F	17.2	2.8	5.6	5.6	20.1	20.1	28.6	36
<i>Allegra180mg</i> is better ... because it lasts longer	F	19.4	5.6	8.3	16.7	13.6	17	19.4	36
<i>Allegra 60mg</i> ... recommended as the starting dose ...	V	30.5	8.3	5.6	38.9	11.1	2.8	2.8	36

### 3. Discussion

Our respondents recognise the ads as argumentative, viz. that the explicitly and implicitly communicated contents provide the recipient with both conclusions and premises for the conclusions. In this context, what strikes our attention most is that in searching within the reasons for wanting *Zoloft* or *Allegra180mg*, people seem to be engaged in what, according to the Elaboration Likelihood Model (Petty & Cacioppo 1986), can be defined as ‘peripheral processing’. In other words, when we pay attention to something, we tend to take a logical and central route to decision-making. But it seems that readers in our study select reasons for supporting their conclusions on the basis of incorrect inferences. Readers’ attention seems to be somehow focused in information that does not really testify to the medical quality of the drugs.

For example, the information ‘*Zoloft* will make your life happy’, quoted by 60% of respondents, is not explicitly stated in the ad. The ad only says – more or less explicitly – that if you suffer from depression, life becomes hard. It seems that from this information readers make the following invalid inference:

If you suffer from depression, life becomes hard.

*Zoloft* will cure your depression.

∴ *Zoloft* makes your life happy.

Indeed, making life happy is definitely more complicated than simply not being depressed! This type of inference is well-known in semantic and pragmatic models of natural language understanding. It’s generally labelled *invited inference* and was documented first by Geis & Zwicky (1971); Geis & Zwicky based their paper on examples like *If you mow the lawn, I’ll give you 10 dollars*. Their idea was that ordinary human reasoning exploits logical fallacies whenever they are likely to achieve correct pragmatic conclusions; here the correct pragmatic conclusion is that *if you don’t mow the lawn, I will not give you 10 dollars*. Contemporary literature in cognitive pragmatics tends to support the idea that *if-conditionals* often get automatically treated as *iff-biconditionals* even when dealing with implicit premises. Many other deviations from logically grounded inference have been noted; the interesting point is that, here as



in many other cases, such cognitive processing features of pragmatic reasoning are actually exploited and managed by the authors of the ads.

The other reason for asking for *Zoloft* is that ‘You get one performance. Why do it with depression?’ – that appears explicitly in the ad. Clearly, if readers quote this sentence as a reason for wanting *Zoloft*, it is because they infer from it a necessary implication between ‘taking *Zoloft*’ and ‘not having depression any more’. But this implication is only probable because there is no way of knowing exactly what effects the medicine will have on each individual person and, more generally, because it is an epistemologically intrinsic characteristic of the medical science that the nexus cause-effect is probabilistic. Data from the recalling part of the questionnaire suggest that this reading of the implication could be inspired by an inferred idea that *Zoloft* is the best medicine on the market. The ad does not say that *Zoloft* is the best. However, it reports among other things that the medicine is prescribed by physicians more than any other antidepressant, that it has treated more people than any other brand. All this information clearly attracts readers’ attention. In fact, approximately three fourths of the sample recall it correctly.

In the way of processing the *Allegra180mg* ad, the important thing to note is that almost all the people of the Group2 recognise as the crucial element for purchasing the product the fact that the effects of *Allegra180mg* last longer than those of any other brand. This information is written in the foreground of the advertisement and is recalled by almost 90% of the sample. But here again people make the wrong equation between the quality of the medicine and its longer lasting effect. 50% of the sample considers that the medicine is better than the other in virtue of its lasting effect. But in dealing with medicine, longer effects are often dictated by the fact that the medicament is strong and, as such, potentially not suitable for many people. The indication that *Allegra180mg* is not indicated as a starting dose for certain categories of people only appears in the patient information section of the ad – in the next page – and it is only recalled by 16.7% of the sample. We can interpret as connected to the perceived quality of the drug the fact that 68.8% of Group 2 wrongly think that the ad explicitly says that doctors prescribe *Allegra180mg* more than any other brand.

At this point of our analysis, someone could object that what we have shown is linked to the way people read and process the information presented in the ads, and that designers of the ads cannot be responsible for the implied meanings of the ads. This is a now classical observation in



natural language understanding theory, notably within Sperber & Wilson's relevance theory (1995), that implicit meanings are 'of the recipient's responsibility', that is, that the writer/speaker only commits himself in the explicit meaning; among other considerations, this was even brought forward as a test for implicit-meaning back-tracking. Yet this problem is far more complicated since the easier the contextualization, the more committed the writer/speaker is to implicit meanings. Here, we can say that this objection could be legitimate if the framework of the information were neutral. But this is not the case. As we shall show, there are clear cases in the ads where the information presented derives from the application of fallacious schemes of argument (van Eemeren & Grootendorst 2004; Rigotti 2006). In this light, it is difficult not to recognize these fallacies as partly responsible for the implied meanings. In particular in the *Zoloft* ad there is a *fallacy of ambiguity* in the statement 'You get one performance. Why do it with depression?'. This statement is *amphibolous* because it has an indeterminate meaning caused by the loose way in which its words are combined. The sentence does not clearly state that *Zoloft* stops depression, but it does not also say the contrary and people, as results show, read it in both ways. Similarly, the inference about the fact that *Zoloft* makes life happy can be enhanced by the *amphibolous* sentences spoken by the main character of the cartoon in the ad. In one of the shots of the ad the character says that after taking *Zoloft* it has realised that the medicine was helping him at work and at home. This sentence could lead to a sense of positive resolution of the problematic aspects of the entire life, even more emphasised by the visual particular that the character before depression was sad and after it smiles. Again in the *Zoloft* ad, we find applied the fallacy of the *hasty generalization*. The fact that *Zoloft* has treated more people than any other brand—as it is written in the ad—is misleading because this datum does not assure that the medicine will work well for the single individual who reads the ad. Nevertheless this information can create a sort of bandwagon effect, leading people to think that it will be good for them because it has been good for many people. We can then see some applications of the *fallacy of relevance*. In particular, in what sense is the claim that 'Zoloft is number one prescribed by physicians' relevant in a context where the intention claimed by the pharmaceutical industry is to provide accurate information for making good health decisions? There is no causal link between the fact that a medicine is most prescribed and its quality. Prescription could, in fact, be driven by other factors. Again, turning to the *Allegra180mg* ad, the product is presented as a medicine that lasts four

times longer than other similar brands, as if this was the most relevant characteristic. As we said before, *Allegra 180mg* is restricted in its use because it is a strong medicine. We thus wonder whether putting so much emphasis on its comparative qualities, and leaving the indications about when and for whom it is not recommended in the back page of the ad - written in a rather unreadable format - is really an adequate communication strategy for orienting in the right direction the hearer's expectations of relevance (Sperber & Wilson 1995).

#### 4. Conclusion

It is a virtual truism that more information is better than less from the standpoint of consumer welfare. However, venerable bodies of research on persuasion, advertising, logic, and argumentation all suggest that the *way* information is presented has important implications for what is understood. Our approach to analyzing the structure of the arguments presented in advertising, confirmed by systematic misunderstanding of those arguments by readers of the ads, provides one possible tool to understand and predict the impact of the form of information presentation. As such, it may be useful in informing the current policy debate over DTCA in the European Union.

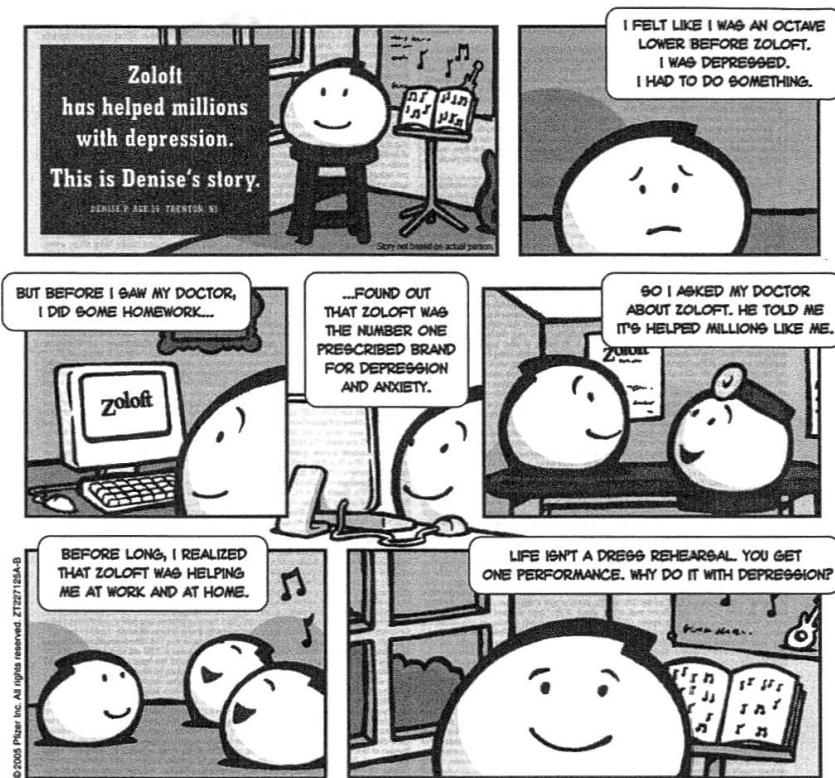
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## Appendix

Image 1: The Zoloft ad



Denise took comfort in the fact that ZOLOFT has helped so many people for so many years. ZOLOFT is safe and effective. It has treated more people with more types of

depression and anxiety than any brand of its kind. So she asked her doctor about ZOLOFT. ZOLOFT. #1 for millions of reasons.

**Zoloft**  
(sertraline HCl)  
www.zoloft.com

Depression is a serious medical condition, which can lead to suicidal thoughts and behavior. A combined analysis of 9 antidepressants showed an increased risk from 2% to 4% in people under 18. This risk must be balanced with the medical need. Those starting medication should be watched closely for suicidal thoughts, worsening of depression, or unusual changes in behavior. In children and teens, ZOLOFT is only approved for use in those with obsessive-compulsive disorder.

ZOLOFT is not for everyone. People taking MAOIs or pimozide shouldn't take ZOLOFT. Side effects may include dry mouth, insomnia, sexual side effects, diarrhea, nausea and sleepiness. In studies, few people were bothered enough by side effects to stop taking ZOLOFT.

ZOLOFT is not habit forming and is not associated with weight gain. So talk to your doctor about how ZOLOFT might help you. ZOLOFT comes in 25mg, 50mg, and 100mg tablets. You and your doctor can discuss the right dose for you. For more information, please see the following page, call 1-800-6-ZOLOFT (696-5638) or visit ZOLOFT.com.

*Real Simple*

Image 2: *The Allegra ad*

“The 11s in *allegra* must stand for long lasting relief.”

LASTS 24 HOURS

LASTS UP TO 6 HOURS\*

LASTS UP TO 6 HOURS\*

LASTS UP TO 6 HOURS\*

**One dose of Allegra lasts up to 4x longer than one dose of most OTC allergy medicines.\***

It could happen to you. You go to your medicine cabinet and pick a seasonal allergy medicine for your runny nose, sneezing and itchy, watery eyes. And before the day is done, it stops working.

But just one Allegra 180 mg gives you longer lasting seasonal allergy relief than one dose of most OTC allergy medicines.\* Allegra is for people 12 and over. Side effects are low and may include headache, cold or backache. Ask your doctor about Allegra.

once-daily  
**allegra**  
The relief goes on.



Get valuable savings @ [allegra.com](http://allegra.com). For more information call 1-800-allegra.

Please see additional important information on next page.

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*Gourret*