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<u>Abstract</u>: Our study is at the juncture of two themes largely investigated by researchers in communication, namely persuasion and pragmatics. First, we recall some tenets of these two topics. In particular, we refer to the dual process theories of the persuasion and the inferential model of pragmatics. Second we develop the argument that studies in persuasive communication have been undertaken until now within the Encoding/Decoding paradigm without considering enough the main ideas of the pragmatics and intentionalist paradigm about communication and language. These remarks aim to support a pragmatic approach to persuasive communication. Third, to support our claim, we propose an experimental study which examines social and preventive advertising.

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Introduction

Generally speaking, each project of communication in an advertising context aims at catching the recipient's attention and impacting on his attitude and, above all, his behaviour. The progress of this process of influence has been carefully studied in the field of consumer psychology where the construct of attitude is now a central object of study (Kassarjian, 1982; McGuire, 1976). On this particular subject, dual process models of persuasion progressively became models of reference as regards the topic of attitude change with easily found applications in the advertising communication domain (Cacioppo & Petty, 1985; Petty & Cacioppo, 1980, 1983, 1984b; Petty, Cacioppo & Schumann, 1983; Rucker, Petty & Priester, 2007).

Reflexions and theoretical work in the philosophy of language and cognitive pragmatics have shown how the reception of a message consists of deducing the "speaker's meaning" (Grice, 1975; Recanati, 2004; Sperber & Wilson, 1986). It became clear that the "code model", in which communication is a simple matter of putting one's thoughts into words for one's audience to put back into thoughts, was insufficient for describing the communication process and that it was time to substitute it or at less complete it by an "inferential model", emphasizing the intentional aspect of the language and in which "to communicate" consists in producing and interpreting some cues (Bracops, 2006; Krauss & Chiu, 1997; Sperber, 2000; Wilson & Sperber, 1993, 2003).

The articulation between pragmatics and persuasive communication has until now been weakly achieved (Ghiglione & Trognon, 1993). Our study precisely aims at articulating these two theoretical fields and more especially at promoting a pragmatic approach of persuasive communication. We will start by recalling some tenets of the "persuasive communication" models as they are defined in the psychosocial literature devoted to attitude change. Then, we will argue that these models present some insufficiencies, in particular by referring to some tenets of the pragmatic approach of communication. Finally, to support this argument, we will present an experimental study which examines the "public health" communication field, and to some extent, the preventive advertising domain.

Persuasive communication

In the literature devoted to persuasive communication, two models are frequently presented which, regarding some particular tenets, present strong similarities. These models are the "Elaboration Likelihood Model" (Petty, 1994; Petty & Cacioppo, 1986; Petty & Wegener,

1999) and the "Heuristic-Systematic Model" (Chaiken, 1980, 1987; Chaiken, Liberman, & Eagly, 1989). Let us present their main assumptions.

Two routes to persuasion and attitude change

Two modes of processing that the recipient employs when presented with a persuasive message are distinguished in these models. These two modes of thinking bound a cognitive elaboration continuum which ranges from low elaboration (i.e. low thought) to high elaboration (i.e. high thought), elaboration being defined as "the extent to which a person thinks about the issue-relevant arguments contained in the message" (Petty & Cacioppo, 1986, p. 128). The first one, called the "central route" (Petty & Cacioppo, 1986) or the "systematic processing" (Chaiken, 1987) can be defined as a thoughtful process, involving a sustained and careful scrutiny of the arguments presented in favour of the advocated position (often indicated in the conclusion of the message). In this case, the quality of the arguments is the main determinant of the attitude change, a message with "strong" arguments producing a higher attitude change than a message with "weak" arguments, via the cognitive responses that these arguments have elicited during the processing.

The possibility for the recipient to judge the validity of the advocated position indicated in the message and thus to have an attitude toward a particular object without involving an extensive cognitive processing of the actual argument presented characterizes essentially the second mode of processing, namely the "peripheral route" (Petty & Cacioppo, 1986) or the "heuristic processing" (Chaiken, 1987). In that case, the value assigned by the recipient to some particular cues, which are typically dissociated from the informative contents of the message, is determinant in the attitude change. For example, the recipient can focus his attention

primarily on the source of the message, in particular when this one is salient in the context of the communication, and react in function of her credibility or attractiveness, which will thus be the important factors of the attitude change.

The factors which influence these two routes to persuasion

These models are also original in specifying the main variables involved in the activation of these two modes of the processing of the persuasive message (i.e. central/systematic vs. peripheral/heuristic). First, the motivation to process: experimental studies have shown that when the recipient is in a condition of "low motivation", he tends to divert his attention from the argumentative contents and form his judgment about the advocated position much more in reference to the peripheral cues available in the context, whereas when he is in a condition of "high motivation", he will be more likely to involve a cognitive effort in the evaluation of the argumentative contents and thus to form his judgment in function of its quality (Chaiken, 1980; Petty & Cacioppo, 1979, 1984c; Petty, Cacioppo & Goldman, 1981).

Some motivational factors can be viewed as transitional conditions insofar as the recipient is experimentally and temporarily put in a state of high or less motivation. Among these ones, the personal relevance of the message topic which made the recipient more or less "involved", the consequences and repercussions of the decision and judgment which made the recipient more or less "accountable", have until now been the most experimentally manipulated factors, in particular when these models were applied to an advertising context (Burnkrant & Sawyer, 1983; Kokkinaki & Lunt, 1999; Laczniak & Muehling, 1993; Park & Young, 1983; Petty & Cacioppo, 1980, 1983, 1984a). Other motivational factors correspond to some personality variables, psychological characteristics, and cognitive styles which are more stable, whatever

the moment and the situation. Among the most studied of these have been the "need for cognition" factor, reflecting the extent to which people engage in and enjoy effortful cognitive activities (Cacioppo & Petty, 1982; Cacioppo, Petty & Morris, 1983, Cacioppo, Petty, Kao & Rodriguez, 1986), and more recently, the "need for closure" factor, reflecting an individual's desire for a clear, definite, or unambiguous knowledge and thus a motivation to draw a conclusion quickly and terminate cognitive information processing (Klein & Webster, 2000; Kruglansky, Webster & Klem, 1993; Webster & Kruglansky, 1994).

The ability to process is the second factor of activation. Just a single presentation or too fast a presentation of the message, too complicated contents or the unavailability of the relevant knowledge needed to scrutinize the arguments, the necessity to react immediately and to express the attitude more quickly, a state of stress, distraction or tiredness, are conditions which can stop the recipient from highly elaborating the informative contents (i.e. arguments) and orientate him towards peripheral cues, in particular when these one are made salient in the context. Motivational factors and ability factors are not similar, referring to different variables, so that when the recipient for instance is motivated to process but does not have the capacity or the possibility to process, he will tend to take the peripheral route.

The consequences of these two routes on attitude and attitude change

The studies have shown that the mode of processing is not without consequence on attitude strength, in other words that the strength of any attitude change depends on where it was changed along the cognitive elaboration continuum. An attitude which results from the "central route" or the "systematic processing" (i.e. high amount of thinking) is stronger than an attitude which results from the "peripheral route" or the "heuristic processing" (i.e. low

amount of thinking) and the strength of the attitude impacts on its other properties such as persistency, resistance, and predictability. Once formed or newly changed, an attitude tends to persist longer over time, to resist better to a counter persuasion and to predict behaviour better when changed under high than under low thinking conditions (Chaiken, Pomerantz & Giner-Sorolla, 1995; Haugtvedt & Petty, 1992; Petty, Haugtvedt & Smith, 1995).

Considering this ultimate assumption, it is important for advertisers (and marketers) to know how extensive the target's processing was during the exposure to the message and its evaluation, in others words to know if the recipient directed it towards the "central route" or the "peripheral route". Indeed, whether the advertising is strictly commercial with the objective to change the recipient's attitude toward consumer goods or strictly preventive, with the objective to make people sensitive to diverse social problems, the advertiser aims at yielding strong attitudes which will be followed by effective behaviours and practices. Let us end this presentation of the dual models of persuasion by recalling that these models have been empirically validated and applied in commercial advertising contexts (Areni & Lutz, 1988; Areni & Sparks, 2005; Brock & Shavitt, 1983; Chaiken & Maheswaran, 1994; Haugtvedt, Petty & Cacioppo, 1992; Haugtvedt & Priester, 1997; Haugtvedt & Strathman, 1990; Wu & Shaffer, 1987) just as well in preventive advertising contexts (Baker, Petty & Gleicher, 1991; Briňol & Petty, 2006; Petty, Barden & Wheeler, 2002; Petty, Gleicher & Jarvis, 1993; Rucker & Petty, 2006).

A pragmatic approach of the communication

At this point of our presentation, if we consider that persuasive communication, whatever its topic and the social problem for which it is designed, is above all a process of communication

between a locutor (i.e. source of the persuasive message) and an interlocutor (i.e. recipient of the persuasive message), then we can envisage revisiting these models of persuasion making reference to some tenets of pragmatics. As we have pointed out in the introduction, studies of communication and language undertaken during the last three decades, have emphasized the necessity of putting away the "code model" of the communication in favour of the pragmatic approach (Ghiglione & Trognon, 1993; Meunier & Perraya, 2004; Reboul & Moeschler, 1998a, 1998b).

Code and inference

A rather large consensus exists today in the field of communication and language sciences, according to which the inferential processes lie at the heart of the pragmatic conception of communication (Bracops, 2006; Sperber & Wilson, 1986; Wilson & Sperber, 2003). These processes, which are superimposed on the code to make possible a complete interpretation of the sentences, are precisely the main subject of the pragmatics: "The study of the interpretation of the sentences recovers from what is called today pragmatics" (Sperber & Wilson, 1986, p.22). The pragmatic conception of communication is thus characterized by the notion that the linguistic communication has to be viewed as semantically under determined and completed by deductive mechanisms which are fundamentally cognitive to be completely interpreted, that is with some degree of exactitude.

Generally speaking, we will point out that the pragmatic conception of communication emphasizes the following notions which are a part of Grice's central claims (1975, 1989): the intentionality present in the produced sentences, that is the distinction between "sentence meaning" and "speaker's meaning", and the presence of an implicit dimension, that is the

distinction between the "message's literal meaning" and the "message's non literal meaning". Let us point out that these distinctions are central in what Krauss and Chiu (1997) have called the "Intentionalist Paradigm". An essential feature of most human communication is the expression and recognition of intentions. Indeed, according to Grice, the sentence, characterized by its syntactic structure and semantic value, and like that, subject of the linguistic, has to be considered like a cue of the speaker's intended meaning; and the determination of this meaning depends on the recipient's capacity to make a deduction (i.e. inference) or much more in accordance with the Grice's terminology, to find some "implicatures" (Grice, 1975).

In developing this claim, Grice laid the foundations for an "inferential model" of communication, a model which constitutes an alternative to the classical "code model". The partisans of this alternative model, which has been largely developed in the Sperber and Wilson's works (1986), claim that the words in a sentence and the meanings those words are understood to convey do not bear a fixed relationship - that the communicative use of language requires participants to go beyond the words in extracting (i.e. deducting) what the speaker intend to mean. In other words, the recipient of the message takes an interest in the message's literal meanings for deducing the speaker's intended meaning and this "speaker's meaning" can not be mapped onto word strings in one-to-one fashion. An utterance is, of course, a linguistically coded piece of evidence, so that verbal comprehension involves an element of decoding. However, the linguistic meaning recovered by decoding is just one of the inputs to a non-demonstrative inference process which yields an interpretation of the "speaker's meaning". From then on, successful communication entails the exchange of "communicative intentions" and messages are the simple vehicles of these exchanges.

Situation and communication contract

In this alternative model, if the function of the language is to represent some thoughts originally located in the speaker's brain, it is assumed that this representation is only in relative adequacy with these original thoughts, generally more complex. The recipient will have to do reasoning and attempt some rational bets on the speaker's meaning. This reasoning can be viewed in a way as a calculation of the implied meaning, in which some extra linguistic information will be considered. These extra linguistic elements constitute what Sperber and Wilson (1986) have called the "cognitive environment" and what Clark and Carlson (1981) have called the "common ground" and constitute a part of the context of the sentence.

Some *implicatures* are sufficiently generalised to be automatically generated or activated by the recipient in reaction to a particular sentence. The inferential interpretation of this sentence thus consists in drawing a plausible "communicative intention" from linguistic forms and/or linguistic fragments perceived by the recipient as a cue. But why and how have some *implicatures* a strong degree of determination? Why are some pragmatic interpretations realized with a very high regularity in front of some produced sentences? It seems reasonable to argue that because the interlocutors have a clear perception and a manifest representation of the situation in which the communication process is accomplished, and/or are sufficiently informed as regards some parameters of this situation, they succeed to find what the speaker intends to mean.

The situation in which the communication and thus the language takes place is defined by some particulars parameters, among which the identity and the status of the interlocutors

("who are the interlocutors?"), the central theme of the message ("what is the topic?"), the main objective of the communication ("what is the aim of the exchange?"). These particular pieces of information about the identity, the topic and the aim are useful to the recipient for deducing with some degree of confidence the underlying meaning and to reconstruct the communicative intention. They constitute a structured set of information which is likely to make some deductions more or less accessible and available. These parameters constitute what some authors call the "communication contract" (Bromberg, 2004; Charaudeau, 2004; Ghiglione, 1997). For instance, Charaudeau (2004) argued that the "contract" is "that which speaks before one has spoken, that which is understood before one has read it, that which gives the text meaning through its conditions of communication ...One part of the meaning is constructed before one enters the particularity of a text, and it is the communication contract that puts it in place, conditioning in part the actors of the exchange" (p. 112).

Toward a critique of the dual models of persuasion

If the notions developed by Grice (1975) and by Sperber and Wilson (1986) reflect correctly what is fundamentally a communication process between a source (speaker or writer) and a recipient (hearer or reader), then we may wonder whether the dual models of persuasion described above have sufficiently considered them and thus portrayed realistically the recipient's processing of the message. Let us consider now the following remarks.

Transparency and immanence of the language

The first remark regards the theoretical frames in which these studies on persuasion have been undertaken, and especially the conception of the language and the meaning which underlie

them. As productive as they were, it seems to us that social psychological studies on persuasive communication have until now largely neglected the pragmatics views of language and meaning. Broadly speaking, we could say that language is endowed with no pragmatic properties, which means that it is viewed only from the point of view of its descriptive function. In other words, language is a simple inert vehicle of pieces of information (i.e. arguments) about the object of attitude; and its unique function is to convey semantic content (i.e. the message) with the greatest transparency, such content being sufficiently convincing and sound to produce an attitude change (i.e. persuasive effect). As a consequence, the meaning of the (persuasive) message is fully specified by its elements, the words which compose the sentences of the message being necessary *and sufficient* for the recipient to construct the meaning. So we argue here that these models of persuasion have been conceptualized and empirically validated in a narrow Encoding/Decoding paradigm.

In these studies on persuasive communication there is no consideration given to the idea that in the message there are some linguistics fragments which constitute information about the speaker's intended meaning, that is a cue on which the recipient can focus and from which he can activate more or less spontaneously and with sufficient confidence an inference about the "speaker's meaning" and once this "communicative intention" constructed, distracting his attention and reflexion from the strict informative content of the message. We can reasonably argue that also in a persuasive situation as defined in the *Petty et al.*'s paradigm, the recipient has some expectations, which means that he not *only* elaborates the issue-relevant information in the message but *also* attempts to foresee and anticipate what the author of the message intends to say, to what conclusion he wants to lead him. And this particular deduction will be all the more easier to make since some linguistic fragments are present in the text.

The "strength" of the argument

As we have seen, the quality of the argumentation is a determining factor of the attitude change in the models of persuasion (Petty & Cacioppo, 1984c; Petty & al., 1981). Indeed, provided that the recipient goes into the "central route", arguments of good quality will increase persuasion whereas poor arguments produce the opposite effect. But it appears clearly that the "argument" here is mainly defined as a linguistic and semantic item, carrying a literal meaning and telling (intended here as describing and portraying) something about the "real", and it is to this particular dimension of language that the recipient is supposed to react when he processes (i.e. elaborates) the message.

Some lexical components exist in language which, by virtue of their literal meaning when only linguistically considered, give to the statement a superiority as argument. In other words, added to a particular statement, they make it a better candidate for argumentation so that they somehow contribute to increase the "force" of the argument (as intended in Petty et al.'s works). To make clearer our assumption, let us consider the following statements extracted from the French dailies. They will also serve as a preamble to the empirical study that we have announced in our introduction and which concerns preventive advertising communication.

These particular statements are: "In New York, three hundred persons are *already* dead, victims of AIDS (...) AIDS have *already* killed three hundred patients"; "In December *only*, ninety one deaths have been registered"; "According to the last World Health Organisation's data, seven million people have *already* been infected by HIV"; "Since it emerged, the virus has infected *more than* sixty million people worldwide, killing *more than* a third"; "Already

twenty million deaths (...) The infection is spreading at the rate of *more than* fourteen thousand new cases per day". Such statements, precisely because of the particular adverbs they incorporate, quantify the number of people deceased, ill and infected in such a way that this number is seen as having exceeded an acceptable and tolerable threshold. By virtue of their literal meaning, they put the indicated quantity into relief and make them more salient and thus are likely to orientate the recipient's judgment as regards the epidemiological situation portrayed in the message. For instance, the linguist Charaudeau (1992) argued that the adverb "already" indicates that "the moment the event occurs is deemed premature compared to its expected occurrence" and signals that a "certain reference point, considered as a maximum not to be exceeded, has been overshot" (p. 265). So considering the notion of "argument strength" as defined in Petty et al.'s studies, we can consider here that these statements are "stronger" arguments than are the same statements devoid of these particular adverbs.

However, if we refer to the "theory of the argumentation within language" (Anscombre & Ducrot, 1976, 1983) and some psycholinguistic studies on the argumentative function of language markers (Bassano, 1991; Bassano & Champaud, 1987; Champaud & Bassano, 1987), we have to consider that the informative and descriptive properties are not the main properties of these morphemes, or at less do not exhaust their role in the sentence. These linguistic fragments have also an argumentative function, which means that they endow the statement which incorporates them with an "argumentative force" or "argumentative orientation" defined by Anscombre and Ducrot (1983) as "the type of conclusions suggested to the recipient, the conclusions that the statement offers as one of the discursive aims" (p. 149). To view these particular linguistic items in the statement as more "argumentative" than "informative", it implies that in addition to its informative content, the statement comprises of

several lexical items that endow it with an argumentative orientation, leading the recipient in this or that direction and making another conclusion discursively impossible. Thus, the statements discussed above are descriptive, which means that they portray the epidemiological situation but they also indicate something about the principal aim of the message and the speaker's "communicative intention", precisely via the adverbs located within the message. This last proposal amounts to saying that which was considered as a stronger argument in the encoding/decoding paradigm of persuasive communication is likely to be viewed primarily as a cue of the speaker's intended meaning once the central claims of pragmatics are considered. How will these particular statements be processed and elaborated in reception? What are their effects in reception on attitude change? The following empirical study will attempt to answer these questions.

Method

Objective and hypothesis

The experimental study we propose now is at the juncture of the two themes presented above: persuasive communication and pragmatics. Its objective is to give some support to the critique we have proposed regarding the lack of a pragmatic approach of the language and communication in the studies on persuasion. Its general hypothesis is that the presence of linguistic markers referring to the argumentative orientation in a persuasive message will generate inferences centred on the communicative intention and that these will be matched with a lesser elaboration of its informative contents. In its empirical aspects strictly speaking, this study also examines an advertising context since the subjects are asked to express their attitude toward a new feminine condom called "Preservatex", presented in the conclusion of

the message as a newly commercialised product, and their intention to purchase and use it.

Before presenting the methodology, let us present its specific hypothesis.

Hypothesis 1. The intention to purchase the condom referred to in the message will be more important when the argumentative orientation of the message will be marked.

Hypothesis 2. The intention to use the condom referred to in the message will be more important when the argumentative orientation of the message will be marked.

Hypothesis 3. The general attitude towards the marketing of the condom will be more favourable when the argumentative orientation of the message will be marked.

Hypothesis 4. The intentional aspects of the message (i.e. "communicative intention") will be more considered by the recipients when the argumentative orientation of the message will be marked.

Hypothesis 5. The recipients' cognitive elaboration of the message informative contents will be lesser when the argumentative orientation of the message will be marked.

Independent variables and experimental plan

In a text presented as an epidemiological information message, we vary 1) the marking of the argumentative orientation ("high marking" vs. "low marking") by endowing some statements of the message with argumentative markers, and 2) the known character of the disease

("known disease" vs. "unknown disease"), by presenting a message which informs participants about a disease whose existence is and is not known to them¹.

More precisely, this text consists of following three parts. First, an introduction which resembles more a title "Sexually Transmitted Infections: Let us take stock of the situation". Second, the main contents of the message inform about the current epidemiological situation of a particular sexually transmitted disease. This part consists of ten statements and within it are introduced the two independent variables indicated above (high vs. low marking and known vs. unknown disease). Third, there is a conclusion which invites the participants to consider a new feminine condom, the marketing of which is imminent "Preservatex, to consume without moderation". Some of the experimental manipulations introduced in the second part are presented below.

	Low marking	High marking
	Group 1 (n = 21)	Group 3 (n = 23)
Known disease	"HIV contaminates 6000 new persons per year in France"	"HIV contaminates <i>up tol 6000</i> new persons per year in France"
	"3500 HIV infections have been registered from January to June 2008"	"3500 HIV infections have already been registered just for the period January to June 2008"
	Group 2 (n = 20)	Group 4 (n = 23)
Unknown disease	"The Paramyxoviridae contaminates 6000 new persons per year in France"	"The Paramyxoviridae contaminates <i>up to 6000</i> new persons per year in France"
	"3500 Paramyxovidae infections have been registered from January to June 2008"	"3500 Paramyxoviridae infections have already been registered just for the period January to June 2008"

¹ The "unknown" disease was in fact a fictitious one and we have checked that all the subjects in this condition declared they did not know it.

Dependent variables

The intention to purchase the condom: participants are asked to indicate this intention on a scale from 1 "not at all" to 7 "absolutely".

The intention to use the condom during the next sexual intercourse: participants are asked to indicate this intention on a scale from 1 "not at all" to 7 "absolutely".

The attitude towards the marketing of the condom: participants are asked to express some judgements as regards this commercialization on three seven-point semantic differential scales anchored at -3 and +3 ("unnecessary - necessary"; "inessential - essential"; "irrelevant - relevant").

The perceived communicative intention: participants are asked to indicate on a scale from 1 "not at all" to 7 "absolutely" to what extent they consider that by elaborating this message, the communicator intended to "alert the women about the risks they incur"; "emphasize the seriousness of the situation for the women"; "to give the women a sense of responsibility"².

The cognitive elaboration of the message contents: participants are faced with six multiple choice items and asked to indicate for each of them the option which tally with the information presented in the text. All the participants receive a global score from 0 to 6.

Population

² Let us clarify that among the ten statements which constitute the message, only three concern women.

Participants were 87 female students aged 20 to 22 years old, and were randomly divided up in the 2 (argumentative orientation: low making vs. high marking) x 2 (disease: known vs. unknown) experimental design defined above. They declared having had three sexual intercourses and more during the last six months. 43,5% of them indicated that they "always" used a condom during these sexual encounters, 34,8% indicated that they used it "occasionally" and 21,7% indicated that they "never" used it. No participant had practised a screening test during the last year and no participant had used a feminine condom until now.

Results

Intention to purchase and to use the condom (hypothesis 1 & 2)

The results indicate that the marking of the argumentative orientation is not without effect on the intentions to purchase and to use the condom referred to in the conclusion of the message (see Table 1). An ANOVA shows that the subjects' purchase intention is significantly more important in "high marking" condition (M = 4.67 vs. 3.93; F(1,85) = 9.41; p < .003), whatever their knowledge of the disease (Gr.3 vs. Gr.1; F(1,83) = 5.05; p < .03 & Gr.4 vs. Gr.2; F(1,83) = 4.37; p < .04). As regards the intention to use it, it is also more important in "high marking" condition (M = 4.0 vs. 3.47; F(1,85) = 5.32; p < .03), but a more detailed analysis shows that the difference does not approach significance in the "unknown disease" condition (Gr.3 vs. Gr.1; F(1,83) = 3.81; p < .06 & Gr.4 vs. Gr.2; F(1,83) = 1.73). The participants' intention to purchase the condom does not differ significantly whether they know the disease referred to in the message or not (M = 4.51 vs. 4.10; F(1,85) = 2,71; p = .11), and the same pattern of results is observed as regards the intention to use it (M = 3,91 vs. 3,55; F(1,85) = 2,42; p = .12).

Table 1 here

Attitude towards the marketing of the condom (hypothesis 3)

The results reflect that the judgments regarding the marketing of the condom depend on the marking of the argumentative orientation (see Table 2). The ANOVA reveals that the participants in "high marking" condition judge this marketing more "necessary" (M = 1.35 vs. 0.66; F(1.85) = 4.79; p < .04), but a more detailed analysis shows that the difference is not significant in the "unknown disease" condition and only marginal in the "known disease" condition (Gr.4 vs. Gr.2; F(1,83) = 1.76 & Gr.3 vs. Gr.1; F(1,83) = 3.14; p = .07). In the same "high marking" condition, the marketing is also considered as more "relevant" (M = 1.43 ys.)0.71; F(1.85) = 5.88; p < .02), a more detailed analysis showing that the difference is only marginal whatever the knowledge of the disease (Gr.3 vs. Gr.1; F(1,83) = 2.76; p = .09 & Gr.4 vs. Gr.2; F(1,83) = 3.28; p = .07). As regards the third judgment (inessential vs. essential), the same pattern of results emerges (M = 1.61 vs. 0.90; F(1.85) = 6.78; p < .02 / .02)Gr.3 vs. Gr.1; F(1,83) = 3.57; p = .06 & Gr.4 vs. Gr.2; F(1,83) = 3.22; p = .07). A general attitude more favourable in "high marking" condition (M = 1.46 vs. 0.76; F(1,85) = 6,06; p<.02) results from these judgments, a more detailed analysis showing however that the difference is only marginal whatever the "knowledge of the disease" (Gr. 3 vs. Gr. 1; F(1,83) = 3.24; p = .07 & Gr.4 vs. Gr.2; F(1,83) = 2.83; p = .09). The participants' judgments about the commercialization of the condom do not differ significantly whether they know the disease or not (F<1) and from this pattern results a general attitude which is sensibly the same (F<1).

Table 2 here

The perceived communicative intention (hypothesis 4)

The results show that participants in "high marking" condition express a higher level of approbation of the propositions regarding the speaker's communication intention (see Table 3). The ANOVA reveals that they are significantly more in agreement with the idea that the author of the message intended to "alert the women about he risks they incur" (M = 5.59 vs. 4.05; F(1,85) = 87.09; p < .0001), whatever their knowledge of the disease [Gr.3 vs. Gr.1; F(1,83) = 40.23; p < .0001 & Gr.4 vs. Gr.2; F(1,83) = 46.95; p < .0001]; "emphasize the seriousness of the current situation for the women" (M = 5.61 vs. 3.95; F(1,85) = 84.46; p < .0001), whatever their knowledge of the disease (Gr.3 vs. Gr.1; F(1,83) = 38.35; p < .0001 & Gr.4 vs. Gr.2; F(1,83) = 46.24; p < .0001); "give the women a more sense of responsibility" (M = 5.89 vs. 3.88; F(1,85) = 112.74; p < .00001), again whatever the knowledge of the disease (Gr.3 vs. Gr.1; F(1,83) = 54.65; p < .0001 & Gr.4 vs. Gr.2; F(1,83) = 58.10; p < .0001). The participants approve each of these propositions to the same extent whether they know the disease or not (F < 1).

Table 3 here

The processing of the message contents (hypothesis 5)

The participants informed with a message characterized by the high marking of argumentative orientation show a lower score of memorization of the message contents (see Table 4). The ANOVA reveals that the difference is significant (M = 2.52 vs. 3.39; F(1,85) = 20.31; p < .0001), whatever the knowledge of the disease (Gr.3 vs. Gr.1; F(1,83) = 9.94; p < .01 & Gr.4 vs. Gr.2; F(1,83) = 10.37; p < .01). On the other hand, this score does not differ whether the participants know the disease or not (F < 1).

Table 4 here

Within each experimental condition and for each of the three propositions regarding the author's communicative intention, we have calculated a correlation coefficient (i.e. Pearson's r) between the level of approbation for this proposition and the score of memorization of the message contents (see Table 5). The statistical analysis reveals a strong relationship between these two measures only in the "high marking" condition, which means that in this condition of argumentative orientation the higher the approbation of the proposition is, the weaker the score of memorization is.

Table 5 here

Discussion

The main objective of this study was to support our claim that studies on persuasive communication have been undertaken until now within an Encoding/Decoding paradigm of the communication and that a pragmatic approach of the persuasive communication is not only possible but maybe also necessary, given that persuasion within the dual model is a matter of "communication". The main hypothesis was that a message characterized by the presence of some linguistic markers referring to the argumentative orientation would be less elaborated inasmuch as these argumentative markers would be perceived and processed in reception as some cues of what the speaker intended to mean through his message, which means that the recipient of message was supposed to generate some inferences centred on this communication intention and in so doing, to elaborate to a lesser extent the strict informative contents of the message. The empirical data support this general hypothesis. Indeed, the

participants who were exposed to the message within which these linguistic markers were disseminated are significantly more in agreement with the propositions relative to the author's communicative intention. Moreover their memorization score of the message contents was lesser and finally this score was strongly correlated with their level of approbation for the items of the author's intended meaning so that the more they were in agreement with these particular items, the less they were in a position to restore correctly the informative contents of the message.

We suppose that in this "high marking" condition, while they were reading the message, recipients have focused their attention on the argumentative markers and made use of what the cognitivist Dennet (1987, 1990) called the "intentional strategy", reconstructing what the linguist Anscombre (1995) called the "deep meaning" of the sentence. Let us recall here that studies on reading and interpretation of sentences have shown that comprehension results from two kind of strategies which work together to ensure an accurate and rapid processing of information. These cognitive processes are the "bottom-up" processing and the "top-down" processing. Generally speaking, when the recipient activates a "bottom-up" processing, he is supposed to extract the information from the message and to deal with this one in a relatively complete and systematic fashion, with little recourse to higher-level knowledge. On the other hand, with a "top-down" processing, the uptake of information is guided by the individual's prior knowledge, expectations and hypothesis and the recipient (i.e. reader) is supposed to take in only just enough visual stimuli to test and comfort these ones (Denhière & Legros, 1983; Goodman, 1967; Smith, 1971). Referring to this distinction, we can hypothesize that participants who were asked to process the message with argumentative markers were more likely to activate a "top-down" processing and this very early in their understanding of the message.

Let us recall too that theories that stress "top-down" processing hold that in most situations, the reader's activity consists in reconstructing the meaning from the text with the least possible time and effort, selectively using the least number of cues possible and the most productive cues (Adams & Starr, 1982; Goodman & Gollasch, 1980; Smith, 1975). We can thus hypothesize that the linguistic markers were relevant for the recipient in his attempt to reconstruct what the author intended to mean. Besides, we can hypothesize that the activation of these deductions (i.e. inferences) about the author's intended meaning and the confirmation of these given the other linguistic markers which appear subsequently have as consequence stopped or at least reduced the cognitive effort the recipient is willing to dedicate to the processing of the informative contents conveyed by the message. In other words, once he has collected the cues which enable him to make an inference about the author's intended meaning and once he is sufficiently confident as regards the relevance of his inference about this communicative intention, the recipient would head towards a lesser elaboration of the informative contents (i.e. a processing which is less "central/systematic").

This study has also shown that by stressing the argumentative orientation of the message, one can increase the subjects' intention to purchase a new condom referred to in the conclusion of the persuasive message, to act favourably on the intention to use it during the next sexual intercourse, and finally produce a more favourable attitude toward its commercialization. To some extent, our study entails some social policy goals in terms of prevention and thus concerns social and public service advertising more than commercial advertising (Cossette, 2001; Kotler, Roberto & Lee, 2002; Kotler & Zaltman, 1971; Sublet & Lum, 2008). However, to assign such social importance to this experiment supposes to question the real efficacy of this linguistic strategy, in this case its capacity to transform such intentions and attitudes into effective behaviours and practices. Let us recall that according to the Elaboration Likelihood

Model of persuasion, the more important the amount of thinking about the relevant information contained in the message is (i.e. high cognitive elaboration), the more stable, the more resistant, and (above all) the more predictive the behaviour and attitude which result from this (high) cognitive elaboration (Haugtvedt & Petty, 1992; Krosnick & Petty, 1995; Petty et al., 1995). Now let us recall too that in our study, the stronger intentions as regards the purchase and the utilisation of the condom on the one hand, and the more favourable attitude toward the marketing of the condom on the other hand have been registered in the condition where the elaboration of the informative contents of the message was deliberately less. Consequently, we can reasonably hypothesize that the discursive strategy tested here has only short time effects, moreover only on the attitude and (but) not on the behaviours.

Conclusion

We hope that this study supports our claim that a pragmatic approach of communication and language in studies on persuasive communication is appropriate. We are in agreement with Sperber and Wilson (1986) when they claimed that "to describe communication in terms of intentions and inferences seems appropriate from a psychological point of view" (p. 42). This "Intentionalist paradigm" seems to us psychologically and cognitively more realistic than the one which has dominated until now studies on persuasion, that is the Encoding/Decoding paradigm. To refer to the pragmatic approach of communication is all the more relevant since the "code model" has underlain until now most studies on persuasion applied to the prevention of risky behaviour (Baker et al., 1991; Petty, Baker & Gleicher, 1991; Petty et al., 1993; Verplanken, 1991).

Broadly speaking, public service advertising is a leading source of information about important health issues and therefore is targeted by those who aim to influence perceptions and behaviours. The main challenge for the designers of the communication is how best to compose messages in order to increase their efficacy (Bertrand, O'Reilly, Denison, Anhang, & Sweat, 2006; Myrhe & Flora, 2000; Palmgreen, Noar, & Zimmerman, 2007). And it is all the more a current challenge since the latest surveys in France have showed an "AIDS normalization process" resulting in a relaxation of preventive behaviors and a degradation of the image of the condom (Beltzer, Lagarde, Wu-Zhou, & Gremy, 2005). Given this context, this study may be somewhat useful for the designers of preventive ads who are concerned about discursive strategies which facilitate the cognitive elaboration of the message.

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Table 1

Mean (M) & standard deviation (SD) in function of the marking of argumentative orientation and the knowledge of the disease

	Low marking		<i>High</i> marking	
	Known Unknown		Known	Unknown
	disease	disease	disease	disease
Purchase	M = 3.71	M = 4.15	M = 4.48	M = 4.87
intention (a)	SD = 0.96	SD = 1.09	SD = 1.24	SD = 1.18
Use	M = 3.24	M = 3.70	M = 3.87	M = 4.13
intention (b)	SD = 0.99	SD = 1.20	SD = 1.18	SD = 0.92

⁽a) The higher the mean is, the stronger the intention to purchase the condom is.

Table 2

Mean (M) & standard deviation (SD) in function of the marking of argumentative orientation and the knowledge of the disease

	Low marking		<i>High</i> marking	
	Known Unknown		Known	Unknown
	disease	disease	disease	disease
Necessity (a)	M = 0.52	M = 0.80	M = 1.30	M = 1.39
	SD = 1.40	SD = 1.47	SD = 1.49	SD = 1.47
Relevance (a)	M = 0.67	M = 0.75	M = 1.35	M = 1.52
	SD = 1.35	SD = 1.45	SD = 1.26	SD = 1.50
Essential (a)	M = 0.76	M = 1.05	M = 1.48	M = 1.74
	SD = 1.26	SD = 1.19	SD = 1.20	SD = 1.35
Company 1 attitude (b)	M = 0.65	M = 0.86	M = 1.38	M = 1.55
General attitude (b)	SD = 1.29	SD = 1.33	SD = 1.25	SD = 1.42

⁽a) The higher the mean is, the more "necessary", the more "relevant", and the more "essential" the marketing of the condom is judged.

⁽b) The higher the mean is, the stronger the intention to use the condom is.

⁽b) The higher the mean is, the more favourable the attitude towards the marketing of the condom is (after addition of the scores observed for each scale).

Table 3

Mean (M) & standard deviation (SD) in function of the marking of argumentative orientation and the knowledge of the disease

	Low marking		<i>High</i> marking	
	Known Unknown		Known	Unknown
	disease	disease	disease	disease
To alert women about the risks they incur (a)	M = 4.10 SD = 0.70	M = 4.0 $SD = 0.92$	M = 5.57 SD = 0.73	M = 5.61 SD = 0.72
To emphasize the seriousness for women (a)	M = 3.95 $SD = 0.74$	M = 3.95 SD = 0.94	M = 5.52 SD = 0.85	M = 5.69 SD = 0.82
To give women more sense of responsibility (a)	M = 3.86 $SD = 0.73$	M = 3.90 SD = 1.12	M = 5.83 SD = 0.88	M = 5.96 SD = 0.77

⁽a) The higher the mean is, the more important the participant's approbation of the propositions regarding the speaker's communication intention

Table 4

Mean (M) & standard deviation (SD) in function of the marking of argumentative orientation and the knowledge of the disease ^(a)

Low marking		<i>High</i> marking	
Known	Unknown	Known	Unknown
disease	disease	disease	disease
M = 3.33	M = 3.45	M = 2.48	M = 2.56
SD = 0.79	SD = 0.82	SD = 0.95	SD = 0.99

⁽a) The higher the mean is, the better the memorization of the message contents

Table 5

	To alert women bout the risks12 n.s07 n.s67 p < .00156 p < .01	To emphasize the seriousness 19 n.s03 n.s44 p < .0461	To give women a sense of responsibility 09 n.s05 n.s46
Group 1 (n = 21) Group 2 (n = 20) Group 3 (n = 23)	.12 n.s07 n.s67 p < .00156	seriousness 19 n.s. .03 n.s. 44 p <.04	sense of responsibility 09 n.s. .05 n.s. 46
Group 2 (n = 20) Group 3 (n = 23)	n.s07 n.s67 p < .00156	n.s. .03 n.s. 44 p <.04	n.s. .05 n.s. 46
Group 2 (n = 20) Group 3 (n = 23)	07 n.s67 p < .00156	.03 n.s. 44 p <.04	.05 n.s. 46
Group 3 (n = 23)	n.s. 67 p <.001 56	n.s. 44 p <.04	n.s. 46
Group 3 (n = 23)	67 p <.001 56	44 p <.04	46
	p <.001 56	p <.04	
	56		
Group 4 (n = 23)		61	p <.04
Group 4 (n = 23)	n < 01		44
<u>, </u>	p < .01	p <.01	p <.04