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Warning of persuading attempts and  
ambiguity within advertising contexts  
in Mexico

*Advertencia del intento de persuadir en  
contextos publicitarios y de ambigüedad  
en México*

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## Abstract

*A common reaction people have when they are trying to be convinced of something is resistance, because they do not want to feel manipulated. This reaction is defined in the Persuasion Knowledge Model. On the other hand, people also show resistance to ambiguous messages because they look for clear messages that are easy to interpret.*

*This research analyzed the resulting attitude of 145 participants regarding a message about an unknown product, in four trial conditions, in which variables of persuasion were manipulated (within an advertising context with commercial purposes and another context that was not advertising nor narrative) and the ambiguity degree of the message, either in logical or in random order (not ordered).*

*The message for a product was broadcasted within different contexts: advertising-ordered, advertising-not-ordered, narrative-ordered, and narrative-not ordered.*

*The findings indicate for a sample of population in Mexico facing an advertising context, as well as ambiguous, in an independent way, there is a less favorable attitude from the participants toward the product. However, when the advertising and ambiguous context interact, the message was found to be more persuasive than in the narrative-alone context, and this constitutes an opportunity to delve into the understanding of the behavior of message receivers facing an advertising and ambiguous context.*

**Key words:** persuasion, ambiguity, attitudes, attempt of persuading.

**Classification JEL:** M30, M31, M37.

## Resumen

*Una reacción de las personas cuando perciben que se les está intentando convencer de algo es resistirse, ya que no desean ser manipuladas. Esta reacción se enmarca en el modelo de conocimiento de la persuasión. Por otra parte, ante un mensaje ambiguo, las personas presentan también resistencia a la persuasión, ya que buscan mensajes claros y fáciles de interpretar.*

*En esta investigación se analizó la actitud resultante de 145 participantes al enfrentar un mensaje sobre un producto desconocido, en cuatro condiciones experimentales, en las que se manipularon las variables de intento de persuasión —en un contexto publicitario con fines comerciales y en otro ni publicitario ni narrativo— y el grado de ambigüedad en el mensaje, ya sea lógico ordenado o en orden aleatorio (no ordenado).*

*Se transmitió un mensaje sobre un producto en diferentes contextos: publicitario-ordenado, publicitario-no ordenado, narrativo-ordenado y narrativo-no ordenado.*

*Los hallazgos para una muestra de población en México indican que la actitud de los participantes hacia el producto es menos favorable, cuando el mensaje se transmite previa advertencia del intento persuasivo e igualmente pasa como un mensaje ambiguo. Sin embargo, cuando se analiza la interacción del intento persuasivo y ambiguo, se encontró que el mensaje era más persuasivo que en el contexto solamente narrativo, lo cual constituye una oportunidad para profundizar en la comprensión del comportamiento de los receptores de mensajes en un contexto publicitario y ambiguo.*

**Palabras clave:** persuasión, ambigüedad, actitudes, intento de persuasión.

**Clasificación JEL:** M30, M31, M37.

## 1. Introduction

Very few products or services, no matter how well they have been manufactured, priced or distributed, can achieve their business goals on the market without an effective promotion in which there are communications from the offering companies, that seek to inform, convince and remind the potential buyers of a product with the purpose of having an influence on their opinion or otherwise to get some response from them (Lamb *et al.*, 2011).

The advertising strategy used by a company can include the following components: advertising, public relations, personal sales and sales promotion, the employer being the person in charge of a company's marketing, along with other components of the marketing blend, in order to achieve the commercial goals of the company (Kotler *et al.*, 2018).

In particular, one of the advertising's principal goals is generating communication with the audience and thus creating messages that cause more favorable attitudes toward a product, service, brand or company (Briñol *et al.*, 2015). Communication focused on audience persuasion is the main goal of advertising and the promotion it seeks, as to finally set a business transaction between the offeror and the buyer (Kotler & Stigliano, 2020).

Briñol and its collaborators indicate that «the research on persuasive communication has shown that a change of attitude depends upon how the message receiver interprets and processes the information received, in which persuasion increases as the receiver generates cognitive responses as positive thoughts associated to the message and decreases when the cognitive responses generated are not positive, as it happens on the counterargument cases» (Briñol *et al.*, 2015, 184).

Friestad and Wright (1994) indicate that, according to their Persuasion Knowledge Model, a common situation in advertising is when an important group of people tends to counterargue the messages they receive as they notice that they are trying to influence and convince them. Therefore, they tend to resist any changes in their way of thinking about a product or service and thus to attempts of persuading.

The counterargument intensity of the message-receiving audience increases when they are warned of trying to be persuaded, slanting audiences, as Petty and Cacioppo (1979) contemplate it in their study, which is reinforced with the findings of several

researchers on this field (Brown & Krishna, 2004; Campbell & Kirmani, 2000; Isaac & Grayson, 2017; Kirmani & Zhu, 2007; Nelson *et al.*, 2020; Wen *et al.*, 2020).

Other aspects that influence advertising success in an audience's change of attitude toward a product or service are its message clarity or ambiguity. There are several studies that indicate how the messages that are easy to process are clearer and more efficient from the persuasive point of view (Alter & Oppenheimer, 2006; Boerman *et al.*, 2017; Germelmann *et al.*, 2020; Green & Brock, 2000; Tormala *et al.*, 2007; Zboja *et al.*, 2021) and, on the other hand, the ones that are ambiguous turn out to be less persuasive (Lim *et al.*, 2021; Russell *et al.*, 2019).

For the person in charge of a company's marketing that wishes to influence its consuming audience through advertising, it is essential to understand the way in which their audience positively or negatively notices or fails to notice attempts of persuading and, at the same time, the way in which the message is clearly or ambiguously transmitted to audiences, since their goal is to convince the consuming audience; hence, these are the problems focused on in this research work, the goal of which is to determine whether the persuasion knowledge and the ambiguity the message to be communicated boost or inhibit the consumer's persuasion.

This study aims to determine whether knowledge of persuasion and ambiguity in the message to be communicated enhance or inhibit persuasion to the consumer, in an advertising and nonadvertising context. Understanding this situation can help generate proposals that allow advertising messages to be better transmitted and effectively influence the consumer.

## 2. Theoretical Framework

Below is a review of the literature, which addresses the model of persuasion knowledge proposed by Friestad and Wright (1994), based on consumer theory, the warning of persuading attempts in the advertising context and its impact on consumers (Boerman *et al.*, 2017; Nelson *et al.*, 2020), clarity or ambiguity of the message and its contribution to the communication of the message to the consumer (Hovland *et al.*, 1953; Germelmann *et al.*, 2020; Hudders *et al.*, 2017) and, finally, the warning of the attempt of persuasion and clarity or ambiguity in the message as elements that influence the consumer (Briñol *et al.*, 2015).

## *Persuasion Knowledge Model*

The Persuasion Knowledge Model postulates that consumers learn about the persuasion attempts performed by influence agents: advertising, public relations, personal sales or sales promotions, and they use this knowledge to face the persuading attempts they are exposed to (Friestad & Wright, 1994).

The persuasion knowledge is based on the consumer's theory, specifically on the beliefs the buyer has regarding: the motives the influence agent has to convince him – information retrieval, changing someone's opinion to do something like buying a product –; strategies and techniques sellers use to influence speaking, asking, negotiating; the fitness and effectiveness of persuasion techniques the seller uses to convince – objection handling, alluring talk and effective listening –; the use of psychological means the seller uses to close a business transaction – appeal to emotions, flatter, deceive –; and the ways the buyer has to face these persuasion attempts from the seller – objections, counterarguments (Boerman *et. al.*, 2017; Campbell & Kirmani, 2000; Friestad & Wright, 1994; Hamby & Brinberg, 2018; Hardesty *et. al.*, 2007; Lim *et. al.*, 2021; Nelson *et. al.*, 2020; Russell *et. al.*, 2019).

It is expected that the persuasion knowledge that the purchasing audience – message receivers – develops is positioned as a preparation component to help it create valid attitudes upon a persuasion attempt from an influence agent (Friestad & Wright, 1994). A basic idea posed by the Persuasion Knowledge Model is that the buyer is able to use its persuasion knowledge to identify when an agent is trying to have an influence on him and thus is able to handle the persuasion attempt in order to achieve his own goals as a consumer (Boerman *et. al.*, 2017; Campbell & Kirmani, 2000; Kachersky, 2011; Hamby & Brinberg, 2018; Van Reijmersdal & Van Dam, 2020; Wen *et. al.*, 2020).

Several studies have found that throughout their life, consumers have been exposed to persuasion attempts by different influence agents: sellers, sales promotions, advertising or public relations, which has allowed them to learn how to distinguish between valid and invalid messages, taking a positive attitude toward the first ones and a resisting, or even rejecting, attitude toward the latter (Boerman *et. al.*, 2017; Boush *et. al.*, 1994; Briñol *et. al.*, 2007; Briñol *et. al.*, 2015; Campbell & Kirmani, 2000; Cialdini & Petty, 1981; Colín, 2018; Chen *et. al.*, 2021, Darke & Ritchie, 2007; Germelmann *et. al.*, 2020; Gopal *et. al.*, 2020; Hudders *et al.*, 2017; Isaac & Grayson, 2017; Kim & Han, 2020; Tze *et al.*, 2021; Vohs *et. al.*, 2007).

## Warning of Persuasion Attempts

During a persuasion attempt, the consuming audience can enter into a psychological state of mind in which they consider that an influence agent may have an ulterior motive regarding the message they are transmitting, which Fein (1996) defined as «suspicion» and its presence can result in not so positive perceptions of the message, having a lower persuasion power on the consumer for considering it questionable as a consequence (Boerman *et. al.*, 2017; Briñol *et. al.*, 2015; Fein, 1996; Hamby & Brinberg, 2018; Hudders *et al.*, 2017; Russell *et. al.*, 2019; Vonk, 1998; Zboja *et al.*, 2021).

When the consumer suspects that the message communicated to him through different advertising mechanisms is trying to convince him to do something (testing or buying a product or service), as a response, people normally tend to resist to what they are trying to be convinced to do. Therefore, they show resistance to the persuading efforts by creating counterarguments that weaken them (Brehm, 1966; Briñol *et. al.*, 2007; Fein, 1996; Friestad & Wright, 1994; Hudders *et al.*, 2017; Fukada, 1986; Isaac & Grayson, 2017; Lim *et. al.*, 2021; Vonk, 1998; Vohs *et. al.*, 2007; Wen *et. al.*, 2020; Zboja *et. al.*, 2021).

This situation is reinforced when consumers are expressly warned about a persuasion attempt and, for this reason, the warning of the attempt of persuasion slants their thoughts because the seller's motivations to influence the buyer are exposed, there are no surprises, and thus the information processing is activated (reactive thought) upon the message, causing the search of counterarguments (Boush *et. al.*, 2009; Briñol *et. al.*, 2015; Chen *et. al.*, 2021; Cialdini & Petty, 1981; Colín, 2018; Friestad & Wright, 1994; Germelmann *et. al.*, 2020; Gopal *et. al.*, 2020; Hudders *et al.*, 2017).

Campbell and Kirmani (2000) indicate that there are two conditional factors that interact in order to affect the consumer's inferences on the persuasion motives that lie beneath the message: the consumer's cognitive ability and the discovery of ulterior motives. These factors have been confirmed by recent studies conducted by Boerman *et. al.* (2017) and Germelmann *et. al.* (2020).

The mechanism used by consumers to make deductions about the messages has been described by Gilbert and Malone (1995), subsequently confirmed in their research by Lim *et. al.*, (2021) and Wen *et. al.* (2020), indicating that a person initially makes a deduction about a message, called characterization, and then adjusts it with the information he has regarding a specific situation, among which we can detect aspects that the person can find to be hidden or express messages.

The characterization stage is mainly perceptive and automatic; the adjustment or correction stage requires a higher cognitive process. Therefore, making higher inferences about potential situations or influential motives require a higher cognitive ability, or previous experiences of persuading attempts that are a part of the consumer's acquired knowledge (Uleman, 1987; Hudders *et al.*, 2017; Germelmann *et al.*, 2020; Russell *et al.*, 2019).

According to Campbell and Kirmani (2000), the use of the persuasion knowledge about a message happens on the adjustment or correction stage, and that requires information about a specific situation of the message and the use of a cognitive ability from the receiving person.

The reaction a person has toward a warning or detecting an attempt of persuading is a psychological state of mind that can appear during the situations in which people are perceived as being someone's persuasive target (Hudders *et al.*, 2017; Isaac & Grayson, 2017; Nelson *et al.*, 2020; Van Reijmersdal & Van Dam, 2020).

## *Warning of Persuasion Attempts in an Advertising Context*

The negative effect of the warning about persuasion attempts has a special importance on the advertising field, in which the purpose of influencing and convincing potential consumers of a product or service is fully explicit (Boerman *et al.*, 2017; Briñol *et al.*, 2015; Campbell & Kirmani, 2000; Nelson *et al.*, 2020; Tze *et al.*, 2021; Zboja *et al.*, 2021).

The beliefs people have about how persuasion works on advertising and marketing can play an important role on how people respond to persuasion attempts by different influence agents (Briñol *et al.*, 2015; Hudders *et al.*, 2017; Hamby & Brinberg, 2018; Isaac & Grayson, 2017; Russell *et al.*, 2019).

One of the reasons people tend to resist an advertising message is that the display of advertising terms warns the consumer of what he is being tried to be convinced of (Brown & Krishna, 2004, Campbell & Kirmani, 2000; Kirmani & Zhu, 2007; Hudders *et al.*, 2017; Germelmann *et al.*, 2020; Zboja *et al.*, 2021).

This express persuasion attempt of advertising contributes to the development of attitudes of the general audience, moving from ambiguous to negative toward advertising itself for considering it fake and deceiving (Calfee & Ringold, 1994;

Hudders *et al.*, 2017; Germelmann *et. al.*, 2020; Isaac & Grayson, 2017). In fact, many advertising techniques are precisely oriented toward concealing the presence of a persuasion attempt, for example, placing products within movie scenes (product placement), or imitating formats used on documentaries and news bulletins – infomercials (Brinson & Eastin, 2016; Hamby & Brinberg, 2018; Horcajo *et. al.*, 2010; Hudders *et al.*, 2017; Germelmann *et. al.*, 2020; Rucker & Tormala, 2012; Tze *et al.*, 2021; Van Reijmersdal & Van Dam, 2020).

Based on the aforementioned, we could say that any persuasion attempt associated with an advertising tag will be less effective when trying to create positive attitudes toward the advertised product or service, than that of a same persuasion attempt not associated to that tag. Therefore, we could conclude that a message will be less persuasive when it is tagged as an advertisement instead of being shown in a more impartial way.

Therefore, a first hypothesis can be proposed for this research work:

H1. When a message is transmitted to a potential consuming audience in which the audience is warned about persuading attempts with advertising purposes, this results in a lack of interest toward the product, as opposed to a scenario in which there is no warning and no express advertising purpose.

## *Clarity or Ambiguity of the Message*

Hovland, Janis and Kelly (1953) indicate on their seminal study of communication and persuasion that messages that are clearer are more persuasive than those that are less clear or ambiguous. This effect can have several explanations: tolerance to uncertainty, or the simplicity and clarity on the communication and fluency of the story with which the message is transmitted. Recent studies carried out by Hudders *et al.* (2017) and Germelmann *et al.* (2020) confirm the validity of this arguments.

An ambiguous message can be less persuasive because a huge amount of the receiving persons of the message have little tolerance toward uncertainty and thus react unfavorably toward it (Germelmann *et al.*, 2020; Hudders *et al.*, 2017; Sorrentino *et al.*, 1988; Van Reijmersdal & Van Dam, 2020).

On the other hand, ambiguous messages are harder to process since they require a bigger effort on the receiving part so that they are able to give it a sense and a coherence that matches their expectations. There is evidence of this within several

studies that found that people have a more positive value of such words, names and symbols that are easier to pronounce, the visibility of these communication elements or the simplicity of the expressions used, whether it be written or verbal (Alter & Oppenheimer; 2006; Briñol *et al.*, 2006; Lim *et al.*, 2021; Nelson *et al.*, 2020; Tormala *et al.*, 2006).

A message is expected to be more persuasive by its ability to introduce and transport the receiver into a story (nowadays, many advertising messages adopt the narrative approach) with the purpose of smoothing the relationship with the audience and causing it to get immersed in the story; hence, an ambiguous or disorganized story can be harder to interpret and cause rejection (Briñol *et al.*, 2015; Briñol *et al.*, 2007, Germelmann *et al.*, 2020; Hamby & Brimberg, 2018; Hudders *et al.*, 2017; Russell *et al.*, 2019).

Considering the above, a second hypothesis can be raised for the study:

H2. When a message is transmitted to a potential consuming audience in which there is ambiguity, a lack of interest is shown toward the product, as opposed to a scenario in which the message is clear and simple.

### *Warning of Persuasion Attempts in an Advertising Context and Clarity or Ambiguity of the Message*

Based on the information reviewed in the theoretical framework, it can be stated that both the warning of persuading attempts and the ambiguous nature of a message are two elements that independently reduce the persuading effectiveness of such message before a potential consuming audience, for which it is reasonable to think that if a message included both features, its effectiveness should be even lower, and therefore an additive effect of the two variables that would have a negative impact on the persuasion attempts could be predicted, which is why the following specific hypotheses is posed:

H3. When a message is transmitted to a potential consuming audience, in which the audience is warned about persuading attempts with advertising purposes and the message is ambiguous, the lack of interest toward the product is dramatically reduced (there is an additive effect), as opposed to a scenario in which there is no warning and no express advertising purposes.

### 3. Methodology

This work included an experiment in which two variables were manipulated: warnings of persuasion attempts and the degree of ambiguity.

#### *Design of the experimental study*

A factorial inter-subject design of two by two was made, in which persuasion attempts were measured: «advertising context» versus «non-advertising» and the degree of ambiguity of the message, «low» ordered versus «high» not ordered, in which the students were divided into two equal groups, assigning them randomly to one of the four experimental conditions.

#### *Sample*

A sample selected at convenience and formed of 145 participants was used: 70 women and 75 men, who were undergraduate students of the Universidad Anáhuac – institution in which the researcher works and has the facility to work with the student population. The selected students are part of the university business management and marketing programs, and they have been involved in activities of advertising and marketing, for whom the participation in the study therefore may be appealing and relevant. The median (M) of age was 20.7 years old and the standard deviation (SD) = 2.1.

#### *Procedure*

The experimental session was performed by randomly dividing the participants by 50 %, where one of the group's half was told that the study was about creativity in advertising contexts with the goal to promote a new product to be sold (warning of persuasion attempts), while the other half was told that the study was about creativity in the communication of a message or a story context, with the goal of evaluating the way in which a message is communicated (without a warning of persuasion attempts). These activities were carried out on two different days.

Once the two groups were counted (advertising and non-advertising context), each of the participants was handed an electronic brochure (original design of the seller) with nine different images of a new-to-the-market product: a new portable evaporating air cooler. As for the clarity of the message, the images were shown in an orderly way to half of the group, and the other half received the same images, but they were not ordered on a logical way; the order was randomly made (these images can be observed in the Appendix).

All the participants indicated their attitudes toward the product in a differential semantic scale (dependent variable), and the degree of ambiguity of the image sequence was handled as an experimental condition (manipulation control). Once the experimental study was over, the participants were informed of the research's goal, they were told that the data would be analyzed anonymously and in group, and they were asked to give their consent to continue with the data analysis.

## *Study's Variables*

### **Independent Variables**

This study has two independent variables: the warning of persuasion attempts and the degree of ambiguity.

#### Warning of Persuading Attempts

This variable refers to the knowledge of the audience receiving the message, which is trying to be convincing with commercial purposes (Brinson & Eastin, 2016; Briñol *et al.*, 2015; Friestad & Wright, 1994; Germelmann *et al.*, 2020; Isaac & Grayson, 2017; Russell *et al.*, 2019). For its handling, the perception of the participants of the context in which the study was developed was experimentally varied.

This was achieved by specifying the instructions received by the participants before observing the electronic brochure of a portable evaporating air cooler, in which half of the group would observe it from an advertising context (brochure that advertises a new product), and the other half with a non-advertising focus (brochure that should be observed with a narrative understanding of the message).

Participants were asked to review the brochure in detail, since after taking a look at it, they would be asked about some aspects of the information it contained.

### Level of Ambiguity

This variable refers to the level of certainty, simplicity, and clarity on the communication of the message and the fluency with which a message is transmitted (Hovland *et al.*, 1953; Sorrentino, *et al.*, 1988; Germelmann *et al.*, 2020; Hamby & Brimberg, 2018; Hudders *et al.*, 2017; Russell *et al.*, 2019). This study handled the display of a commercial brochure with an ordered and a disordered communication structure. Half of the group received the ordered structure (according to the brochure's original design of seller), and the other half received the disordered structure (a random section version).

The ordered structure of the brochure has the following sequence: cover page; presentation of the brand; product confidence statement and distribution path; principle of evaporating cooling; filtration technology; use of green technology – environmentally friendly; conditions of use of a portable evaporating cooler and price; image; quality; and customer service (see Appendix A).

The proposed structure for the brochure that shows a disordered sequence and that was obtained randomly is the following: use of green technology; conditions of use of a portable evaporating cooler and price; cover page; principle of evaporating cooling; quality and customer service; image; presentation of the brand; product confidence statement and distribution path; and filtration technology.

The use of a disordered structure aims to create a higher ambiguity as opposed to the ordered structure (see Appendix B).

### **Dependent Variables**

This study has two dependent variables: the attitude toward the product and the manipulation control.

#### Attitude Toward the Product

This variable represents the participants' attitude toward the product, which goes from negative to positive; a differential semantic scale was used for its measuring.

#### Manipulation Control

This variable measures the degree of ambiguity perceived upon the communication of the message on the brochure and goes from lower to higher ambiguity.

## *Instruments*

### **Attitude toward the product**

A differential semantic scale of seven points was used, which included a question about the perception of the product with the following five items:

1. «Not attractive – totally attractive.»
2. «Totally unpleasant – totally pleasant.»
3. «Totally against – totally in favor.»
4. «Not recommendable – very recommendable.»
5. «Totally disillusioned – totally satisfied.»

Reliability measured with Cronbach's alpha coefficient was of 0.88; the values were added and averaged creating an index; at higher values, we have indicators of more positive attitudes toward the product.

### **Manipulation control**

A subjective perception scale of seven points was used to measure the degree of ambiguity perceived on the message from the electronic brochure. Regarding the question: to what extent have you found that the images have a logical sequence? The answer goes from not logical at all (seven) to totally logical (one). An inverted scale was used; therefore, the higher values indicate a higher ambiguity. Reliability measured with Cronbach's alpha coefficient was of 0.92

## **4. Results**

Regarding the participant's attitude toward the product variable, the answers of the participants were subject to a variance analysis of two: warning of persuading attempts in an advertising context and a non-advertising context, by two – degree of ambiguity of the stimulus, ordered and not ordered. In the study, only the variables indicated above for the experiment were measured; no other research method was performed.

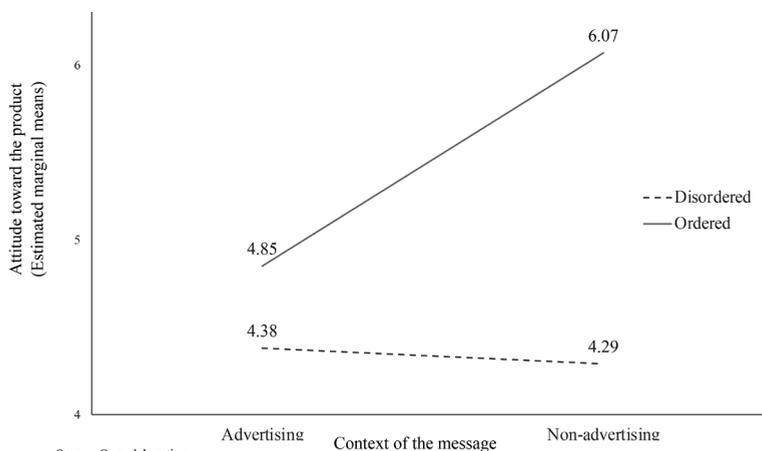
The results showed that there is a significant main effect on the warning of persuading attempts regarding the attitude of the participants toward the product,

$F_{(1,141)} = 58.39$ ,  $p < 0.01$  and a value of partial eta squared = 0.29 -explanation of the variance-. The attitude for an advertising context was less positive –  $M = 4.62$ ,  $SD = 0.05$ , as opposed to for a non-advertising context,  $M = 5.18$ ,  $SD = 0.05$ .

On the other hand, it was found that there is a significant main effect of the degree of ambiguity of the stimulus (ordered and not ordered), regarding the attitude toward the product,  $F_{(1,141)} = 78.86$ ,  $p < 0.01$  and a partial eta squared = 0.36. The attitude of the participants toward the product in an ordered situation (less ambiguity) was more positive,  $M = 5.23$ ,  $SD = 0.05$ , as opposed to the disordered case,  $M = 4.57$ ,  $SD = 0.05$ , or with less ambiguity.

In addition, it was found that there is a significant interaction between the following factors: warning of persuading attempts and the degree of ambiguity of the message – ordered and disordered,  $F_{(1,141)} = 232.29$ ,  $p < 0.01$  and a value of partial eta squared = 0.20. In the advertising context, the participants indicated that their attitude toward the product is more positive when the message is ordered,  $M = 4.85$ ,  $SD = 0.08$  as opposed to when it is in disorder,  $M = 4.38$ ,  $SD = 0.08$ . On the contrary, when the context is non-advertising, the value of the attitude is higher when the message is ordered,  $M = 6.07$ ,  $SD = 0.08$ , as opposed to when the message is in disorder,  $M = 4.29$ ,  $SD = 0.08$ ; and when it is disordered, the advertising context provides a better attitude toward the product ( $M = 4.3$ ), as opposed to the non-advertising context ( $M = 4.29$ ). These results can be observed on graph 1 (see graph 1).

**Graph 1.** Two-way ANOVA. IV: Context of the message; DV: Attitude toward the product, and MV: Degree of ambiguity of the message (ordered versus disordered)



Source: Own elaboration.

As to the manipulation control variable (degree of ambiguity the participants perceive on the electronic brochure's communication), the answers of the surveyed participants were subject to a variance analysis of two: warning of persuading attempts in an advertising context and a non-advertising context, by two - degree of ambiguity of the stimulus, ordered and disordered.

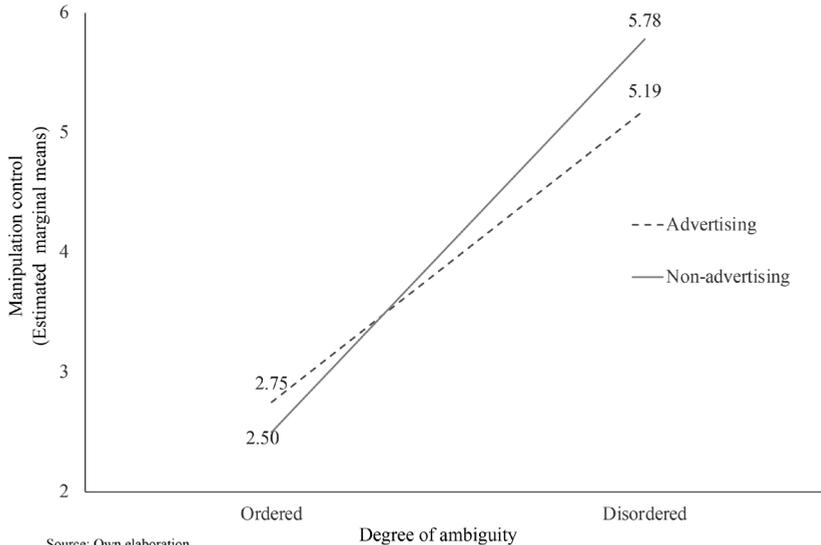
The results showed that there is a significant main effect on the warning of persuading attempts on the manipulation control of the participant's degree of ambiguity toward the product,  $F_{(1,141)} = 2.64$ ,  $p < 0.01$  and a partial eta squared = 0.02. The manipulation control (inverted scale) for an advertising context was more,  $M = 3.97$ ,  $SD = 0.07$ -, as opposed to for a non-advertising context,  $M = 4.14$ ,  $SD = 0.07$ -.

On the other hand, it was found that there is a significant main effect on the degree of ambiguity of the stimulus on the manipulation control,  $F_{(1,141)} = 753.20$ ,  $p < 0.01$  and a value of partial eta squared = 0.84. The manipulation control in an ordered situation (less ambiguity) was more positive,  $M = 2.63$ ,  $SD = 0.07$ , as opposed to the disordered case,  $M = 5.49$ ,  $SD = 0.07$ .

Likewise, it was found that there is a significant interaction between the following factors: warning of persuading attempts (advertising and non-advertising context) and the degree of ambiguity of the message (ordered and disordered),  $F_{(1,141)} = 16.12$ ,  $p < 0.01$  and a value of partial eta squared of 0.18. Participants showed less ambiguity on the non-advertising context and an ordered message,  $M = 2.50$ ,  $SD = 0.11$ , as opposed to the advertising context,  $M = 2.75$ ,  $SD = 0.11$ .

On the other hand, the disordered message in an advertising context showed less ambiguity,  $M = 5.19$ ,  $SD = 0.11$ , as opposed to the non-advertising context,  $M = 5.78$ ,  $SD = 0.11$ . These results can be observed on graph 2 (see graph 2).

**Graph 2.** Two-way. IV: Degree of ambiguity (organized versus disorganized); DV: Manipulation control, and MV: Degree of ambiguity (ordered versus disordered) – Inverted scale



## 5. Conclusions

The results of this research show that when a message is transmitted to a potential consumer in an advertising context, in which the consumer is warned about a commercial purpose, the consumer's attitude toward the product decreases, as opposed to when he is not warned about such commercial purpose (non-advertising context). This situation is clearly observed on the data from the product's attitude median in an advertising context,  $M = 4.62$ , and a non-advertising context,  $M = 5.1$ .

This matches the results of research performed by Boerman *et al.*, (2017); Briñol *et al.* (2015); Friestad and Wright (1994); Germelmann *et al.* (2020); Isaac and Grayson (2017); Wen *et al.* (2020); Zboja *et al.* (2021). Hence, there is a reduction effect on the consumer's attitude toward a product when a persuasion attempt, that has an express commercial purpose, is detected (advertising context), thus H1 is not rejected. The result of this research is consistent with the resistance posed by the studies carried out by Boerman *et al.* (2017); Briñol *et al.* (2015), Van Reijmersdal and Van Dam (2020) and Zboja *et al.* (2021).

On the other hand, the less ambiguous messages (more ordered) in this study proved to be more persuasive than those that are more ambiguous (less organized), which can be appreciated on the data of the attitude toward the product medians with ordered messages,  $M= 5.23$  and disordered messages,  $M= 4.57$ . Therefore, H2 is not rejected. This matches what is posed on the studies carried out by Alter and Oppenheimer (2006); Briñol *et al.* (2006); Hudders *et al.* (2017); Nelson *et al.* (2020), Russell *et al.* (2019) and Wen *et al.* (2020).

The previously described results show that both the warnings of persuading attempts and the ambiguity result counterproductive regarding the consumer's attitude when receiving a message about a product, such as the one analyzed in this study.

On the other hand, a very interesting finding is that two variables that are independently counterproductive (warning of persuading attempts and ambiguity), when combined and interacting with each other, may result persuasive. This could be observed in this study, and evidence of such behavior can be observed on graph 1 and 2, in which, when there is an ambiguous situation, the participants of the study show a better attitude toward the product in an advertising context as opposed to in a non-advertising context. That is a paradoxical situation according to the results of each isolated variable and to what can be assumed due to their summative effect.

The findings of this study imply rejecting the H3 proposed in this research and, thus, reevaluating the result of the interaction between the warning of persuading attempts and ambiguity regarding the attitude of the recipient of the message toward a product or service. This constitutes a future line of research to perform a more detailed and profound study of the phenomenon in order to confirm the findings in different contexts.

The results of this research on the persuasive effect of an advertising and ambiguous context match the ones of a study performed by Briñol and its colleagues on a group of students of the Psychology School at the Autonomous University of Madrid, which found that in similar circumstances (an advertising context and an ambiguous situation), the participants' attitude on such a study about a new product (a yogurt) improves in comparison to what was observed on a non-advertising and ambiguous context (Briñol *et al.*, 2015).

On the aforementioned study, the authors argue that given the situation of a new product, a new yogurt brand, that is unknown to the study's participants, in

addition to a not-so-understandable message, it is probable to generate positive thoughts about the message's meaning and thus associating it with a commercial advertisement that seeks to influence potential buyers and, ultimately, buying the product (Briñol *et al.*, 2015). This can entail positive arguments for its consumption and also taking a positive position about it, even though at that moment it seems incomprehensible, which implies a reflection ability from the recipient of the message regarding the communication material produced for the presented product.

The findings of this study made in Mexico, as well as the ones from Briñol and its colleagues in Madrid, allow us to pose arguments for more profound research on the subject and thus clearly understanding the reasons of this type of behavior from the participants of the study. A possible explanation of the mechanism in which this phenomenon operates is that a communication in an ambiguous advertising context may create a more positive attitude when people are motivated to consume the product, and they have the necessary ability to think and reflect on the intention of the message (Briñol *et al.*, 2015). In case there is no motivation toward the product or an ability to think and reflect about the message, the effect may be foreseen on the H3 posed on this research, that is, an adverse summative effect derived from the warning of persuading attempts and ambiguity.

In this study, the characteristics of the sample of participants allow to include people that are motivated by their activity of professional studies on management and their education level, and as instructions indicated to answer the survey, this may have allowed them to have a deeper thinking about the product (in this case it was an evaporating fan), and projecting a positive attitude, even with the statement of a message in an advertising context, warning of a persuading attempt and disordered (ambiguous) information. Therefore, good opportunities are opened to investigate different samples and understand whether the motivation toward the product and the ability to think and reflect about it are aspects that influence on the observed phenomenon.

In conclusion, the results of this study provide contributions to the commercial and advertising context, in which we can appreciate features that can be included on a communication addressed to a general audience, such as: messages in which a commercial attempt of persuasion cannot be noticed, and clear and concrete messages in order to avoid resistance to the messages from a potential consuming audience. There still remains an aspect that needs to be researched in more depth and with a better understanding, which is the effect of ambiguous advertising

messages, which may apparently be appealing to a motivated group of consumers with a critical thinking ability, who are drawn to certain products with these messages, and thus studying the behavior of these potential buyers and the possible moderating and mediating variables of the phenomenon found on this research.

### *Limitations of the study, managerial implications and future research perspectives*

The most important limitations presented by this work are the type and size of the sample; in this case, it focused on undergraduate students from only one educational institution in Mexico City, so there is an opportunity to expand the sample size to a larger one, and to other population groups – not only students – and to other areas beyond Mexico City. In addition, a qualitative methodology can be incorporated to understand different aspects that allow a better explanation of the phenomenon. Another limitation of this study is that the results show what is happening, but not the reason for it happening, this being an area of opportunity to develop research to understand, why this phenomenon occurs.

Regarding the practical implications, the results allow us to recommend that the communication be made in a context in which the persuading intention of a commercial nature of the messages is not noticed; messages should be clear and concrete, to avoid resistance to them by the potential consumer public.

As for the prospects for future research, the field is broad and interesting, since there is an opportunity to understand how communication in an advertising and non-advertising context can influence consumers in their purchase decision making.



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# Appendix

## Stimuli

### Appendix A. Images presented in the brochure for ordered conditions

The brochure panels contain the following text:

- Panel 1:** Symphony, el mejor productor de enfriadores evaporativos del mundo, tiene la solución perfecta para mejorar todos los espacios: espacios comerciales que también son espacios familiares y seguros, enfriadores para instalaciones en hoteles, espacios para toda una casa o para espacios comerciales e industriales.
- Panel 2:** **ENFRIAMIENTO EVAPORATIVO**. Beneficios de los enfriadores: 1. Tecnología avanzada, 2. Ahorro de energía, 3. Fácil instalación, 4. Bajo mantenimiento. Tipo de enfriamiento: 1. Ahorro de energía, 2. Fácil instalación, 3. Bajo mantenimiento.
- Panel 3:** **ICE CUBE 271**. Filtros de alta eficiencia en 3 paredes. Rejillas con oscilación automática. Temporizador de hasta 7 horas. Función de restauración del sistema. Control remoto. Color Blanco. Precio: \$3,250. Capacidad de tanque de agua de 27L. Consume 105 watts. Refresca un área de hasta 18m<sup>2</sup>.
- Panel 4:** refresco en área de hasta 18m<sup>2</sup>. IMPCO.
- Panel 5:** **MARCAS DE CONFIANZA**. IMPCO.
- Panel 6:** Somos tecnología verde en equilibrio con el planeta.

**Appendix B.** Images presented in the brochure for disordered conditions

## ■ About the author

Carlos Gabriel Colín Flores studied Chemical Engineering at the Universidad Nacional Autónoma de México (UNAM) and has a master's degree in Administration by the Instituto Tecnológico Autónomo de México (ITAM). He also has various diplomas by the Universidad Iberoamericana, EGADE Business School of Instituto Tecnológico de Monterrey, and the Kennan-Flagler School of the University of North Carolina at Chapel Hill. Additionally, he has taken specialization courses in Strategy and Business Analytics at the Wharton Business School of the University of Pennsylvania, as well as in Pricing at the Graduate School of Business in Columbia University, among others. He has a PhD in Administration (organizations) by UNAM. He has worked as an executive in companies such as Coca-Cola Femsa, Grupo Peñafiel, Grupo Cuervo, Grupo Resistol, among others. He holds a professorship at the Faculty of Economics and Business, Universidad Anáhuac, and teaches at EGADE Business School. He is currently a member of the Board of Directors of the Mexican company ZD Logística y Negocios.

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