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KEYS TO THE POWER OF PERSUASION

The imaginative potential of concrete language on message persuasiveness

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Academic Year
2014-2015

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Acknowledgments

At the end of this work, my thoughts are with all the people who made it possible.

I would like to thank my supervisor, professor Michele Costabile, who believed in me since the first time we talked about this project. Although he is an authority in his area, the golden quality of humility makes him bright and appreciated by all the people who meet him.

A special thank goes to professor Matteo De Angelis, he patiently guided me along this path and his advices were precious for the strengths of this project. I really appreciated the care and effort he had spent for me, even if what makes him more than a professor is the passion and enthusiasm that shine through his work.

In addition, I would like to thank professor Cesare Amatulli for his participation to the definition of the project, my co-supervisor, professor Marco Francesco Mazzù, who showed great interest in my work and finally, for their contributions, Vito Tassiello and Giacomo Cesarini.

Then, I'm grateful to all my friends who made colourful my life as a university student. A special thank goes to my colleagues (the Prosperi group) and to Mattia Moretti who participated in the realization of the experimental materials, together with Angelo Massimi, Antonio Santaniello and Luciano Roffi.

My family receives all my love in exchange for all the love they gave me. I really thank my parents for their empathy toward such a strict person like me. I'm also grateful to my sister for her technical support.

Finally, I want to dedicate this work to Michela, my girlfriend. She lived with me all the pleasures and pains behind the final result and directly made it real.

I thank her with all my heart because her candour makes my world happier and she makes me richer by enlightening my days.

Introduction

The topic of persuasion has fascinated individuals since its early studies in the ancient Greece. What is interesting to notice is that in the last 60 years more articles and books have been written than in the previous 2.500 years.

The studies of social psychology contributed to the advancements in this area, first persuasion writers would be enthusiastic to see how far scientific knowledge has arrived.

After decades of social experiments that faced both successes and failures, trials and errors shaped what today we can reliably use to comprehend the complexities of reality.

The most intriguing and somehow scary discovery is that human mind doesn't react always the same way to persuasion attempts. Sometimes it will pay attention to what the persuader is saying, will ponder arguments and will carefully arrive to a new opinion. Other times, it will not. There are circumstances in which we automatically base our decision on mental shortcuts, thus we unconsciously rely on signals that allow us to find a quick solution. These are the expertise of the speaker, how likeable he is, the support of the majority, fear and guilt or other social and psychological pressures.

There are several factors influencing which way our mind will choose in order to address a persuasive attempt. One of them is *involvement*, which is our personal relevance toward the issue.

In one social experiment (Petty, Cacioppo & Goldman, 1981), it was found that the quality of arguments, that were chosen to change opinions, was actually considered only when involvement was high, it means strong arguments prevailed over weak ones only if respondents had an effective interest in the message. When involvement was low, almost any difference was perceived between strong and weak arguments. What made the difference, in terms of persuasion, was the expertise of the communication source. The superficial perception of knowledge was more important than what he was actually saying.

The keys to persuasion, suggested by the title of this dissertation, refers to the contents or "variables" of the persuasion setting and the ways they are used. Variables are the characteristics of the communication's structural components: source, message, recipient and context. In the previous experiment, expertise was one variable referred to the source of communication. The ways of using variables are the parameters that determines their effect on persuasion. In the experiment we saw, the attention that is paid to the message was one of them.

The outcome of a persuasive communication depends on the setting of persuasion variables, these are the keys to influence people and, if we are aware of them, to defend ourselves from hostile attempts.

This dissertation aims to present the topic in details by bringing together all major reports, contents are ordered in a clear and organic explanation and recent findings are used to update current discussions. In addition, an empirical contribution is given to research by presenting two experiments that have been conducted. These introduce a new variable within the persuasion setting, namely the abstract/concrete dimension of language, and their results explain how it affects message persuasiveness.

Contents have been ordered in five chapters.

In the **first chapter** the topic of persuasion is related to another phenomenon that is equally important for marketers even if it has been more deeply analyzed only recently, it is word of mouth (WOM). Consumer informal communication about products and brands is briefly explained in its main functioning: how does it occur, what are its antecedents and its consequences for companies, why it is so important today. In the present we live, communication technology allows real time sharing *from* all consumers and *to* all consumers, that means the effect of WOM on company's reputation is greatly amplified and accelerated. This hot topic drove the interest toward what influence others, indeed the WOM-related areas that can benefit from a better understanding of persuasion are discussed.

The **second chapter** deeply enters in the topic of persuasion. After a precise definition is given, some intriguing social experiments or real-life scenarios are presented as an introduction to the phenomenon.

The detailed discussion starts from the roots, the psychological construct that is the target of persuasion: attitudes are explained in their structure, functions, relations with behaviour and measurement.

Before entering the core, the historical milestones of persuasion research are highlighted in order to better comprehend the logical bases of contemporary theories. Then, the framework that is actually used to predict the outcome of persuasive communications is extensively discussed, that is the Elaboration Likelihood Model (ELM). It demonstrates how the mind reacts to persuasion attempts, differentiating among the psychological processes that can be activated on the base of given determinants. Furthermore, it clearly explains the parameters that predict which role a persuasion variable can assume within the persuasion setting. On the base of this scheme, an updated overview of all the

most studied persuasion variables is presented, these are divided by source, message, recipient and context variables.

The **third chapter** discusses the variable whose effect on persuasion will be empirically tested. This is the language abstract/concrete dimension as defined by the Linguistic Category Model which gives the title to the chapter. The model distinguishes among 4 categories of verbs plus the category of adjectives, these classes differ in terms of abstractness of language: "John is aggressive" is more abstract than "John pushed Jack". This language dimension conveys some interpretations about the event that is described, such as how verifiable it is ("to push" is more verifiable) and how likely it will repeat over time ("being aggressive" seems more enduring). The chapter presents both how individuals *use* (consciously or not) and *perceive* language categories. For the reason why one interesting effect of concrete language is due to its imageability, the following chapter explores this topic.

The **fourth chapter** starts with one effective example about the power of imagination (or mental imagery), that is a social experiment in which subjects confused real perception with visual imagery (Perky, 1910). Indeed, several brain areas were found to be shared between these two very different processes.

Building on this noteworthy point, the chapter explains the main effects of imagery, how it can be measured, what are the ways to evoke it and which variables have been found to moderate their imageability potential. In addition, most recent discoveries about imagination in advertising are presented in order to highlight how still today this topic is crucial in influencing customers.

In the **fifth chapter**, the last one, two experiments that have been conducted are presented and discussed. They tested whether a concrete language is more persuasive than the abstract one and if the reason lies in the higher imagination potential of concrete language. In Study I a written message about a university course was showed to respondents, in Study II it was a video message about the homeopathic medicine. Both messages aimed to convince respondents about the efficacy of the issue, however some respondents saw the abstract version and the others saw the concrete one. Furthermore, Study II tested the role of personal experience (i.e. what differences can be observed in subjects who had at least one homeopathic examination) that could be expected to increase the imaginative power of concrete language by providing more stimuli for visual imagery. Will statistical analysis support proposed hypotheses?

Chapter 1
DYNAMICS OF WORD OF MOUTH

Word of Mouth (hereafter WOM) has been broadly defined as an informal communication among consumers regarding products, services, brands or firms (Dichter, 1966). The main characteristic of this communication, as highlighted by Arndt (1967), is the nature of the source as non-commercial. It means the source hasn't any actual or direct interest in the business purpose of the firm, even though there are other personal drivers to WOM.

It's easy to observe in ordinary life how products' communications from other people are much more effective in our purchase process in comparison with the firm's advertising. First of all, opinions from people we know are more credible because we don't perceive a specific interest in the company's profits. Then, they provide an experience or information that appears more vivid and tangible than commercials that are abundantly proposed by media.

In order to systematically explain how WOM works and why it is a crucial component of marketing, we will faithfully report the most recent review of this phenomenon (De Angelis, 2012). It provides a complete exploration of the actual state of knowledge and it is presented in a clever and organic structure.

WOM drove the interest toward what influence individuals, in the last paragraph we will explain how a better understanding of persuasion research can improve the firm's WOM management.

1.1 How does it work

A detailed understanding of what WOM consist of is necessary to really appreciate its impact on firms' performance. The first aspect to address is how WOM occurs, namely what are its dimensions.

De Angelis (2012) identifies four typologies that categorize this phenomenon.

- **Valence** refers to the ***positive*** or ***negative*** nature of communication, which can respectively improve or damage the reputation of the firm. Several studies wondered which type tends to prevail, however the answer lies in the following typology of WOM.
- **Stage** refers to how directly the experience can be referred to the communication source: during ***transmission*** the source simply reports an experience of another

individual, ***generation*** implies that the source personally had the experience. Thus WOM could have different levels of direct experience.

Recent studies found that Stage is correlated with Valence: generation tends to be positive while transmission tends to be negative (De Angelis et al., 2012). This finding was explained by the *need for self-enhancement*, which is the tendency to promote a positive self-image.

- **Form** refers to the presence of an explicit indication to act in a certain way: an ***opinion*** is a judgement only, an ***advice*** includes also the suggestion to do something (e.g., "You should try it"). Of course the mere information without a judgement or a numerical rating cannot be considered in this dichotomy. Which form is more effective? It depends on whether the information is perceived as diagnostic, it means how useful it is in order to make a decision (e.g. very useful if there is a strong tie with the speaker or when product preferences are homogeneous). Advices are better accepted when information are perceived as highly diagnostic, opinions are more influential when information are not perceived as diagnostic.
- **Content** refers to the product category that dominates conversations. Why the 10% of consumer goods belongs to 85% of discussions (Niederhoffer et al., 2007)? Recent studies (Berger & Schwartz, 2011) found the answer in the difference between *immediate* WOM (immediately after the experience) and *ongoing* WOM (after some weeks or months) together with the difference between ***interesting*** products (due to their intrinsic characteristics) and ***accessible*** products (easy to recall from memory, e.g. because of their high frequency of use or high visibility in many situations). The analysis revealed that the highest share of WOM is captured by accessible (or *top-of-mind*) products because they produce both immediate and ongoing WOM while interesting products tend to produce only immediate WOM.

The second aspect to consider is when WOM has a higher impact on the purchase process.

De Angelis (2012) identifies which product characteristics constitute the most important scenarios for WOM. These are the factors, which can be referred to some sectors more than others, that mostly rely on peers' evaluations.

- **Ease of evaluation** refers to how easily consumers can evaluate product characteristics. A distinction can be made among *search goods* (such as cars, clothes) that can be evaluated before purchasing, *experience goods* (such as food, travels, movies) that can be evaluated only after purchasing and *credence goods*

(such as wine, legal or health services) that can be hardly evaluated even after purchasing. The more difficult the evaluation the more consumers will rely on WOM.

- **Perceived risk** refers to the potential loss after purchasing, in terms of *financial* (i.e. the purchase price and other resources that have been spent) and *social* loss (i.e. group exclusion if the purchase doesn't respect the group values).
- **Visibility** of the product is the extent to which it can be used to either identify ourselves with a group or to affirm our personality (think about any luxury brand). High visibility products strictly rely on interpersonal dynamics and thus on WOM.
- **Complexity** refers to the number of product dimensions (in terms of material components, uses and so on), it requires word of mouth in order to both obtain information about the product functionalities and its general performance. In general, product complexity tends to coincide with its technological content.

Now that WOM is clearer in terms of how and when it occurs, we can focus on why it happens.

1.1.1 Antecedents of WOM

The drivers of WOM have been classified in four categories of antecedents (De Angelis, 2012):

- **Transactional**

  They are referred to the single consumption episode: *satisfaction* (depending on its extremity and on the degree it exceed expectations), *perceived quality* (of the product or service), *perceived value* (total utility, based on the difference between what the customer gave and what he received in terms of all relevant dimensions) and *second order satisfaction* (evaluation of how the firm managed the customer dissatisfaction in terms of reimbursement, procedure and relation) are the main responsible factors of the consumer positive (or negative) WOM.

- **Relational**

  They are referred to the broader consumer-firm relationship: *loyalty* (desire to maintain the relationship with the firm), *commitment* (it has an affective component that emotionally bind the consumer to the firm and a normative component that represents a moral obligation toward it) and *trust* (perceived reliability, the consumer knows the firm will satisfy him) explain why only some consumers will always energetically support the firm.

- **Interpersonal**

  They are referred to the relationship among WOM actors: *tie strength* between sender and receiver increases the diagnosticity of information, their *affinity* (in terms of values, preferences and experiences) and *similarity* (in terms of age, gender, job and education) can explain to what extent WOM is asked by the receiver and it is not spontaneously proposed by the sender. Taken together, these factors are very powerful in explaining what drives WOM and toward which direction.

- **Individual**

  They are referred to the sender's personal motives that drive product conversations. A recent review (Berger, 2014) identifies five psychological factors (or functions) that shape WOM. Below they are presented together with the contents of discussion they lead to.

  - *Impression management* means use discussions to present ourselves in a particular way to achieve a desired impression to others. This motives could have three aims: *self-enhancing* intends to create a positive self-image (i.e. status seeking), *identity-signalling* is the desire to communicate the possession of certain characteristics, knowledge or expertise, *filling conversational space* by sharing anything that comes to mind wants to avoid other people make negative inferences if we stand in silence. The impression management function leads to some specific contents of WOM: entertaining things (e.g. interesting and surprising), useful information (e.g. advices makes the individual seems smart and helpful), self-concept relevant things (e.g. certain products are more symbolic of identity than others), high status goods (e.g. a Rolex), unique things (e.g. limited editions) and common ground arguments.
  - *Emotion regulation* means use discussion to manage our emotions in several ways: generating social support (search of consolation), venting (e.g. relieve negative emotions), sense making (discuss to understand what I feel and why), reducing dissonance (confirm our own judgements), taking vengeance (punish the company) or encouraging rehearsal (re-accessing past positive emotions). Emotion regulation determines the emotionality of discussion, the valence of content shared and lead people to share emotionally arousing contents (leading to some actions, such as re-transmit the information).
  - *Information acquisition* means use sharing for advice seeking (reduce product uncertainty) or problem solving (find assistance for problem resolution). This

motive determines what people talk about: risky, important, complex or uncertain decisions (e.g. a surgery operation) or when they are not based on trustworthy information (e.g. a particular travel destination).

- *Social bonding* means sharing information to connect with others, this occurs because discussion allows a reinforcement of shared views (highlighting things in common) or reduces loneliness (sharing decreases interpersonal distance). Social bonding drives people to talk about things that are common ground (e.g. the weather, the place where we both are) or more emotional in nature (in order to share a feeling, e.g. a funny story will make both parties laugh).
- *Persuasion* means using WOM with the conscious purpose of convincing others to do something (e.g. seeing a particular movie instead of another, going to a particular restaurant). When individuals want something from others, things they share will have a more polarized valence (a more extreme judgement) and will be more arousing (e.g. inducing anger will better activate reactions from others).

What the author underlines is that these motives to WOM are not necessarily used in a conscious way, rather they can act as automatic processes. However there are situations in which people are aware of their drivers of sharing (e.g. in a job interview people may actively monitor what they are saying in order to achieve a good impression).

1.2 Relevance

Although the topic of WOM is relatively recent, since its early studies scholars immediately recognize its importance for the company's success.

Even before the formal definition by Ditcher (1966), it was perceived as a persuasive source of information in the customer's decision process since 1954 (Jungho and Byung-Do, 2013). Kotler claimed that advertising is less impactful than peers' communication in one of the first edition of its famous *Marketing Management* (1967). As time passed, WOM was judged as the most effective and least understood marketing strategy (Misner, 1999) and it was found to influence from 50% to 70% of all purchase decisions (Balter, 2008; Bughin et al., 2010). McKinsey suggested 2/3 of sectors are rooted on WOM, Bain&Company and the London School of Economics demonstrated that WOM is the most important driver to firms' profits growth.

In 2013, the Nielsen Global Survey of Trust in Advertising analyzed a base of more than 29,000 customers across 58 countries and it found that WOM recommendations

from friends and family are the most trustworthy form of advertising according to 84% of global respondents, followed by branded websites (69%) and consumers' opinions posted online (68%).

The explosion of internet use has made WOM a hot topic in research and managerial practices, awakening a huge wave of interest. In the following paragraphs, the digital revolution and the consequences of WOM for firms are briefly explained.

1.2.1 The digital revolution

Nowadays, the study of WOM falls in a technological context that is radically different from that one in which marketers operated only two decades ago. The way internet potential has changed from simple information retrieval to interactivity, interoperability and collaboration (the web 2.0 as defined by Campbell et al., 2011) modified the WOM potential for firms. Indeed, today the so-called WOM marketing (WOMM) is possible, that is the firms' intentional influencing of consumer-to-consumer communications (such as offering incentives to generate WOM).

According to Kozinets et al. (2010), the way firms can influence WOM has passed three stages as described by the following models:

1) *Organic Interconsumer Influence Model*: consumer communication (one-to-one) is a spontaneous phenomenon that can be hardly traced nor influenced. The only influence comes from firms' general marketing efforts;
2) *Linear Marketer Influence Model*: firms can actually influence WOM by targeting the *opinion leaders*, namely those consumers who reach a sufficient audience (one-to-many communication). They are the only intermediaries firm can use and they faithfully reply its message;
3) *Network Coproduction Model*: communication technologies allow all consumers to both receive and generate WOM (many-to-many communication). Firms can influence this phenomenon by communicating with any consumer. Furthermore, each consumer customize his WOM to the network he is talking to, that is the determinant factor for the success of sharing.

The potential offered by Internet is radically increasing the relevance of online WOM (or electronic WOM, eWOM) and even changing traditional (or offline) WOM. As a consequence, the company's management of this phenomenon has to consider the following trends that can be easily observed:

- *Consumers are more susceptible to WOM*: given the tremendous amount of information and alternatives consumers can easily access to, they rely much less on advertising and they need much more peers' evaluations;
- *Consumers generate more WOM*: the expertise provided by the web affects also the possibility to generate WOM, consumers can easily became a source of advices;
- *Online WOM has a higher impact on firms than offline*: the eWOM allows consumers to reach an amplified audience (from known people to completely strangers), information sharing is tremendously accelerated (because it is real time), it is more stable (since it is written rather than orally communicated) and it can be also more frequent (mobile advertising allows sharing in the precise moment and place of the consumption experience);
- *Firms can control eWOM*: Divol et al. (2012) suggest that firms can use social media in order to monitor what consumers say about products, answer to negative comments or highlight positive ones, amplifying WOM by asking consumers to share their experiences (by providing incentives) or driving consumers to change their consumption patterns and obtaining an immediate feedback.

All these changes are so rooted in the analysis by De Angelis (2012) that they give the title to his book: *Reputational Bubbles*. The reputation of firms, described as the set of perceptions and opinions of actual and potential customers (Cavazza, 2012), strongly results from people WOM and it is a precious value for all the firm's stakeholders (above all customers). The digital revolution, that we explained how is responsible for the WOM acceleration and amplification, led to the point that reputation of firms can rapidly inflate if positively nurtured by WOM as rapidly blow up due to negative WOM (such as a bubble). Marketers cannot ignore this scenario anymore.

1.2.2 WOM consequences

This paragraph will present few examples of how WOM impacts some indicators that directly affect the firm's performance (De Angelis, 2012).

- **Customers Acquisition**

  Recent studies found that WOM as a customer acquisition channel is more effective (as well as cheaper) than traditional marketing levers.

  After comparing marketing-induced vs. WOM customer acquisition (Villanueva et al., 2008) considering the customer relationship in terms cash flows over time, results show that the former channel is more profitable in the short run while the latter is more profitable in the long run. Even considering a firm-induced WOM

(WOMM) through a referral program (i.e. provide economic incentives to make customers bring new customers), it was found that customers from this channel have a higher contribution margin, a higher retention rate and are more valuable both in the short and long run (Schmitt et al., 2011).

- **Sales**

  The most interesting effect of positive WOM on sales is the virtuous circle it creates: the more customers share their positive experience the more sales grow, in turn higher sales stimulates new word of mouth. The first effect is highly documented, one study (Chevalier & Mayzlin, 2006) studied the effect of online reviews on book sales comparing two famous websites (Amazon and Barnes&Noble) and they found a positive strong correlation between reviews and relative incremental sales. The second effect was demonstrated in studies such as those about film reviews, Dellarocas et al. (2007) found that the number of reviews can be reliably used as a parameter to forecast movie sales. A good suggestion provided by Godes and Mayzlin (2009) is that firms should target less loyal customers, because they can act as a bridge to reach other customers much better than loyal customers (that have been found to share WOM in contexts where people already know the firm).

- **Stock price**

  Considering the financial dimension, WOM has been found to have a direct effect on stocks' price. Luo (2009) demonstrated how negative WOM can activate a vicious circle with this financial dimension. Besides negative sharing has short- and long-term effects on cash flows, stock returns and volatilities, a feedback effect was found from bad financial performance to further negative WOM. That has been explained with some managerial reactions to negative WOM: as they cut expenses (typically from marketing and R&D), customer services and complaint handling management face a reduction in quality. This way, the seeds for more negative WOM in the future have been planted.

- **Consumer behaviour**

  Research has outlined how WOM exerts a substantial effect on the judgements of products, both in the short and long run (Bone, 1995). It was found to have a high persuasive power in product evaluations and the explanation is its high accessibility in memory (Herr et al., 1991). Indeed the vividness of information was one moderating factors of this effect.

Finally, WOM valence was found to have an effect even on who generates it (Davidow, 2003). Results showed a high correlation between re-purchase intentions and valence of measured WOM when participants were asked to remember cases of dissatisfaction management.

The impact of WOM has been always critical for companies and nowadays it has a much higher weight for customers. As communication technologies allow this trend, on the other hand they give firms the possibility to control these dynamics, reduce negative WOM and amplify positive one.

The following paragraph will explain which contexts of the firm's communication can benefit from a better knowledge of persuasion.

1.3 WOM and Persuasion

The topic of WOM is the context in which the broader research area of persuasion is introduced.

This dissertation will explore in details what are the psychological process behind persuasion, how persuasion variables work and what determines the efficacy of some of them more than others.

A better understanding of this topic can be highly beneficial for every business that has to communicate its value proposition. Marketing strategy can be outlined through sophisticated persuasion tools that can have several applications as those presented here.

- **Advertising**. Although this research is focused on how to improve WOM, the use of persuasion tools for advertisement making is the most intuitive. Commercials, both on traditional and digital channels, can benefit of a better understanding of persuasion processes: when it is better to associate products with positive things? What is the best way to build argumentations? How is it possible to gain credibility to the eyes of customers? What are the most powerful levers for persuading others?
- **Social Media**. The firm's reputation is at stake in social media, where everybody can post comments and the firm is required to take a position. Silence or wrong answers will have devastating effects because they will rapidly reach a huge audience. Understanding how to defend reputation is a matter of persuasion, the right setting of persuasion variables is the key that is commonly used by politicians that are continuously attacked by opponents. Good arguments will prevail over subtle tricks? How to balance expertise and similarity?
- **WOMM**. Once the firm found the right incentive to push its customers generating WOM, what levers should be preferably used by them? What is the most effective

peers' communication? Both offline and online (e.g. company's forums), the firm has to understand what benefits are most important for customers, how peers can leverage on emotions, how they can balance evidence and narrative.

- **Online reviews**. The firm can do much more than stimulating positive WOM. It can create online platforms and structures that facilitate this kind of consumer communication. If the company understands what the dimensions of online reviews are, it can really highlight positive ones (give them higher visibility) and address negative ones (publicly resolving the problem). What do differentiate online reviews in terms of persuasiveness? What is the relative impact among credibility factors, argument quality, certainty, extremity and the other parameters that can be explicitly measured and exhibited for each review?

In the following chapters these issues will be addressed. After that, a new persuasion variable will be more directly studied, that is language concreteness/abstractness dimension.

Chapter 2
PERSUASION: PROCESSES AND VARIABLES

Persuasion is a topic that has been studied since many eras, dating back to ancient Greek philosophers. However, in the current century more articles and books have been published than in the previous 2.500 years (Perloff, 2010). What distinguishes actual researches is the scientific approach: each hypothesis is based on empirical observations and it is tested by rigorously manipulating variables in experiments.

Scholars in disciplines like psychology, communication and marketing have systematically studied the processes of persuasion on the base of scientific experiments.

Psychology was the discipline who pioneered studies on persuasion, it began in 1930s with research on attitudes (Allport, 1935) and attitude change (Hovland's experiments during World War II). Up to now, social psychologists contributed mostly to the growth and development of persuasion knowledge, for this reason they will be the giants on which shoulders this dissertation will build.

The beginning of this chapter, after giving a precise definition of persuasion, introduces the topic with the main insights from one of the most famous books about persuasion (*Influence: The Psychology of Persuasion*, Cialdini, 2006). The practical advices suggested by Robert Cialdini will be an intriguing teaser for the discussion of this chapter. Then, the presented ideas will be better understood and arranged into a more complete and organic presentation of the topic.

2.1 What is Persuasion

Scholars have provided many definitions of persuasion. Although each of them carries a new observation, they all share some common dimensions. Two effective definitions of persuasion have been given in detailed academic reviews about this topic: *The Dynamics of Persuasion* (Perloff, 2010, p. 12) and *Persuasion: Theory and Research* (O'Keefe, 2002, p. 5). The definition that is proposed here includes all the components they both have in common.

Persuasion is a communication process[1] with a conscious attempt[2] to change another's attitude[3] in an atmosphere of free choice[4].

As we can see, there are four main ingredients that define the concept of persuasion.

[1] **Communication process** (Hovland, Janis, & Kelley, 1953). As a process, it cannot happen with a single step, but it requires time and several stages. The communication feature leads to the necessity of all the communication setting's elements, these are the source (or sender), message, the medium to transmit the message, the recipient and the context (all the external forces influencing the message transmission, in both physical and social terms).

[2] **Conscious attempt** (Bettinghaus & Cody, 1987). The source has to be aware not only of the intention to influence the recipient but also of the persuadee's susceptibility to change (i.e., he can potentially and actually change his mind). This attribute is necessary because, if omitted, every communication can be counted as persuasion.

[3] **Attitude change** (Petty & Briñol, 2008). The target of persuasion is a person's attitude, which is a general evaluation he has regarding objects, issues, places or other people, while the goal of persuasion is attitude change. Attitude change means to create a predisposition (positive or negative) toward something (such as a product) that, as a consequence, will predict the individual's behaviour and decisions toward it. Why persuasion cannot directly aim to behaviour instead of targeting its driver? The answer is straightforward: it would sadly coincide with coercion. Coercion means the influenced agent is attempted to act contrary of his preferences (for example by using physical pressure), is threatened of some consequences or is deprived of some measure of autonomy (Rosenbaum, 1986). Thus persuasion can occur only by convincing people about arguments or ideas (e.g., this product is useful, this habit is dangerous, this action is cool...), then the resulting attitude will determine their choices. As we shall see, some tricks can often be used to change attitudes even without an agreement.

[4] **Free choice** (O'Keefe, 2002). The recipient must be free to change his mind spontaneously, it means the communicator simply sets the arguments and then the listener decides to accept or refuse them. Thus, coercion has not to constrict both the recipient's behavioural response and opinion formation.

2.2 Insights on the topic

Among all books that have been written about "How to persuade others", those by Robert Cialdini are undoubtedly dominant. In *Influence: The Psychology of Persuasion* (Cialdini, 2006) and in the text book version *Influence: Science and Practice* (Cialdini & James, 2009) a practical guide is presented.

The author explains that the human mind is susceptible of some automatic reactions it cannot control. These are rooted in our ordinary life, we got used to them since we were children. However, they can be exploited to persuade us to do something (with ill or useful ends). These are the weapons or principles that Cialdini reports in his books and that constitute a good teaser before a complete discussion about persuasion.
In this paragraph, the "six principles of persuasion" will be presented together with social experiments and real-life scenarios that demonstrate their indisputable power.

Reciprocity

When someone gives us something for free, it is human nature to feel obligated to return the favour. In one experiment (Regan, 1971) pretending to be about art, respondents were unexpectedly asked to buy some lottery tickets from their assistant. When the assistant made a favour to them (i.e. offering a Coca-Cola) respondents bought a number of tickets that, on average, was double in comparison with no-favour condition. Results show that sales were completely unrelated to the perceived likability of the assistant.
Salespeople typically use this weapon when they offer something for free. Furthermore, they link it with a strong perception rule, which is the *principle of contrast*. If we experience two stimuli that are different, we will tend to see a bigger difference in the second one. Thus presenting an extremely expensive item immediately before the product to sell, we will perceive the second price as smaller.

Consistency

The human mind has an almost obsessive need to be consistent with things we do. Some experiment at the racetrack (Knox & Inkster, 1968) found that just after placing a bet, people are much more confident of their horse than immediately before the bet. The key of consistency is a *commitment* that has been taken, then several personal and social pressures will push us to stick to it. In case of public commitment, one experiment (Deutsch & Gerard, 1955) found that subjects who wrote their evaluation publicly were more difficult to convince of another evaluation in comparison with non-committed groups. Also the effort that has been spent is a powerful force for commitment as it happens for initiation rituals: the more electric shock a woman received as part of the initiation ceremony, the more she later persuaded herself that her new group and its activities were interesting, intelligent and desirable (Gerard & Matewson, 1966).
All these findings have been explained through the so-called Theory of Cognitive Dissonance (Festinger, 1957).

Social proof

People adjust their behaviour on the base of what others do. It is something we cannot resist. Children who suffered from phobia to dogs merely watched a little boy playing happily with a dog for twenty minutes a day. After only four days, 67% of them were willing to play with dogs even after the experiment was finished (Bandura, 1967). The necessity to conform to the social context lies behind the registered laughs in comedy shows, or it explains why in big cities the higher the number of people assisting a crime the lower the probabilities of individual interventions. When other people are perceived as similar, the power or the social proof is so amplified that it was found to explain even death by imitation: the so called Werther effect (i.e. the Goethe's novel provoked a wave of emulative suicides in Europe) was found even in modern days (Phillips, 1974). News about a suicide are strictly correlated with peaks of new emulative suicides mostly by people who were demographically similar to the first one.

The social proof principle is used in persuasion by sustaining that "the majority of people did it!".

Liking

People we like exert a higher power in making us comply with their requests. For salespeople it is sufficient to mention the name of a friend "who suggested I call on you", then it will be difficult to reject them because it will be almost like rejecting the friend. The factors that cause one person to like another person are: beauty (Efran and Patterson, 1976, found that attractive political candidates receive double votes in comparison with less attractive candidates), similarity (Emswiller et al., 1971, found that people willingness to give a coin was correlated with similarity of receivers' clothes), compliments (even when we know the other has some stake, Drachman et al., 1978), familiarity (Bornstein et al., 1987, projected the faces of some strangers at a speed that didn't allow to remember them; when strangers were actually met, those with the higher frequency were more able to convince respondents of their opinions) and cooperation (that pushes prisoners to confess during the Good Cop / Bad Cop strategy). If liking is not directly evoked, it can be indirectly benefited by association: products are associated with beautiful models, people are more open when they are eating (because the pleasure is associated to the persuader), when publicly stating our relationship with famous or likeable individuals we try to shine of reflected light.

Authority

Information from a recognized authority can provide us a valuable shortcut for deciding how to act in a situation. Salespeople use subjection from authorities such as doctors, professors or the government to sell their products. It is interesting to note that we are vulnerable even to *symbols* of authority such as titles (when presented as professors, the same individuals were perceived as taller in comparison with "student" or "assistant" titles, Wilson, 1968), clothes (uniform led respondents to comply to strange requests in comparison with usual clothes of speakers, Bickman, 1974) and trappings (such as jewellery, Doob and Gross, 1968, found motorists waited significantly longer before honking their horns when a luxury car stopped in front of a green traffic light in comparison with an economy model).

Scarcity

Opportunities seem more valuable to us when their availability is limited. This principle is used in marketing when stating that the product is a limited edition, the offer will stand for few days, the decision has to be taken immediately or it will disappear. Even information seem more valuable when we think it is not publicly available ("my boss doesn't want me to tell you this").

The psychological force that makes this rule works is the *reactance motive*: whenever free choice is limited or threatened, the need to retain our freedom makes us desire them significantly more than previously. Experiments demonstrated this principle in several contexts: children who had to take one toy over two equal ones (with the second one protected by a barrier) always chose the latter when the barrier was tall enough to be an impediment (Brehem & Weintraub, 1977); a survey about 140 couples revealed a strong correlation between parents opposition and tie strength (Romeo and Juliet effect, Driscoll et al., 1972); when a novel advertising included an age restriction, students with limited access wanted to read the book more and believed they would like it more than did those who didn't see the restriction (Zellinger et al., 1974).

Conclusion

As the author explains, these weapons to make people say "yes" are more effective when we are distracted, have time constraints, feel stress or uncertainty. Furthermore, these conditions are even enhanced by the dynamic environment in which we live that saturates us with information to process and decisions to take.

In the following paragraphs, the human mind's reactions to persuasion will be explained in details. Thus, we will see what exactly is the position occupied by the principles that have been presented here.

2.3 Bases of Attitudes

For the reason why attitudes are the target of persuasion, knowing what they are is essential to understand how to change them. The study of attitudes will provide some precious lessons that will be recalled (in a specific context) when explaining the contemporary framework about persuasion.

The father of attitudes, Gordon Allport, defined them as ''the most distinctive and indispensable concept" in social psychology (Allport, 1935, p. 798). Nowadays a vast amount of literature can be used to demonstrate this claim. Furthermore, the whole persuasion literature makes Allport one of the main persuasion pioneers and makes attitudes the roots of persuasion studies.

An attitude is an evaluation, it means we have categorized something and made a judgment of it, thus we are not neutral about that topic anymore. As stated previously, attitudes can refer to very broad and abstract ideas (e.g., justice) as well as very concrete and specific things (as products, issues, decisions), other people (including ourselves) and places. They are characterized by a relative enduringness over time and by a structural valence that can range from very positive through neutral (representing the absence of the attitude) to very negative. Being an evaluation, an attitude can be expressed as a number (ranging from positive to negative) that is the "mark" of the attitude's object. The things toward which we have the highest attitudes are those that can more easily found in our choices, for example: if I buy an iPhone it means I have a more positive attitude toward it in comparison with competitor brands.

2.3.1 Structure

What are the determinants of attitudes?

The **expectancy value theory** (Fishbein & Ajzen, 1975) explains that the attitude toward an object depends on the beliefs that the individual has about that object. A belief is a conviction that the object has a certain attribute or consequence, in other words it is a mental association. Considering for example a smartphone, some beliefs can be: "it is useful for every-day tasks", "the battery is long-lasting", "it costs about X dollars", "I feel more secure owning it".

All these beliefs determines the attitude as a multiplicative function of:

- *Expectancy*, (i.e., likelihood) that means how likely the attribute/consequence can be associated to the object (in other words, it is an evaluation of the belief strength);
- *Value*, (i.e., desirability) that is the evaluation of how desirable the attribute is in a scale such as good-bad, positive-negative or favourable-unfavourable;

Both factors are subjective numbers, ranging from negative to positive (e.g., -3 to +3), that can be measured by asking questions like: "How likely this smartphone will make you feel secure?" and "How desirable is security for you?".

The attitude (A in the following formula) toward the object can be then computed as the product of expectancy (or likelihood) and value (or desirability) of the attributes associated with the object, summed across all attributes (n):

$$A = \sum_{i=1}^{n} expectancy_i \cdot value_i$$

Assuming 4 attributes and an evaluation scale of ±3, the attitude number will range between -36 and +36.

The consequences of the model are that two individuals may have the same attitude level toward an object by holding different beliefs, furthermore they may have two different attitude levels even if they hold the same beliefs (that is because they evaluate differently likelihood and desirability of the object's attributes).

The consequence for the following discussion about persuasion is very intuitive:

Lesson #1 – In order to change an attitude, it is necessary to modify value or expectancy of actual beliefs or adding new beliefs with the best expectancy-value combination, any change has to be linked with a causal explanation.

This lesson can be explained as follows: if we want to reduce the impact of actual beliefs we have to act on either their expectancy or value, when adding new beliefs they must have the highest expectancy linked with the maximum desirability (if a positive attitude is the goal, otherwise desirability has to be minimum).

Then, when supporting a consequence, it is more effective to explain why it does happen in comparison with simply stating that the consequence is statistically correlated with the object.

Let's consider the example of the attitude toward a candidate for elections (Petty & Wegener, 1998). An individual may believe that the candidate favours tax reduction (likelihood: +2), tax reduction is good for the country (desirability: +3) and, thus, he has a positive attitude toward the candidate (+6, assuming only this consequence). This attitude can be changed in the opposite direction by adding new beliefs (e.g. the

candidate will legalize pollution that is bad for environment), otherwise by explaining why the candidate does not favour tax reduction (or it is unlikely he will, e.g. there is a strict governmental budget constraint) or why tax reduction is bad for the country (or it is unlikely it will be good, e.g. lower taxes lead to lower services). This is the scientific way of how logical arguments must be set.

Another consideration about the beliefs behind an attitude is about their nature. According to the **tripartite theory** (or ABC model of attitudes, Breckler, 1984), a belief can belong to one of the following three areas:

- *Affective*: it includes emotions or feelings (e.g., "owning this smartphone makes me happy");
- *Behavioral*: it includes actions or behaviours (e.g., "I have just tried this smartphone"), that means people may infer attitudes from their past actions;
- *Cognitive*: it includes cognitions or thoughts (e.g., "the battery of this smartphone stands for 4 hours");

These areas are the main components of an attitude, beliefs can come from all of them but one area can prevail over the others. Interestingly, people are not necessarily aware of the bases of their attitudes (Petty, Wheeler & Tormala, 2010). For the following discussion about persuasion, it is important to remember:

Lesson #2 – It is more effective to change an attitude by using contents that match the area of beliefs (Affective, Behavioral or Cognitive) that is (or even that is perceived to be) the most relevant.

This notion is based on several studies (Edwards, 1990; Fabrigar & Petty, 1999) and it means to provide rational arguments if the attitude is based on thoughts, emotional stories if it is based on past emotions or offer new experiences to the individual (e.g., free samples for products) if it is based on past actions.

2.3.2 Why are they used

What is the necessity of attitudes for individuals, why do they hold them?

The **functional theory of attitudes** explains they are necessary to manage the every-day life, they are useful to guide people in decisions, they help to cope with the surrounding environment. That is, attitudes are functional. The main functions they have are catalogued by researchers on the base of the benefits they provide (Katz, 1960; Maio & Olson, 2000):

- **Knowledge**. Our evaluations and opinions allow us to make sense of the world, we use them as a framework to predict what is likely to happen, to have a sense of control and thus to understand events that sometimes may be ambiguous or even scary. Religion can fulfil this function for many people, above all for those who have faced tragedies in their lives.
- **Utilitarian**. Some attitudes can be useful in a material sense, that is obtain rewards or avoid punishments. People may prefer a given attitude in order to achieve results, a positive attitude toward a university course may for example be functional in order to gain the professor's cares or to find motivation to study the subject.
- **Social adjustive**. An attitude can be adopted not because we really agree on it but because we want to be accepted by other people. Thus, in order to join a group, can be functional to align to the group's ideas and be accepted.
- **Social identity**. Attitudes can be functional in order to express ourselves to other people, it means show who we are and our aspirations. The evaluation of some products, above all those with high display value, are deeply rooted in this kind of attitudes. Perfumes, dresses, tattoos and many electronic products receive an evaluation according to the social identity that they allow to express.
- **Value-expressive**. Some attitudes can be explained by the core values the individual wants to express. Evaluations about capital punishment, charity or recycling can be functional to communicate our high ideals, such as law and order, equality or the environment protection.
- **Ego-defensive**. Attitudes can be necessary in order to protect ourselves from truths we do not want to see. Thus we convince ourselves of something in order to avoid unpleasant emotions or acknowledge any belief that is psychologically uncomfortable. An example could be a person whose pride has suffered a defeat in sport and for this reason he decides to adopt a negative attitude toward it (so he can avoid an unpleasant thought).

A central principle of the functional theory is that the same attitude can serve different functions for different people. Considering a positive attitude toward shopping, it can be functional to utilitarian reasons (as a material gratification), to ego-defensive reasons (relieve stress) or even to value-expressive reasons (those who grew up in economical tightness can now express their freedom and autonomy; Perloff, 2010).

For the following discussion about persuasion, the function of an attitude is pivotal to address:

Lesson #3 – In order to increase the attitude toward an object, it is first necessary to understand what is that object's main function for individuals and then use arguments that support that function.

In one experiment about volunteering (Clary et al., 1994), students have been asked to rate the importance of a series of reasons for volunteering: learning skills (knowledge), gaining prestige at work (utilitarian), living in a society based on helping others (value-expressive) and so on. Then, they have been showed a videotape supporting volunteering that either matched or mismatched their main function (e.g., utilitarian function was addressed by explaining how much employers value volunteering). It goes without saying that when the individual's function was supported, the attitude toward the issue increased widely.

As a consequence, the message has to explain on a causal basis how the attitude's object is associated with the main function/benefit it has for individuals (i.e., likelihood) and also how desirable that benefit is (i.e., desirability). Once again, the expectancy-value theory provides the rigorous way to support arguments.

Reasoning about the opposite goal (decrease a positive attitude that has a given benefit), the persuasive message has to demonstrate that the opposite attitude (negative) leads to a greater amount of the same benefit.

2.3.3 Attitudes and behaviour

As already mentioned, the relevance of attitudes stems from their influence on behavior. However it is not always the case, it is easy to think about situations in which we say one thing and do another.

Although several factors have been identified as moderators of the attitude-behavior relationship and two major theories have been proposed (the *theory of reasoned action*, rooted in the expectancy value theory, by Fishbein & Ajzen, 2010; and the *accessibility theory* by Fazio & Roskos-Ewoldsen, 1994), attitude's **strength** is the most relevant factor that can predict to what extent an attitude will guide behavior. Strong attitudes are those that influence decisions and behavior, are persistent over time and are resistant to counterpersuasion (Krosnick & Petty, 1995). This set of effects will be recalled as the "tripartite consequences": persistence, resistance and behaviour predictability.

For what concerns the causes that make an attitude strong, there is a multitude of indicators that are identified as the determinants of attitude's strength. The most recent review about this topic (Visser, Bizer & Krosnick, 2006) lists the followings:

- **Extremity**: the extent to which the attitude level lies toward one end in the valence continuum (from very positive through neutral to very negative);
- **Importance**: amount of psychological significance a person ascribe to the attitude's object, also called personal relevance or involvement to the issue;
- **Knowledge**: amount of information about the attitude's object (either the subjective perception or the objective measurement);
- **Accessibility**: how quickly the attitude can be retrieved from memory;
- **Elaboration**: the extent to which the attitude is formed as a result of in-depth thought process instead of a superficial and reduced effort;
- **Certainty**: amount of confidence a person attaches to an attitude;
- **Ambivalence**: (reversely related to strength) the degree to which a person has both favourable and unfavourable reactions to an object (internal conflict due to pros and cons);
- **Structural consistency**: the three components of the attitude (ABC model) are internally consistent, all of them have the same valence;

A strong attitude has high levels of at least some of these indicators. The stronger the attitude the more it will influence the individual's behavior, the more difficult the persuasion process will be and the more it will endure over time (assuming no counter attacks).

2.3.4 Attitude Measurement

Without the possibility to measure attitudes it will be not possible to verify the effects of a persuasive effort. Attitude assessments can be usefully distinguished considering the degree of directness through which the attitude is measured.

Direct techniques simply ask respondents for an evaluation of the attitude object. This category includes one-item rating scale (e.g., how much do you like the X brand from 1 to 7), open-ended questions and more complex measures such as:

- *Likert scale* (Likert, 1932): for a series of opinion statements respondents have to indicate their agreement or disagreement along a numerical scale (i.e., from strongly disagree to strongly agree);

- *Semantic differential* (Osgood, Suci, & Tannenbaum, 1957): for a given object there are several bipolar scales (e.g., good-bad, strong-weak...), each of them has to be rated toward either one extreme or the other;
- *Guttman scale* (Guttman, 1944): list of sentences ordered from the least difficult to accept to the most difficult to accept, if the last one is chosen automatically all of them are accepted;
- *Thurstone scale* (Thurstone, 1928): several respondents rate a series of opinion sentences, the investigator computes the average for each sentence and then selects 20 of them such that they are equally spaced in the rating scale. Finally the respondent chooses the items he agrees with and his attitude score consists of the average of these items;

Indirect techniques, on the other hand, infers the individual's attitude from his reactions or behaviours. This category includes:

- *Information Error Test* (Hammond, 1948): decisions have two possible answers but both of them are wrong, the over- or under-estimation can reveal the respondent's attitude;
- *Response time*: the time it takes to an individual to make a selection can reveal his attitude, this principle is used in the Implicit Association Test (Greenwald et al., 1998) and in the Automatic Evaluation Task (Fazio et al., 1995);
- *Physiological measurements*: attitude is inferred from body reactions such as sweating, pupil dilation and facial muscle activity (electromyography, Cacioppo & Petty, 1979), also physical behaviours like non-verbal gestures, eye contact or seating distance can be considered.

The way to compute attitude level in most experiments about persuasion (such as the famous Petty, Cacioppo & Goldman, 1981; Petty, Briñol & Tormala, 2002) is based on semantic differential scales (i.e., against-in favour, bad-good, foolish-wise, strong-weak...) referred to the attitude's object. If ratings are highly inter-correlated, they can be averaged to create a composite attitude index (ranging from negative to positive).

2.3.5 Persuasion Measurement

The effect of persuasion is directed toward attitudes, thus it can be measured on the base of how the initial attitude does change. In an early classification (Miller, 1980), three possible goals of persuasion were identified or, in other words, three possible effects of attitude change: *shaping*, *reinforcing* or *changing* in the strict sense. In the following

graph, these goals are depicted considering that the initial attitude (either positive or negative) is represented on a kind of "psychometer".

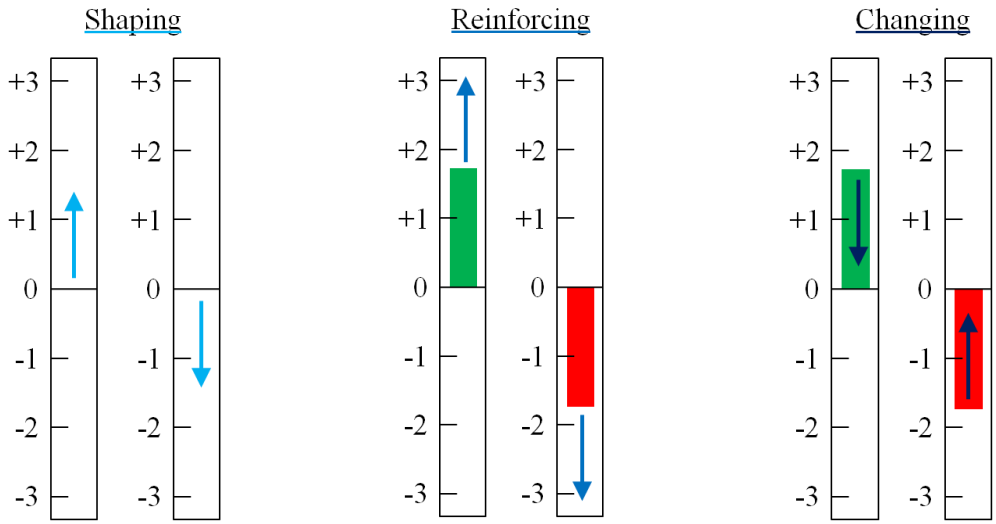


Figure 2.3.5a Goals of persuasion

As it is easy to deduct, *shaping* means build an attitude from scratch (because the topic is completely new), *reinforcing* means amplify the attitude toward the direction it has (make it more extreme, improve defence toward competitors' communication) and *changing* means convert the attitude toward the opposite direction. One could easily argue that the most impactful cases on companies' revenues are: shaping a positive attitude toward products and (the most difficult) changing a negative attitude toward them.

After the potential goal has been set, different outcomes can be achieved depending on the quality of the persuasive message: persuasion can *occur* (if attitude goes toward the advocated direction), the individual can *resist* (the initial attitude remain exactly where it is) or persuasion can even *fail* (attitude goes to the direction that is the opposite to the message's position, boomerang effect).

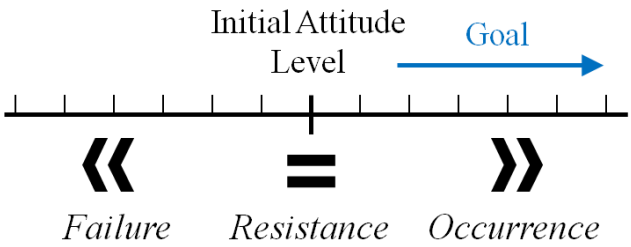


Figure 2.3.5b Outcomes of persuasion

The extent of change (in case of occurrence or failure) depends on the effectiveness of persuasion, as we shall see it is a matter of arguments quality only in specific circumstances. Hereafter, when saying "persuasion increases" it could mean a higher occurrence but also a lower failure (depending on how other variables are set). Reversely, "persuasion decreases" could mean a lower occurrence but also a higher failure.

The *attitude target* is the level that the persuader wants to achieve by supporting a position advocated in the message. This position could be different in comparison with the recipient's position to several degrees, *discrepancy* is the difference between the recipient's position and the advocated position (O'Keefe, 2002). Furthermore, message's position can be either *attitudinal* if it respects the recipient's initial attitude or *counterattitudinal* if it has the opposite valence. In the O'Keefe example, if the audience believes a 5% increase in tax is desirable, positions supporting the 15% or 30% are both attitudinal with different discrepancies. If otherwise the persuader advocates a decrease in taxes (e.g., -5%), the position is counterattitudinal (opposite side to the recipient's view).

The extent of persuasion (or *attitude change differential*) can be computed for a single individual as the difference of attitude level before and after the persuasive message. If there are several groups of respondents (e.g., one group receives strong arguments and the other weak arguments) we can compute a relative measure of attitude change by asking only the attitude level after the persuasive message and then making a comparison among groups. Finally, persuasion can be asked on a numeric scale directly ("how much do you think the message is convincing or persuading?"), it can be inferred from intentions ("are you going to put into practice the message's position?") or even from behavior ("do you want to buy this product?"; "do you want to share the message?").

2.4 Historical Background

The Elaboration Likelihood Model (hereafter ELM) is the contemporary framework that is currently used to understand persuasion processes and variables. Before explaining this model, its historical foundations will be briefly highlighted.

This step is pivotal not only to be aware of how the model was born, but mostly to understand its main components. The chronological developments in persuasion studies are very useful when studying the ELM, that is because they provide the logical

sequence that allows to really comprehend and appreciate the richness of the framework.

2.4.1 Hovland and the learning approach

Although the first discussions about persuasion can be traced to the ancient world (i.e. the Sophists' oratory discipline, Aristotele's *Rhetoric*, Cicero's *De Oratoria*, Quintillian's *Istitutio Oratoria*), the early scientific studies began with Allport's attitudes (1935) and simultaneously with researches during World War II. A group of researchers was commissioned by the US War Department to study the effect of a series of documentaries (*Why We Fight*) whose aim was to boost the morale of soldiers. The Yale psychologist Carl Hovland seized this opportunity to conduct experiments on persuasive communications. The result of these efforts was *Communication and Persuasion* (Hovland, Janis & Kelley, 1953), a volume that is a pillar of the whole persuasion research.

Hovland and his colleagues took concepts and ideas from Aristotele (such as *ethos*, *pathos* and *logos* as the main ingredients of persuasion) and started to systematically study how different variables affect persuasion. Variables have been organized in a conventional way that still nowadays is used, categories are taken from the communication setting: source (e.g., credibility, attractiveness), message (e.g., conclusion drawing, sidedness, fear appeal), recipient (e.g., gender, intelligence) and context (e.g., distraction, repetition, mood). The medium of transmission has consequences that can be included within context.

By manipulating each of this variable, Hovland and the other Yale researchers arrived at the conclusion that the main determinant of attitude change is the learning degree of the persuasive message. This approach (that is referred as *learning approach to attitude change*) holds that the persuasion process requires several steps: attention, comprehension, learning, acceptance and retention of the message. Thus, the effect of any variable can be predicted considering how it influences this process: distracting someone from message reduces persuasion because it interferes learning, a credible source enhances persuasion because it motivates people to pay attention to the message.

This theory provided a very logical and linear beginning, indeed it is based on the *single effect* and *single process* assumptions (for a historical review see Petty & Briñol, 2008). Single process means that all variables influence persuasion through the same steps, as a consequence any variable is found to have just one effect on persuasion, that is either

enhancing or reducing it, regardless to other conditions. Today we know that surprisingly, and unfortunately, it is not true.

2.4.2 A period of confusion

Hovland's results (Hovland, Janis & Kelley, 1953) gave impetus to a new interest wave about persuasion, he set the research agenda for decades afterwards. From '50s to '80s scientific research simply exploded, a huge quantity of data and an impressive number of theories have been proposed, more than on any other single topic in the social sciences (Petty & Cacioppo, 1986).

However, the more empirical results were discovered the less agreement about the dynamics of persuasion was achieved. The literature was torn by a "reigning confusion" (Sherif, 1977, p. 370) due to all the emerging contradictions and inconsistencies "with few (if any) generalizable principles of effective communication" (Fishbein & Ajzen, 1981, p. 340): whatever effect was demonstrated in one study, following results showed the opposite effect. Even the simplest variables (such as source expertise) presented complexities. Although the existing literature supported a clear and defined effect on persuasion for certain variables, new experiments revealed sometimes the expected effects, sometimes no effects and sometimes even reverse effects (Petty & Briñol, 2008).

In this period the seeds of the ELM have been planted. First of all, the concept of duality began to gain space in persuasion theories. It is a recurrent theme in psychology since Freud, thus it is not surprising that it emerged also in this field (Petty & Briñol, 2008).

Kelman's framework (1958) is one of the most early and influential introducing a dual persuasion process: *internalization* is the acceptance of the message arguments, *identification* is the agreement due to the recognition of the source. Certain persuasion variables (such as source expertise, according to Kelman) act through the former process (that is more stable), while others (such as source attractiveness) act through the latter one. The assumptions of the theory are thus the *dual process* and, again, the erroneous *single effect* (the variable can either enhance or reduce persuasion).

Another development in this period is the **cognitive response theory** (Greenwald, 1968), it is relevant because it goes beyond the learning approach's assumption that people are like sponges that passively absorb the information they receive. Instead, how people cognitively react to the persuasive message is the real determinant of persuasion (that is how much mental effort they use), even more important than the message itself.

This finding is still central in contemporary approaches: the individual plays an active role by producing thoughts, these come from the elaboration of new information together with prior knowledge.

If the cognitive response has more favourable thoughts to the position of the message than unfavourable ones (it means that, overall, proarguments are stronger than counterarguments) persuasion occurs. Thus, the more positive thoughts toward a message are generated the more persuasion increases.

That is close to persuasion's definition of free choice: after the arguments have been set, the person's *own* toughs determine the extent of influence.

This perspective was finally able to solve some limitations of the learning approach, such as why message learning can occur without any attitude change and why attitudes can change even if the persuasive message was not proposed (as it happens in role-playing exercises or simply by asking the individual to think about the topic; Petty & Wegener, 1998). Furthermore, the theory introduced how persuasion can be affected through variables that impact the amount of cognitive effort. *Distraction* can either enhance persuasion when thoughts about message would have been unfavourable (due to weak arguments) or hamper persuasion when thoughts would have been favourable (due to strong arguments; Petty, Wells & Brock, 1976). Thus the crucial point is our mental activity: distraction impacts persuasion by limiting our thoughts about the message, we are distracted from our mind rather than from the message.

With the same logic, *forewarning* an individual that he is going to be exposed to a persuasion process (Petty & Cacioppo, 1979) or even anticipating some arguments of the opposition (together with critics on them, *inoculation theory*, McGuire, 1964) will increase resistance to persuasion exactly because the person will spend a higher mental effort on the presented message.

Cognitive activity is still considered a central determinant of persuasion because it explains the strength of the new attitude, in terms of the tripartite consequences.

2.4.3 The contemporary approach

As researchers found contradicting results, the necessity of new theories to accommodate these findings was finally satisfied in the 1980s. The two most popular models, the Elaboration Likelihood Model (ELM) and the Heuristic-Systematic Model (HSM), were originally proposed in doctoral dissertations respectively by Richard E. Petty in collaboration with John Cacioppo (1977) and by Shelly Chaiken (1978).

Subsequently they were expanded into full persuasion theories (Petty & Cacioppo, 1986; Chaiken, Liberman & Eagly, 1989).

Both models are rooted in the cognitive response approach, thus they support the cognitive effort (called *elaboration* by the ELM and *processing* by the HSM) as the main determinant of persuasion effectiveness.

What they add is that people do not always exert mental effort when facing a persuasive message but they can also use mental shortcuts that avoid them to waste mental resources. Thus individuals may change an attitude without a deep and dutiful scrutiny of arguments, it means they do not pay attention to the relevant merits of the message but simply infer them from superficial rules of thumb such as the speaker's expertise ("if he is an expert, it should be right!") or even his/her beauty, the mere number of pros against the number of cons, or they accept the message because of the influence of what was discussed in Insights on the topic (e.g. "If the majority of people did it, it should be right"). These tricks (also called cues or heuristics) are extremely rooted in our every-day life, think about for example the last time you purchased a product by relying on what other people did.

In a nutshell, the two models discovered that persuasion can occur in two different ways or *routes*, one is based on high mental effort and the other one on mental shortcuts. The Elaboration Likelihood Model called them respectively *central* (from high mental effort) and *peripheral* (from low mental effort), while the Heuristic-Systematic Model called them (as its name suggests) the *systematic* and the *heuristic* processing.

The dual route distinction, as explained in Petty and Brinol (2008), was finally able to...

...explain the **strength** difference in attitude change, research indeed supports that the more cognitive activity (or elaboration/processing) is spent in attitude change, the more durable, resistant to counterpersuasion and impactful on behavior the new attitude will be (tripartite consequences, Krosnick & Petty, 1995).

...make order among all **persuasion processes** that have been discovered over time and that have been considered as competing. That is, all existing theories of persuasion can be organized and accommodated through the dual route overarching umbrella.

...dissolve the "reigning confusion" in **empirical results** about persuasion variables (e.g., source credibility, attractiveness, emotion, message structure...), that is explaining how the same variable can either enhance or reduce attitude change depending on the situation. The ELM explicitly postulated the *multiple-roles* notion according to which variables can impact attitudes through a finite number of mechanisms, these are situations that predict how the variable will boost or lessen

persuasion. The ELM is thus a *dual process* theory (such as Kelman's framework) but it overtakes the false single effect assumption in favour of the more accurate *multiple effect* assumption. As we shall see, a given variable can potentially assume five different roles depending on the circumstances: it is hardly possible to say that something is always good or bad for persuasion.

Today the ELM and the HSM have more similarities than differences and can accommodate the same empirical results (Petty & Wegener, 1998). However, the focus will be on the ELM because it has generated more research and it offers a more comprehensive framework for understanding persuasion effects (Perloff, 2010). Its father, Richard E. Petty, is undoubtedly one of the most influential researchers in this area, in fact his contributions still enlighten the current state of knowledge.

2.4.4 Metacognition

After the ELM has been experimented, at the beginning of the 21th century it was enriched with new discoveries. These were rooted on a prominent topic in social psychology (Petty & Briñol, 2008), that is *metacognition*.

As its name suggests, individuals may elaborate on their own thoughts, that means thoughts about our thoughts. This phenomenon makes a distinction between primary thoughts or first-order cognition (that is an association of an object with an attribute) and secondary thoughts or second-order cognition which involves reflections on the first level thoughts (Petty, Briñol, Tormala & Wegener, 2007). One of the most important reflection is in terms of *confidence* on them, ranging from extreme certainty to extreme doubt. This dimension is completely separated from the dimensions of expectancy and value, *thought confidence* is the individual's subjective assessment of the validity of his or her thoughts (Petty, Briñol & Tormala, 2002).

The idea that subjective confidence in a thought can increase the impact of that thought on attitude (and thus on attitude change) is referred as the *self-validation hypothesis* and it was experimented by Petty and colleagues in 2002. Results confirmed that persuasion is determined not only by how many favourable and unfavourable thoughts are generated from the message but also on the confidence people have on them.

Considering Petty's initial experiments (where confidence was both measured and manipulated) and also following studies (for a review of them see Briñol & Petty, 2009), it is clear that thought confidence can be induced in two ways.

- **Directly**: thought confidence can be induced by revealing some persuasion variable after message processing (timing is crucial) such as providing an in-group

feedback, revealing that the source was highly credible or it had a majority status. This way thought confidence stems directly from the objective accuracy or inherent quality of thoughts (the same for ease of retrieval: the more easily the thought is generated the higher the confidence in it).

- **Indirectly**: other variables activated after message processing can induce general confidence in the individual (confidence is an autonomous persuasion variable). These can be: ask participants to recall a personal experience in which they felt confidence, induce a sense of power, positive emotions, ask participants to perform body actions while listing post-message thoughts (e.g., nodding "yes" rather than "no" with the head, writing with their dominant or non-dominant hand, sitting in a confident or doubt posture). This general confidence or doubt that is evoked will be misattributed to thoughts and thus it will indirectly lead to thought confidence or doubt.

Through both ways, thought confidence will enhance the impact of thoughts, regardless they were favourable or unfavourable toward the advocated position.

The discovery of the self-validation process completed the functioning of the ELM model, furthermore it added the 5th mechanism or role through which persuasion variable can alter persuasion (i.e., by affecting thought confidence).

2.4.5 Recap

In the following graph a historical summary shows the most important milestones in the persuasion research.

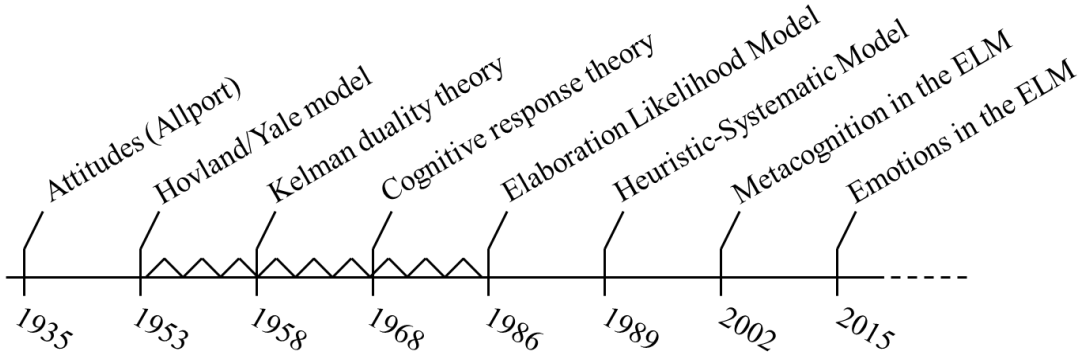


Figure 2.4.5 Milestones in the Persuasion Research.

The jagged line represents the period of confusion, conventionally starting from Hovland's research until the advent of the dual route models. Over this period many theories have been proposed, some of them will be presented in the following

paragraphs when explaining processes that can occur in persuasion (under either high or low elaboration).

The years in the graph refer to the publication dates of single articles. However, most of researches started much earlier than their publications, such as Hovland's experiments in the 1940s (before World War II) or the ELM and HSM that were initially developed in the end of 1970s.

All the articles behind the publication dates have been cited up to here except for "Emotions in the ELM". For several years, the ELM have been criticized for not addressing the issue of emotions (Perloff, 2010). Although some frameworks have been presented (from Nabi, 1999 to Solloway, 2010), recent experiments together with previous ones allowed to finally integrate the effect of emotions within the ELM. In 2015, an invited review (Petty & Briñol, 2015) reported all the conclusions that can be supported empirically.

2.5 The Elaboration Likelihood Model

The name of the model suggests that there are factors affecting the probability (*likelihood*) that an individual will strongly *elaborate* on the persuasive message. Elaboration is the extent to which a person scrutinize message arguments "in light of the associations available from memory" (Petty & Cacioppo, 1986, p. 128) or, in other words, the extent to which new information are integrated with prior knowledge structures (MacInnis & Price, 1987, p. 475). Thus, actively think about the message means establish multiple connections among existing data and completely "absorb" arguments into our mental background.

As stated earlier, this theory is an extension of the cognitive response model because it considers the possibility that individuals do not always elaborate persuasive messages. This is a very observable evidence: it is neither possible nor practical to process every message. As Richard E. Petty noted, "just imagine if you thought carefully about every television or radio commercial you heard or ad you came across in newspapers or magazines. If you ever made it out of the house in the morning, you probably would be too mentally exhausted to do anything else!" (Petty, Cacioppo, Strathman & Priester, 1994, p. 118). Considering all the stimuli, the decisions and issues we face every day, it is easy to comprehend why our mind needs some effort-saving mechanism.

In this chapter, the whole functioning of the ELM will be explained by highlighting the processes it includes and the ways through which a variable is postulated to affect persuasion (for a review see Petty & Briñol, 2012).

2.5.1 Overview

The ELM assumes that elaboration ranges in a continuum from **low** to **high**. Only in the high extreme people will ponder issue-relevant information and the merits of arguments in relation to knowledge they already possess. In the opposite case people will engage in a number of less effort-demanding processes that allow them to arrive quickly and easily to a conclusion. In the following paragraphs, the main high- and low- elaboration processes will be presented (for a review see Petty, Wheeler & Tormala, 2010).

Recalling the Insights on the topic section, most principles that have been presented refer to low elaboration processes (social proof, liking, authority and scarcity) while consistency refers to one particular high elaboration process (exploitation of dissonance) and the missing one, reciprocation, leverages on the broader phenomenon of social influence that is behind the scope of this dissertation.

Now the question that is implicit in the name of the model is more interesting: when are individuals particularly likely to elaborate persuasive messages? Luckily, the answer is very intuitive: it depends on how much the individual *want* and *can* elaborate the message. More formally, the two factors are (Petty, Wheeler & Tormala, 2010):

- **Motivation**: it is the desire to exert a high level of mental effort. It depends on how much the individual is personally involved with the issue and also on a psychological trait called Need for Cognition;
- **Ability**: it is the availability of the necessary skills and opportunity to engage in thinking. These depends on prior knowledge about the issue and on other opportunity factors (such as distractions or message repetition) that can hamper or enhance ability to think;

These factors will be discussed in details in the section Determinants of Elaboration. For now, it is important to underline that the individual has to be both able and motivated to effortfully think about the issue, otherwise some shortcuts will be used. The higher these two factors the more likely a high elaboration.

The elaboration level will directly determine how attitudes will change, that is how persuasion will occur: in the high extreme of the elaboration continuum, attitudes will change through the **central route**, when instead the elaboration likelihood is low, attitudes will change through the **peripheral route**.

What the model postulates, and confirms through empirical experiments, is that these ways to persuasion vary in their effectiveness: attitude changes coming from the central route (i.e., high mental effort) are **stronger** than changes coming from the peripheral

route. It means central attitude change will be much more stable over time, resistant to counterpersuasion and, above all, it will be a greater predictor of behaviour (tripartite consequences). As we saw in Attitudes and behaviour, Elaboration is one of the determinants of attitude's strength (Visser, Bizer & Krosnick, 2006).

2.5.1.1 High Elaboration

When the individual elaborates the message, the outcome of persuasion depends on the thoughts that are generated (for a discussion of the thought-listing procedure see Cacioppo, Harkins & Petty, 1981).

Thoughts can be considered as the mental reflection about how the new information has been integrated with prior knowledge in terms of the consequences it has for the persuasion goal. As a consequence, thoughts can be rated as **positive**, **negative** or **neutral** depending on whether they, respectively, support the advocated position (favourable thoughts), do not support it (unfavourable) or they cannot be used to either reject or refuse the message (i.e. although the information has been integrated, it lacks the link with the message position). Central attitude change will occur only if the total number of thoughts of one sign is greater than those of the other sign. If the "**net result**" is positive persuasion will *occur*, otherwise if there are more negative thoughts persuasion will *fail* (attitude level will move to the undesired direction, boomerang effect). If the net result is neutral, because the numbers of thoughts of either signs are equal or because there are only neutral thoughts, the individual will retain the initial attitude exactly as it is (*resistance* to persuasion).

Another aspect has to be considered: thoughts are not differentiated only by their sign (or valence), they have also to be weighted to the **confidence** the individual has on them (Petty, Briñol, & Tormala, 2002). That is because, as explained by the self-validation hypothesis, the higher the confidence the higher the impact of thoughts. Self-validation processes can occur only when elaboration is high, as authors explain:

"*There are at least two reasons for this. First, for validation processes to matter, people need to have some thoughts to validate. Second, people need substantial motivation and ability not only to think at the primary level of cognition but also to think and care about their own thoughts*" (Petty & Briñol, 2015, p. 17).

In conclusion, the outcome of persuasion in high elaboration depends on the content (or valence) of thoughts, their amount and also the confidence people put on them (singularly or overall).

2.5.1.2 Graphical representation

The model described up to here is represented below. This graph is a simplification of the most recent ELM representation as a flow diagram (Petty & Briñol, 2012; available in the Appendix) that actually remained almost equal to the original diagram (Petty & Cacioppo, 1986).

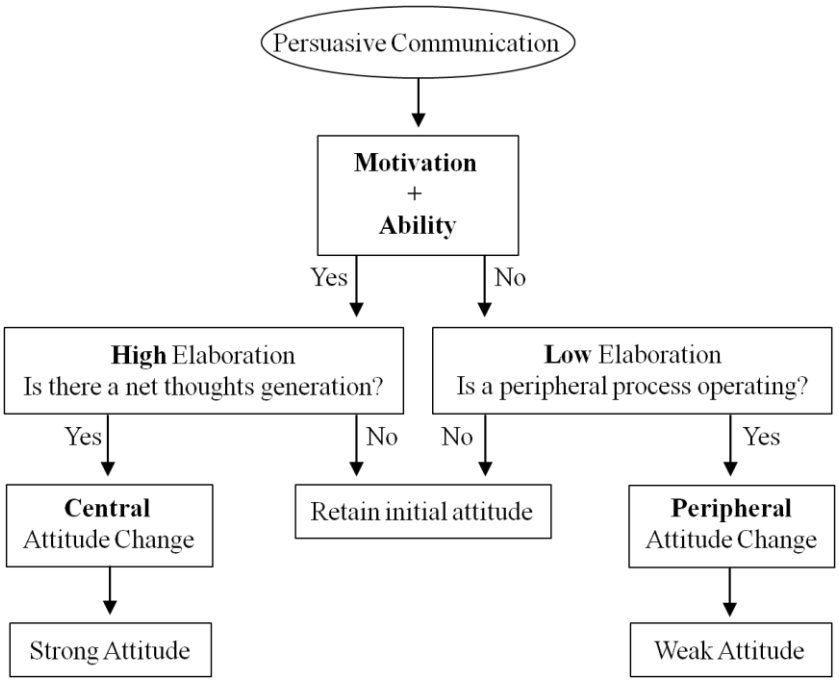


Figure 2.5.1.2 Schematic depiction of the Elaboration Likelihood Model.

The graph explains that only if the individual is both motivated and able to process the message he will start thinking effortfully about it (**high elaboration**). The outcome depends on the thoughts that are generated: if there is a net result (either positive or negative) central attitude change will occur (respectively toward either the desired or undesired direction), otherwise the individual will retain the initial attitude as it is (resistance to persuasion).

If the individual has no ability or motivation to elaborate the persuasive message, **low elaboration** processes can interfere and a peripheral change will weakly modify the attitude. However, if the persuasion setting doesn't offer any stimulus that allows to activate them, the initial attitude will remain the same.

Notice that central attitude change will produce a stronger attitude for better or for worse, that is whatever the direction of change is toward the desired (dominant thoughts are favourable) or undesired direction (dominant thoughts are unfavourable). Of course when the initial attitude remains the same after a high elaboration process, it is stronger than before even if its level is not changed.

2.5.2 Tradeoff Hypothesis

The previous diagram is as easy to comprehend as technical incorrect.

For the reason why it is a discrete representation that rigidly distinguishes between high and low, central and peripheral, it fails to depict how the ELM explains a more complex reality. As the ELM's authors point out: "*Elaboration is incorrectly thought to refer to two discrete points rather than a continuum. This confusion probably stems in part from the depiction of high- and low- elaboration endpoints in schematic presentations* [such as the one proposed by themselves in order to explain the concept]*, or perhaps from discussion of the two routes to change, meant to describe prototypical points*" (Petty & Wegener, 1999, p. 45). "*Of course, much of the time, persuasion is determined by a mixture of central and peripheral processes*" (Petty & Briñol, 2012, p. 226).

The problem of the previous graph is not really the absence of the elaboration continuum, what is missing is the idea that in real-world situations persuasion will always include both central and peripheral routes. This is very easy to observe, imagine for example when you are evaluating a product (that is *shaping* your attitude toward it) in order to chose whether to buy it. We will both think about the merits of arguments but also make inferences about its value considering how many people bought it, how credible the source is and what appeals are highlighted in the message.

The co-existence of both central and peripheral routes to persuasion, that jointly influence judgments, is the implication of the *tradeoff hypothesis*. What this notion says is that movements in either direction along the elaboration continuum tend to enhance the relative impact of one route over the other (Petty, Wheeler & Tormala, 2010). That is, the higher the elaboration the higher the share of central route over total attitude change. Then, the lower the elaboration the higher the share of peripheral route over total attitude change.

In order to graphically include both the elaboration continuum and the tradeoff hypothesis, a different representation of the ELM is proposed.

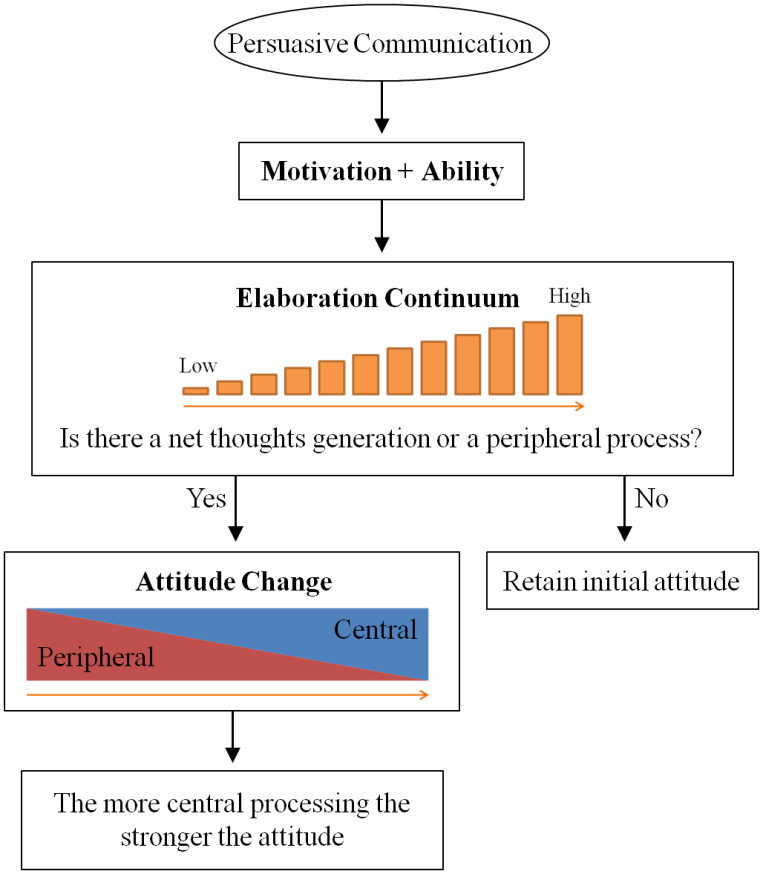


Figure 2.5.2a New schematic depiction of the Elaboration Likelihood Model.

In the graph, motivation and ability to elaborate affect the extent of elaboration (ranging from low to high). This extent, in turn, determines the share of peripheral and central routes. Notice that, for most of the points, both routes will occur and only in the extreme points of the elaboration continuum it will be possible to have a pure central or peripheral persuasion. Also the consequence of attitude change in terms of strength has been updated: the higher the share of central route the stronger the attitude.

The tradeoff between central and peripheral route has different implications for each of them, it means as the share of one route varies the elaboration process modifies in some ways (Petty, Wheeler & Tormala, 2010):

- For central attitude change, the high mental effort takes place in terms of quantity of information that has to be examined and how critically information are examined (that can be figured out as time spent on the single information). Thus, in the high elaboration extreme both quantities are high, then, as elaboration decreases (reducing the central route share), both the amount of arguments considered and the effort that is spent on each of them decrease as well.

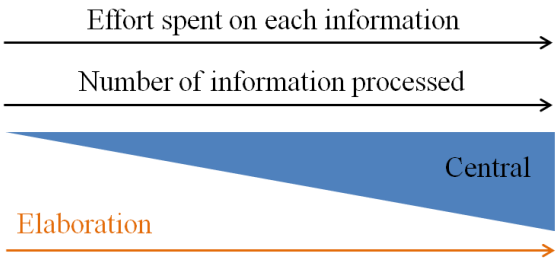


Figure 2.5.2b Central attitude change along the elaboration continuum.

- For peripheral attitude change, we have to consider that low elaboration processes require different amounts of cognitive effort (as we shall see, *associative* processes are "cheaper" than *inference-based* processes) and multiple low elaboration processes can be activated simultaneously. Let's see what happens when elaboration varies: moving toward the low extreme increases the number of low effort processes that are activated simultaneously, however moving toward the high extreme increases the share of inference-based processes over total low elaboration processes.

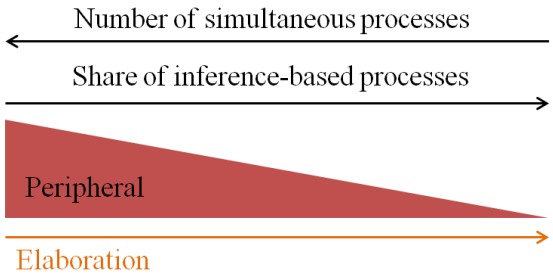


Figure 2.5.2c Peripheral attitude change along the elaboration continuum.

2.5.3 Low Elaboration Processes

The main processes that can be activated when motivation and ability to think are low are presented in several attitude change reviews. This paragraph will faithfully report one of the most recent classification (Petty, Wheeler & Tormala, 2010) that starts by distinguishing associative and inference-based processes. As already mentioned, the main difference between them is the cognitive effort they require (although they both are low elaboration processes): associative processes are more unconscious than inference-based ones.

2.5.3.1 Associative processes

Associative processes are those that impact attitudes by associations that develop between attitude objects and positive or negative stimuli.

- **Classical conditioning**: when an initially neutral stimulus (an attitude object such as a new product) is immediately followed by another stimulus that already has positive or negative associations, the former gains the valence of the latter. In research, that has been proved with odors, temperatures, sounds, shocks, photographs and other stimuli (Gresham & Shimp, 1985). Early work was Pavlov's teaching dogs to salivate at the sound of a bell by associating it with food.
- **Affective priming**: (backward conditioning) when an initially neutral stimulus is immediately preceded by another stimulus that already has positive or negative associations, the former gains the same valence. It was found that subliminal presentation of positive or negative pictures (e.g., either smiling people or snakes) made subsequent evaluations of unfamiliar target individuals more favourable or unfavourable, respectively (Krosnick, Betz, Jussim & Lynn, 1992).
- **Mere exposure**: research has shown that the mere repeated exposure of an object can make one's attitude toward that object more favourable, even if one doesn't recognize the object as having been encountered previously (Zajonc, 1968). The perception of fluency and familiarity increases persuasion at low elaboration levels, also message fonts or colour combinations that are more easy to read induce these effects (for a review see Alter & Oppenheimer, 2009). An example is low quality products whose brand has been designed to remember another popular brand: the individual unconsciously build a positive attitude.

2.5.3.2 Inference-based processes

Inference-based processes do not rely on simple associations but on deductions and assumptions that require a higher mental effort in comparison with associative processes.

- **Balance**: (Heider, 1958) in order to find balance (harmony) within the elements of an attitudinal system, people agree with others they like and disagree with others they dislike at low levels of elaboration (this is Cialdini's *liking* principle).
- **Attribution**: (Bem, 1965) people infer attitudes about themselves by observing their own behavior. In one experiment (Taylor, 1975) participants inferred their attitudes from their own physiological reactions only when elaboration was low (self-perception theory), in another application (overjustification effect) people devalued previously enjoyed activities when they received sufficient rewards for

engaging in them (Lepper, Greene, & Nisbett, 1973) because they view their behaviour stemming from the reward rather than their real preferences.

- **Heuristics**: according to the heuristic-systematic model of persuasion (Chaiken, Liberman & Eagly, 1989), when elaboration is low people evaluate persuasive message on the base of stored heuristics, these are simple decision rules based on prior experience or observations. Heuristics that received empirical observations are: "experts are correct", "length implies strength", "if other people believe it, then it is probably true", the mere number of arguments (pros versus cons), speed of speech or the amount of effort associated with the object (e.g., the time it took to compose a poem or a painting).

  The availability heuristic relies on the examples that immediately come to mind because they are already "available" or easy to recall from memory. These will be judged more relevant than others.

  The principles of *scarcity*, *authority* and *social proof* (see Insights on the topic) exert their effect as heuristics when elaboration is low.

- **Priming**: the exposure to one stimulus influences the response to another stimulus, such as the expression of an attitude. In one experiment (Berger, Meredith & Wheeler, 2008) people who were assigned to vote in schools (rather than churches) were more likely to support education fund raising. In another experiment (Kawakami et al., 2003), subjects who were implicitly "primed" with stereotypes (because they read related words) reported more stereotype-consistent attitudes (e.g., "skinheads" reported more racist attitudes, "elderly" expressed more conservative attitudes).

2.5.4 High Elaboration Processes

When the individual is able and motivated to actively think about the issue, three high elaboration processes can produce persuasion: elaboration due to the interaction with a persuasive message (cognitive response approach), self-persuasion without any message (role-playing exercises or simply asking to think about the topic) or self-persuasion as a result of a dissonance process (theory of cognitive dissonance).

What these processes have in common is that the individual will really pay attention to the issue, thus the persuader has to face more difficulties in convincing him and low elaboration "tricks" will not help to achieve the goal of attitude change. Following paragraphs will address how to persuade others by using a strong message (recalling the

three lessons that have been presented in Bases of Attitudes) or by exploiting dissonance (already mentioned in Cialdini's *consistency* principle).

2.5.4.1 Cognitive Response Approach

The success of persuasion depends on how the message leads individuals (in high ability and motivation) to generate thoughts with respect to their pre-existing knowledge, prior attitude (if any) and considering also information not contained in the message itself.

As already mentioned, three dimensions of thoughts have proven important:

- *Content*. It means that the overall valence, computed as favourable/positive thoughts minus unfavourable/negative thoughts toward the advocated position, determines the outcome of persuasion (occurrence, resistance, failure).
- *Amount*. It means the number of net thoughts (positive or negative), it determines the effectiveness of persuasion, that is the attitude change differential (toward the desired or undesired direction). In essence, the more net thoughts the wider the change.
- *Confidence*. It means the perceived level of certainty for every single thought that determines its weight or impact in the overall persuasion process. As we shall see, some persuasion variables can be used to induce confidence or doubt (directly or indirectly) toward all the thoughts that have been generated (paying attention to whether dominant thoughts were favourable to the message position or not).

Now the question is: what are the message arguments leading to the highest amount of favourable thoughts? In other words, what determines the argument quality, what makes an argument strong for the purpose of attitude change?

The answers is embedded in the previous lessons we learned by studying attitudes. That is, strong arguments about the attitude's object are those that:

- (Lesson #1) Support on a causal basis the desirability of the object's consequences and how likely they are associated with the object;
- (Lesson #2) Match the individual's most relevant area of beliefs about the object (Affective, Behavioral or Cognitive);
- (Lesson #3) Support the main function the attitude's object could have for the individual;

However, what the ELM teaches us is that these lessons are valid only when elaboration is high, in this condition the individual will really consider arguments, otherwise even the most cogent message will fail in persuading who is in low elaboration conditions.
Remember that arguments can be used to shape, change or reinforce an attitude: only arguments that rigorously provide evidences are able to impact it. Strong arguments are those proposing statistical data, logical assumptions and addressing the real causes of the recipient's resistance. Weak arguments could be personal opinions, quotations, non-representative examples or also good arguments for the wrong person. Of course strong arguments are always more persuasive than weak arguments (**arguments' quality effect** on attitudes), however what it is less intuitive is the effect of weak arguments.
One could think that after strong arguments have been proposed, adding also weak arguments will have a slight positive effect that is better than nothing. Research has demonstrated that, when elaboration is high, increasing the number of weak arguments (*ceteris paribus*) decreases persuasion (Petty & Cacioppo, 1984). It means they do not contribute with an incremental improvement but they actually subtract effectiveness to the communication. They are more able to convince of the opposite position. Indeed, it has been found that the presentation of only strong arguments is more persuasive than presenting both strong and weak arguments (Friedrich et al., 1996). In conclusion, when elaboration is high, silence is better than weak arguments. Something to think about.

2.5.4.1.1 Biased Information Processing

When elaboration is high, and thus the individual carefully process information, it doesn't mean he will do it in an objective manner (Petty, Wheeler & Tormala, 2010). Indeed, both motivation and ability to think can be biased by any factor that can influence the direction of thinking.
When there is a *motivational* bias (e.g. provoked by some arguments presented in the message), the individual will stop to seek the truth "wherever it might lead" (Petty & Cacioppo, 1986) but he will prefer one judgement/conclusion over another. He may prefer the forbidden judgement (if a *reactance motive* is somehow evoked, Brehm, 1966), the position advocated by the source he likes (*balance motive*, Heider, 1958), the most socially acceptable position (*impression management motive*, Tedeschi, Schlenker & Bonoma, 1971) or the position that will make him feel the best about himself (*self-affirmation motive*, Steele, 1988).
On the other hand, the *ability* bias affects how prior information are recalled during processing, favouring some connections rather than others. One factor such as positive

mood (Bower, 1981) could increase the access to positive materials stored in memory and restrict negative ones.

In general, bias is observed to affect processing mainly when the persuasive message is somewhat **ambiguous**. It means multiple interpretations of presented information are possible, thus it is not clear if arguments are precisely weak or strong because their link with the message's position is missing (Chaiken & Maheswaran, 1994).

The main lesson is that the clearer the message the less likely the bias (both motivational and ability).

Clarity should be the dominant strategy when bias could act against the persuasive goal and available arguments are strong. If, instead, arguments we can use are weak and a favourable bias could be provided, making arguments ambiguous will enhance persuasion.

When discussing persuasion variables, a focus will be given (where possible) about how they can be used to bias processing.

2.5.4.2 Theory of Cognitive Dissonance

This section will explore another interesting way to achieve persuasion, that is exploiting an individual's state of dissonance. This process is rooted on the theory of cognitive dissonance (Festinger, 1957) that has generated a great amount of research and that today is still influential. In this paragraph we will see in details what was called the *consistency* principle in Insights on the topic.

Dissonance is a negative and unpleasant feeling that is experienced when the individual simultaneously holds two conflicting cognitions (Festinger, 1957). One of them is behavioral, such as "I spent a lot of money for this product", and the other one can be either rational or emotional, such as "I just found it doesn't work properly" (e.g., a product) or "I don't like it at all" (e.g., a movie). In order to restore consistency one of the two cognitions has to be changed. However, for the reason why it is not always possible to change the behavioral action (i.e., reimburse the product or the cinema ticket), dissonance process typically involves changing the second cognition. Thus the individual will autonomously think about the attitude toward the object and convince himself that: "after all, the movie was nice".

Brilliant real life examples (Exs) of cognitive dissonance in persuasion have been presented in Perloff's work (2010).

Ex1) The time children spend in religious activities (Christian catechism or Jewish study of Torah) is dissonant with the knowledge they could be having more fun

doing other things. The need to reduce dissonance pushes them evaluate positively those experiences and increase their attitude toward religion.

Ex2) Initiation rituals at many college fraternities or military academies involve physical stress, verbal abuse and humiliation. In order to compensate the negativity of these experiences, the commitment to the group is amplified. In other words, the group evaluation becomes extremely positive in order to avoid the dissonance between a tremendously high cost and a slight benefit.

How persuaders and communication campaigns could exploit this psychological mechanism to change attitudes? Two ways can be used.

Induced compliance means encourage a person to perform a counterattitudinal action, it means comply with a persuader's request (behavioral part) that is against the person's attitude (the cognitive beliefs that has to be changed). It is essential that the person freely chooses to perform the action in exchange for an insufficient external justification, such as a small amount of money. The dissonance between the attitude and the counterattitudinal action without a large reward will lead the person to self-change the attitude.

This effect is even greater if the counterattitudinal action is public, thus social pressures will be activated (that is Cialdini's *commitment*).

Ex1) In one experiment (Festinger & Carlsmith, 1959), students were asked to perform extremely boring tasks (such as sharpening a large number of pencils) and then to tell the next participant that they had a lot of fun. However, some students were paid $20 to lie and others were paid only $1. At the end, they rated the enjoyableness of the task. Surprisingly, who received only $1 liked the tasks more and was even more willing to participate in similar experiments in the future. How is it possible? $20 provided a large enough justification to hold "The task was boring" (attitude) with "I said it was fun" (behavioral action) and erase dissonance, while $1 was not sufficient and pushes students to align their private attitude with their public behavior.

Ex2) Dissonance could be used to make children appreciate some not-liked but necessary activity, such as cleaning the room or doing physical exercises. Parents may offer them a dull reward in exchange for doing the counterattitudinal activity: after engaging in it, children will be prone to develop a positive attitude toward that activity in order to find a justification of their behavior.

Ex3) A company may encourage customers to publicly support its products even if they are not interested in them. After the channel to reach these individuals has been identified, the company could launch a campaign to share on a social media a message (such as a video) that supports its products in exchange for a small reward (such as free samples or discounts). This way the potential customers that were not sure about the company will adjust their attitude to the public commitment they displayed.

Induced hypocrisy is the other way to persuade people by exploiting dissonance. It consists of simply highlighting how the individual's behavior is inconsistent with its beliefs and then let psychology do its work. Let's see few examples of how to apply this strategy.

Ex1) In one study about safe sex (Stone et al., 1994) students were asked to write about the importance of this issue and, later on, to list their failures to practice safe sex. These students bought condoms more than students who didn't face hypocrisy (control group).

Ex2) A company could find what is the main belief against its products and then what are the main behaviours contradicting that belief. Then, an effective communication campaign could highlight (explicitly or implicitly) this hypocrisy and change attitudes through dissonance.

2.5.5 Determinants of Elaboration

Variables that are able to affect the extent (amount) of thinking act on either motivation or ability to think about the issue. This paragraph is built on this distinction. Remember that when elaboration is high, argument quality is more effective while when elaboration is low mental shortcuts prevail.

2.5.5.1 Motivational factors

- **Personal relevance**: (also called issue/personal involvement, self-relevance, ego-involvement or importance) it is the extent to which the attitudinal topic is related to the self and how much the individual considers important that topic (Petty & Cacioppo, 1990). Relatedness to the self means the issue has direct consequences on the individual in terms of his personal values (e.g., freedom), goals (e.g., get a degree), people (e.g., a relative but also the self: my intelligence, my body) and objects (e.g., material possessions). Then, the subjective importance of that topic

must be considered as well (e.g., some individuals may consider health as important more than others).

When personal relevance is high, people are more influenced by the substantive arguments in a message and are less impacted by peripheral processes (Petty, Cacioppo & Goldman, 1981). Personal relevance can be measured but also manipulated, such as highlighting the consequences on the self, including first-person pronouns (Burnkrant & Unnava, 1989), using arguments supporting the main function the attitude's object has for the individual (Petty, Wheeler & Bizer, 2000) or also introducing incongruities among persuasion variables (Karmarkar & Tormala, 2010). The last one means violating expectations in order to evoke surprise and enhance this way motivation to elaborate: I expect that my position is endorsed by the majority of people, I could expect a positive/negative framing for a given topic, I expect an expert source to be certain of his arguments.

- **Need for cognition**: (NFC) it is a personality characteristic determining the motivation to think, "a stable individual difference in people's tendency to engage in and enjoy effortful cognitive activity" (Cacioppo, Petty, Feinstein & Jarvis, 1996, p. 198). Cacioppo and associates developed a scale of statements to reveal NFC by asking respondents to rate each sentence from 1 to 5: "I would prefer complex to simple problems", "Thinking is not my idea of fun", "I only think as hard as I have to" and so on (Cacioppo & Petty, 1982). People high in NFC are more influenced by quality of arguments, while those low in NFC are more influenced by peripheral processes that save them from effortful thought. Thus, persuaders could tailor their messages considering this personality trait. For example, recent experiments (Green et al., 2008) found that low NFC individuals are more transported by films while high NFC individuals prefer print narratives.

2.5.5.2 Ability factors

- **Opportunity factors**: situations can enhance or hamper individuals' ability to process the message. *Repetition* provides more opportunities for argument scrutiny and reduces the obstacles to high elaboration. On the other hand, external *distractions*, *fast presentations*, *external pacing* of messages (such as a registered ad rather than printed), *time pressures* on processing, the recipient's *uncomfortable posture* and, of course, rendering the message *difficult to understand* have been empirically found to decrease the likelihood of elaboration and thus increase the impact of low effort processes (see Petty, Wheeler & Tormala, 2010, for a review).

- **Prior knowledge**: the more people know about the issue the more likely they will process information carefully. Studies revealed that argument quality has a stronger impact on attitudes among expert individuals while those with little relevant-knowledge rely on the available shortcut (such as message length; Wood, Kallgren & Preisler, 1985). Furthermore, the same studies found that knowledge is only effective to the extent that it is accessible, that means it can be easily recalled from memory.

2.5.5.3 Consequences

As already stated, these variables determines the likelihood of elaboration. But how the extent of elaboration affects persuasion? Does it enhance or hamper attitude change?

We already saw that increasing the level of thinking will increase the impact of message central scrutiny and will decrease the impact of peripheral processes. Thus the answer is intuitive: I prefer people to elaborate more on the persuasive message as long as what it contains is compelling. In other words, elaboration increases persuasion depending on how strong the presented arguments are. As we saw, arguments' strength increases the extent of attitude change (arguments' quality effect on persuasion), however the more the individual can elaborate on them the more he will appreciate their merits or demerits. Thus, **elaboration amplifies the arguments' quality effect** on persuasion: strong arguments will appear stronger, but weak arguments will appear weaker!

So, if our arguments are strong we prefer the listener to highly elaborate them. This way a higher and stronger attitude change will be achieved toward our goal. If otherwise our message is weak, we prefer a low elaboration supported by positive cues that will temporarily and slightly change attitudes. That is because if the recipient starts deeply reasoning on it, he will be convinced of the opposite position and his attitude will move toward the undesired direction (i.e., persuasion will dramatically fail).

Below, two classic experiments are presented in order to impressively explain how the elaboration continuum (set by a motivational or an ability factor) determines the impact of either arguments' quality or peripheral shortcuts.

Experiment on Motivation

In one of the first experiments on the ELM (Petty, Cacioppo & Goldman, 1981), students have been asked to evaluate the institution of a final comprehensive exam in their major area of study, considering that their feedbacks will be used by the university in order to decide whether to implement the idea (it has been re-proposed in many other

experiments). This issue generated a high involvement for students, the goal is attitude shaping because the comprehensive exam is a new topic to evaluate.

Before receiving the message (containing either strong or weak arguments, presented by either an expert or non-expert source), elaboration likelihood was determined by the involvement on the issue: students were told the exam would be instituted either the next year (high involvement due to consequences in their lives) or after 10 years (low involvement). Finally, post-communication attitude toward the final comprehensive exam was measured. The results are the followings.

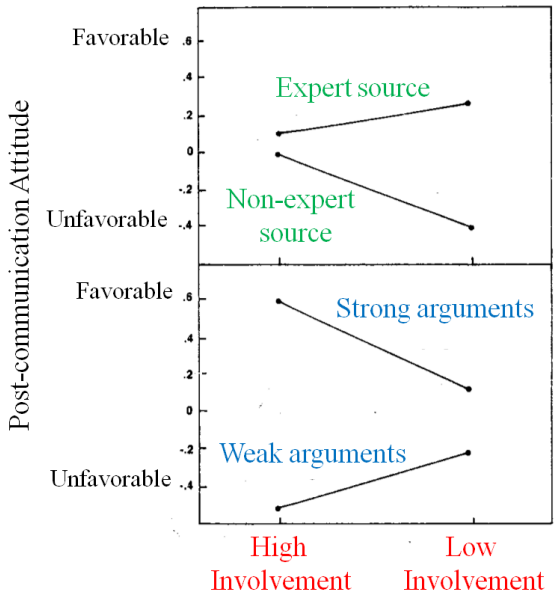


Figure 2.5.5.3a Attitude change for the Argument quality × Expertise × Involvement Interaction.
Source: Petty, Cacioppo & Goldman, 1981, p. 852.

In the graph, attitude levels are linked by lines in order to highlight the change between high and low involvement. Then, when attitude level is above 0 a positive attitude has been shaped (persuasion has occurred, positive attitude shaping was the goal) but when it is below zero a negative attitude has been shaped, that is the opposite of the desired outcome (persuasion has failed).

Notice that only when elaboration is high the quality of arguments makes a real difference, while the expertise of the source is almost irrelevant. On the other hand, when involvement sets the elaboration as low, source expertise makes a much wider difference than what he is actually saying.

These effects works in both positive and in negative directions: when elaboration is high, strong arguments will be more appreciated (persuasion will be more successful), but if they are weak the boomerang effect (persuasion failure) will be higher. On the

other hand, when elaboration is low a positive cue will be a success, a negative cue will be a defeat.

Experiment on Ability

In another experiment (Moore et al., 1986), elaboration was determined by an ability factor, which is time of presentation. Two radio commercials, about either calculators or razors, were presented in three different speech rates (words per minute: slow, moderate and fast). This way, three levels of elaboration were established: low (rapid ad made processing impossible), high (slow ad allowed processing) and unconstrained (moderate speed made processing possible but challenging, participants had to decide whether to process the message or not). Furthermore, source expertise and argument quality were manipulated. The results are depicted below.

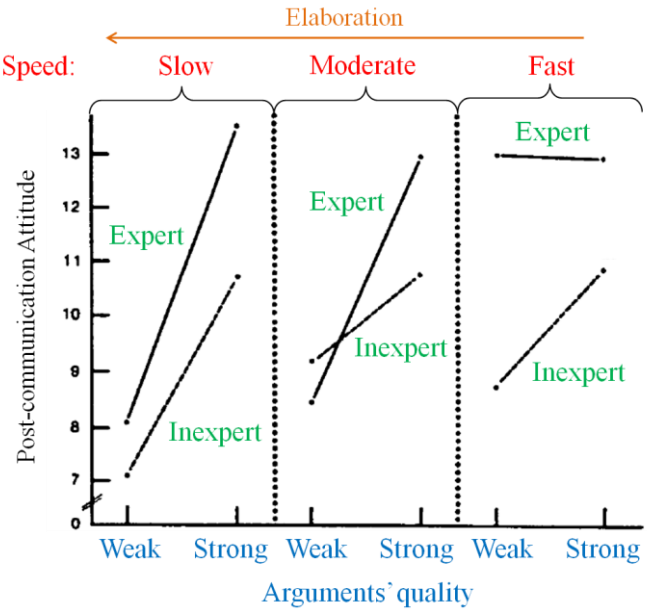


Figure 2.5.5.3b Attitude change for the Argument quality × Expertise × Exposure rate Interaction.
Source: Moore et al., 1986, p. 97.

The effect of the ability factor on elaboration likelihood is demonstrated: when elaboration is high (slow rate) expertise makes just a slight difference while argument quality is responsible of the highest variation; when elaboration is low (fast rate) expertise makes the difference while the strength of arguments is not appreciated. Then the experiment adds the unconstrained dimension: when elaboration was not obstructed by ability (moderate speed) and motivation was unsure, expertise enhanced thinking (arguments' quality effect is higher) while the inexpert source reduced the attention

toward arguments. Notice that in case of weak arguments, an inexpert source would have been better.

This experiment explains how individuals process persuasive messages along the elaboration continuum and introduces how a given variable (i.e., source expertise) can assume different roles on the base of the persuasion setting. The following paragraph explains what are the settings that predict how the same variable can affect persuasion.

2.5.6 Multiple Roles Hypothesis

The ELM identifies for any given variable in the persuasion setting (referred to source, message, recipient or context) five different roles it can potentially assume in influencing attitudes. That means, the same variable can affect persuasion in five different ways, the one that will occur can be predicted on the base of some parameters that are going to be discussed (a brief explanation can be found in Petty & Briñol, 2008, for a deeper discussion see the review Petty & Briñol, 2012).

In this paragraph the five roles are introduced through a practical example and then summarized with some graphical help.

Think about a variable that can hardly have more than one effect on persuasion, think about **source attractiveness**.

1) The main role it should assume is as a mental shortcut or "peripheral cue". A **cue** is any signal for which the individual in low elaboration can leverage on low effort processes such as, in this case, a balance effect ("I agree with people I like"), an association effect (link the issue with the attractive speaker) or a heuristic ("beauty people are right") that will allow to save cognitive work. For this reason the beautiful seller of vacuum cleaners will be more effective in changing (temporarily) the customer's attitude toward the product than an unattractive seller (as long as motivation and ability are low). In the political context, beautiful candidates provide low-involved voter with a simple cue to take a decision (as we saw in Insights on the topic). However, this is not the only way attractiveness can affect persuasion.
2) In fact, there could be instances where the beauty of the speaker can be used as a piece of evidence in order to take a decision. If, for example, the source is trying to sell a cosmetic product or we have to hire that person for a front office position, then the appearance of that person will be a central dimension in the assessment. In other words, if source attractiveness is relevant to the persuasive message, then this variable will be used as an **argument** that will centrally influence judgement

together with all other arguments (that means it will not be the only argument!). This process occurs only when elaboration is high, because thinking is pulled by motivation and it is not constrained by ability factors.

3) In high elaboration setting, another mechanism can occur. If source attractiveness is not relevant for the judgement, then the speaker's beauty can bias information processing. In this setting the persuasion variable acts as a **bias** or prejudice affecting either motivation or ability to objectively process information. As a consequence, there will be an influence in the direction of thinking, as we saw it is more likely to occur when presented arguments are ambiguous (i.e., they are not clearly strong or weak). Source attractiveness can bias motivation to think by evoking a balance motive ("I agree with people I like") and, this way, driving the interpretation of arguments toward the position advocated by the beautiful speaker. Also ability to think can be biased by the positive feelings evoked by beauty: positive information will be more easily recalled than negative ones.
4) As a variable can affect the direction of thinking, the same variable can influence the amount of thinking and thus act as a determinant of elaboration. Considering source attractiveness, the fact that a famous actor/actress publicly criticizes a governmental action or supports fund-raising for a social cause may push people's motivation to spend more cognitive effort toward that issue (in comparison with a less attractive communicator). This variable role can be labelled as **catalyst** to thinking (Perloff, 2010) and it can occur only when elaboration is unconstrained or, in other words, both ability and motivation to think are moderate. What does it mean: ability factors do not constrain elaboration to be low (e.g., there are no distractions, time pressures, difficulties to understand or too low prior knowledge) while motivational factors do not constrain elaboration to be either high or low (e.g., involvement and need for cognition are moderate: in one experiment about the comprehensive exam, "moderate involvement" was replicated by keeping unspecified the exam's time of institution, Puckett et al., 1983). In this situation (i.e., the absence of determinants of elaboration) the message's recipient is not sure if the issue deserves mental effort or not, thus a variable such as a beautiful speaker can stimulate motivation to elaborate the message. What is the effect of increased elaboration? As we saw in Determinants of Elaboration, thinking increases the arguments' quality effect. Thus, if dominant thoughts to the persuasive message are favourable to it (because of strong arguments) then persuasion will increase, if otherwise dominant thoughts are unfavourable then persuasion will be reduced.

5) Finally, a variable like source attractiveness can enhance or reduce the confidence people have in their own thoughts (Petty, Briñol & Tormala, 2002) acting as a **self-validator**. However this occurs only if the variable is revealed after the persuasive message has already been processed in high elaboration mode (that is because secondary cognition requires even more effort than primary one). In their experiments, Petty and colleagues (Briñol & Petty, 2009) found that revealing some source characteristics (such as expertise or similarity) after the effortful elaboration allows respondents to self-evaluate their thoughts whatever their valence was. The effect on persuasion is the amplification of argument quality, similar to the elaboration determinants' effect: if dominant thoughts are favourable to the message an increase in confidence will increase persuasion, if otherwise dominant thoughts are unfavourable an increase in confidence will reduce persuasion.

2.5.6.1 Summary of five roles

In this paragraph a recap of the multiple roles is provided together with a graphical help in order to better visualize and recall them in later paragraphs. According to the ELM, all persuasion variables are postulated to potentially affect attitude change through all the following ways depending on the persuasion setting.

Cue

It is any signal that the recipient with low ability and motivation to think can use in order to save mental effort and engage in low elaboration processes. For the reason why the variable is used to "cut" the effort of thinking, scissors could be a useful representation.

Argument

If the variable is relevant in order to evaluate the attitude object, the recipient with high motivation and ability to think will scrutinize it as an argument (together with all other arguments). The lens depicts a high elaboration processing.

Bias

When elaboration is high, a given variable could bias the direction of thinking toward a conclusion that is either preferred (due to biased motivational factors) or constrained (by biased ability factors). As a consequence there is something that the recipient (voluntarily or not) is not seeing and considering. The monkey covering his eyes (without considering the meaning of the Japanese pictorial maxim) is probably the

best portray of this outcome.

Catalyst

When the recipient is not sure about how much effort the issue deserves (and there are no constrains on mental effort), a given variable may influence the amount of thinking/processing it will be spent. This way it acts as a catalyst that stimulates motivation to think, thus elaboration likelihood will be enhanced (as the gauge/indicator evokes).

As we know, if arguments are found to be weak, it would have been better not having a catalyst to think at all (and avoid the message to be discredited).

Self-Validator

After a message has been processed in high elaboration, the subsequent discovery of a given variable may be used by the recipient to validate his own thoughts (whether they were favourable or unfavourable to the message's position), that means put a "check" on them. The greater the confidence on thoughts the greater their impact on persuasion.

The following graph proposes a flow diagram that links the multiple roles with the parameters of the persuasion settings that predict which role the variable will assume.

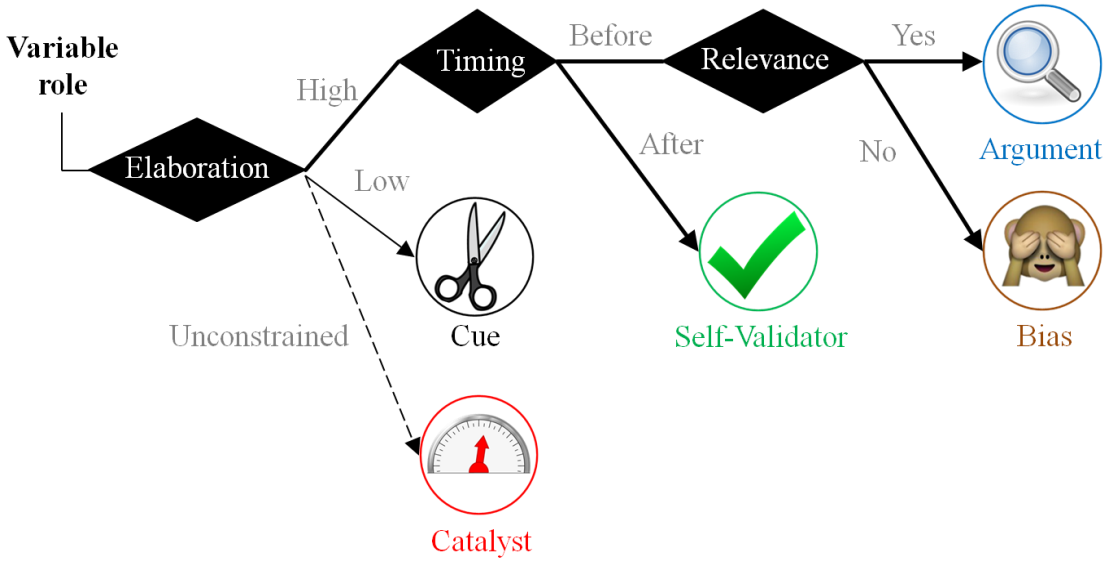


Figure 2.5.6.1a The parameters that determine the five roles a persuasion variable can assume.

As we can see, **Elaboration**, **Timing** (i.e., before or after message processing) and **Relevance** (referred to attitude's object evaluation) compose the persuasion setting that determines how a given variable will affect persuasion (i.e. which role the variable will

assume). The effect on persuasion (i.e., either enhance or reduce it) depends on the nature of the variable (e.g., trustworthiness, majority status or happiness have the opposite effect of untrustworthiness, minority status or sadness).

However, two roles (i.e., self-validator and catalyst to think) require an additional parameter to predict their effect on persuasion: **Arguments' Quality**. If arguments are strong, dominant thoughts that will be generated after processing will be favourable to the message's position. Only in this condition the previous two roles will enhance persuasion by amplifying the impact of dominant thoughts. If, instead, dominant thoughts are unfavourable to the advocated message, a higher impact of them will reduce persuasion.

The four parameters presented in this paragraph are very *heterogeneous*: one of them is a persuasion variable (i.e., Arguments' Quality), another one is a variable's intrinsic characteristic (i.e., Relevance to the evaluation), Timing can be considered as a "pure" parameter while Elaboration derives from the variables presented in Determinants of Elaboration. Thus the way a given variable interacts with other ones (i.e., arguments' quality and determinants of elaboration) establishes which role it will assume.

Now it is easier to comprehend why the ELM relies on the *multiple effect* assumption. It is almost impossible to say that a given variable will always enhance (or reduce) persuasion regardless to other conditions. Even the simplest and most predictable variables such as those characterizing the communication source (e.g., credibility, authority, attractiveness, similarity and so on) have situations in which they can row against persuasion. These critical situations (i.e., using the variable to catch attention or to post-confirm the conclusion of the evaluation) are used as communication tools much more often than what we expect. Thus, it is important to strategically match them with the quality of available arguments in order to avoid a reverse effect on persuasion.

In the previous example of **source attractiveness**, we saw that it can enhance persuasion acting as a simple cue, an argument or biasing positively message processing. If instead it acts as a catalyst to think or a self-validator, the outcome depends on the quality of proposed arguments (see the following graph).

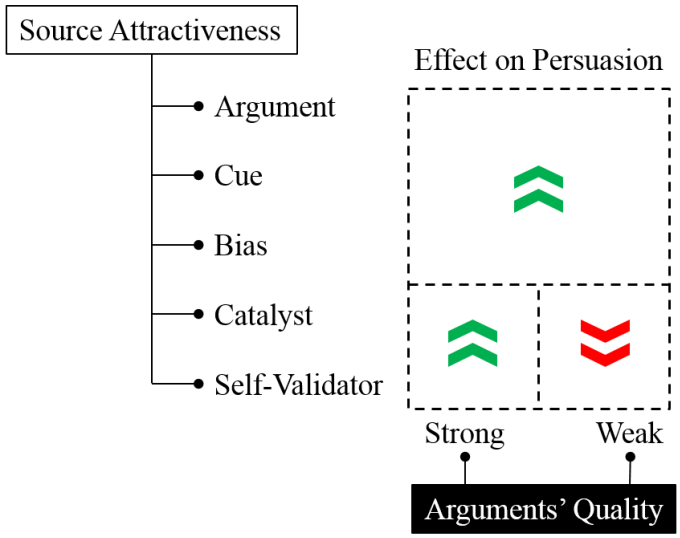


Figure 2.5.6.1b The effect of source attractiveness on persuasion depending on its role and arguments' quality.

This explanation of the variable's effect on persuasion cannot be extended to all persuasion variables for at least two reasons. The first is that not all variables can assume all the roles presented in the ELM (e.g., source credibility cannot be treated as an argument). The second is that a given variable could act in one direction for one role and in the opposite direction for another role (e.g., trustworthiness is a positive cue but, as a catalyst, is less effective than untrustworthiness, Cacioppo & Petty, 1982). In conclusion, each variable has to be discussed separately.

2.6 Variables of Persuasion

Persuasion variables (38 in this dissertation) constitute the keys to the success of persuasion together with the parameters that determine their effect. As we saw in the previous paragraph, parameters are 3, plus one already included in persuasion variables. This section will present an updated overview of the variables that received the highest attention in scientific research. These will be examined within the multiple roles framework when it is allowed by the intrinsic variable's potentialities and when scientific experiments are available.

The five roles will be recalled with the previous graphical representation:

Cue	Argument	Bias	Catalyst	Self-Validator

Variables affecting attitude change have traditionally been organized into source, message, recipient and context categories since Hovland's pioneering researches.

However some variables (such as mood) can be considered as "recipient" when measured and as "context" when manipulated (for a review of main variables see Petty & Wegener, 1998, and Perloff, 2010).

2.6.1 Source Variables

Source variables are perceived characteristics of the person presenting the persuasive message, thus they are subjective to the recipient. The source can be revealed explicitly (e.g., presenting a speech) or implicitly (e.g., as the author of information).

Traditionally, source variables have been organized according to Kelman's taxonomy (1958) which separates among credibility, attractiveness and power (or authority, Perloff, 2010). Additional source variables are presented in virtue of their effect on the previous three main areas.

2.6.1.1 Power

A powerful source means it is perceived as having control over rewards or sanctions due to its position in the social structure (Perloff, 2010). This power is exercised depending on the recipient's compliance and on the possibility to monitor the recipient's behavior. People are thus influenced by the authority not necessarily because they agree but rather because they want to obtain positive rewards or avoid punishments. Little work has investigated how information is processed if presented by a powerful source instead of a weak-power source. However each role outlined by the ELM would seem applicable to sources varying in power (Petty & Wegener, 1998): as a simple cue, a bias (in interpretation or inducing *reactance motives*), a self-validator, the authority's position can be a catalyst of thinking or an argument.

In the very famous Milgram experiments (reported in his book *Obedience to Authority*, 1974) the effect of power was studied over ordinary people showing how they comply with requests that may even violate human decency. In one study, during a fictitious experiment about the effects of punishment on learning, individuals were asked to administer an increasing electric shock to another respondent every time he makes a mistake. Every hesitation, solicited by the victim's pain, complaining and screaming, was overstep by the scientist assisting the experiment by ordering to continue and stating the importance of the experiment.

Although a group of psychiatrics predicted that only 1 person over 1000 could administer the highest shock (450 volts), 65% of individuals went this far.

The experiment wasn't real (the victim was an actor), however it is difficult to accept that so many people inflicted such a mortal blow to a helpless victim just because a scientist asked them to do this. Explanations include not only the trappings of authority (the prestige of the Yale University where the experiments were conducted, the scientific equipment in the room, the experimenter's clothing) but also the socialization force it provides and all the psychological forces that bound participants (Perloff, 2010). If someone argues the experiment crosses the line dividing persuasion from coercion, in a recent replication of the study (Burger, 2009) participants were told they could leave the experiment. Nevertheless, results paralleled Milgram's findings showing that authority's persuasiveness (separated from coercion) is not decreased in the time of almost four decades.

2.6.1.2 Credibility

The credibility of the communicator has been studied since Hovland's massive research on persuasion, indeed it is one of the most powerful variables affecting attitude change.
Credibility is broadly defined as the "attitude toward a source of communication" (McCroskey, 1997, p. 87), in other words the recipient's perception of the communicator's qualities. That means credibility is not a characteristic that is intrinsic in the speaker but it comes from the acceptance of the audience. There is something democratic in this trait that is highly different from authority, which instead stems from the communicator's position in the social structure. "Credibility can only be earned by paying the price of effective communication" (Hart et al., 1983, p. 205), in other words it is not guaranteed by any communicator's title or reference but it has to be gained through the respect of the audience.
The main components of source credibility are expertise and, nevertheless, the willingness to say the truth (i.e., trustworthiness). These attributes received the greatest academic interest. In his book, Perloff (2010) includes also source **goodwill**, intended as the perceived caring or interest the communicator has toward the listener. In a brilliant example, he claims a doctor could demonstrate expertise and honesty but may appear uninterested in the patient. Whether this dimension is not included somehow in trustworthiness awaits further research.
The two credibility's ingredients are reported below together with the available experiments that demonstrate the roles these attributes can assume (within the ELM framework).

- **Expertise** is the perceived knowledge or ability of the communicator that is not guaranteed from his experience or formation.

Expertise has a higher impact on persuasion when elaboration is low rather than high, this was demonstrated in experiments where elaboration likelihood was determined by personal relevance (Petty et. al., 1981), distraction (Kiesler & Mathog, 1968), prior knowledge (Wood & Kallgren, 1988) and others.

When elaboration is unconstrained, an expert source leads to greater information scrutiny than an inexpert source (Heesacker et al., 1983). In the experiment by Moore et al. (1986), when an ad was presented at a moderately fast pace ("does it deserve thinking?") the expertise of the source led to greater scrutiny then the inexpert source.

Given an ambiguous message and high elaboration, expertise increase persuasion by biasing message processing (Chaiken & Maheswaran, 1994). That is, the interpretation of information will favour the expert source's position.

When expertise is revealed after message processing (in high elaboration), confidence will enhance argument quality (Tormala, Briñol & Petty, 2006). The expert source will make strong argument stronger (increases persuasion) and weak arguments weaker (reverse effect). The case of weak arguments can be explained as follows: if they are validated by an expert source, the bad evaluation of them will be validated as well.

When the source is perceived as an expert, the audience has some expectations and if they are disconfirmed the invoked surprise will enhance message processing according to the *Informational Incongruity process* (Karmarkar & Tormala, 2010). Source expertise is expected to be correlated with source certainty that can be revealed from message expressions such as "I confidently have this opinion", "There's no doubt that.." and so on. Incongruity will enhance processing and thus arguments' quality, that means (ironically) that an expert with strong arguments will be more influential by expressing uncertainty about his recommendation. On the other hand, an inexpert consumer (such as those posting online reviews) can gain effectiveness by strategically including expressions of high certainty into the message (Karmarkar & Tormala, 2010).

Another source of incongruity was found between expertise and likability: when one trait is perceived as high and the other one is discovered as low, message processing is enhanced (Ziegler, Diehl & Ruther, 2002).

- **Trustworthiness** is the perceived honesty or sincerity, that means how likely the communicator will tell the truth.

Petty and Priester (1995) found that a sincere source increases persuasion more when elaboration is low (people low in need for cognition) than when it is high (people high in need for cognition).

When elaboration is not constrained, an untrustworthy source leads to a greater message processing in comparison with the honest source (Cacioppo & Petty, 1982).

When source trustworthiness is revealed after message processing, confidence will validate dominant thoughts (Briñol, Petty & Tormala, 2004). If they were favourable persuasion will increase, otherwise it will decrease.

An important factor affecting the trustworthiness of the communicator is the audience's expectation about the position he will take (Eagly, Chaiken & Wood, 1981). Expectations can refer to his information background or to his desire to please the audience:

- A *knowledge bias* is the perception that the speaker has a biased view of the issue due to any characteristic he possesses, such as gender, age or religion, that has prevented him from looking objectively to the various sides (Perloff, 2010);
- A *reporting bias* is the perception that the speaker has deliberately omitted certain facts or said the socially correct thing just to make points with the audience;

If expectations are confirmed the communicator is seen as untrustworthy, if they are disconfirmed and the source violates his own self-interest then he gains in honesty and surprise will enhance message processing (Informational Incongruity process, Harasty, Petty & Priester, 1996).

For example, if you says the university where you graduated is not good or a salesperson says the low price product is better than the higher price version that is very likely true because it violates knowledge bias. If you receive a gift and says to the giver you don't like it or if the shop assistant tells you the dress doesn't fit well on you that is quite certainly true because it violates reporting bias.

2.6.1.2.1 The sleeper effect

Credibility of communicators is subject to an interesting phenomenon: when a message is accompanied by a negative cue (e.g., noncredible source) it is observed to increase its persuasive effectiveness over time. Also the opposite situation holds, that is when the message is delivered by a highly credible source it becomes less persuasive over time (Hovland, Janis & Kelley, 1953). The term "sleeper" suggests that the original message's effect is asleep in the short run but it awakes in the long run.

This pattern was observed by the persuasion pioneer Carl Hovland, considering both source trustworthiness (Hovland & Weiss, 1951) and source expertise (Hovland, Janis & Kelley, 1953). The effect was represented as follows:

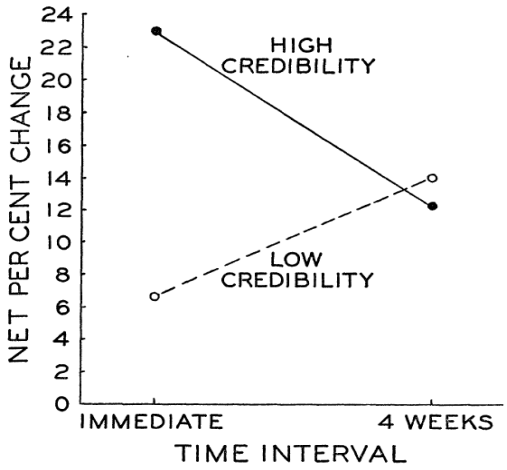


Figure 2.6.1.2.1 The sleeper effect.
Source: Hovland & Weiss, 1951, p. 646.

The explanation that traditionally prevailed was that people tend to disassociate the discrediting (or accrediting) cue from the message position (Cook, Gruder, Hennigan & Flay, 1979).

If false messages that have been disseminated by low-credible communicators become true over time, it is easy to understand how rumors can damage reputations even if they are just rumors (characterized by low credibility by definition). Think about political candidates when they try to instil into the public mind some misleading information about their opponents. Think about companies damaged by rumors such as McDonald's and the belief its hamburgers had ground worms.

Progresses in persuasion research give us a better explanation of the sleeper effect. Analysis of this topic suggest that it is most likely to occur when people first elaborate the message and then the discounting cue is presented (Pratkanis et al., 1988). Thus, the ELM explained this effect through the self-validation process (Petty, Briñol & Tormala,

2002): the discounting cue after message processing acts as a self-validator, it reduces confidence people have in their favourable thoughts about the message. However, this reduction in confidence is only temporary: as soon as it increases again, the original impact of the message (before the negative cue was presented) will be restored. The same happens for a positive cue.

This finding explains a previous research suggesting that labelling the false information as a rumor (that is re-stating the low credibility of the source) is enough to reduce its influence on behavior and, thus, its transmission (Kamis, Folkes & Perner, 1997). That is because keeping low the confidence on the message will reduce the sleeper effect, in other words the original impact of the message will not "wake up".

This practice is even more important in light of new findings from the Word-of-Mouth literature: when transmitting information, people fail to share the confidence (or "belief certainty") they have in those information (Dubois, Rucker & Tormala, 2011) and this happens both for high and low thought confidence.

Thus facts and rumors tend to get confused in WOM because their attached certainty get lost.

As a consequence, providing a self-validator cue (i.e., stating either the high or low credibility of the source) avoids that thought confidence dissipates with both time and sharing. This way, the effectiveness of the overall persuasive message is not distorted.

2.6.1.3 Attractiveness

Source's attractiveness has two main components that can be hardly separated in research experiments. These are **likability**, the attitude toward how the speaker naturally behaves and the person he is (perceived personality), and **physical attractiveness**, that is the beauty of the speaker (already discussed in the paragraph Multiple Roles Hypothesis).

Attractiveness has a greater effect on persuasion when elaboration is low, with likelihood of elaboration determined by personal relevance (Chaiken, 1980), prior knowledge (Wood & Kallgren, 1988) and also when messages are externally paced (videotaped rather than written; Chaiken & Eagly, 1983).

When elaboration is unconstrained, people are more likely to pay attention to an attractive speaker. This was demonstrated in one experiment about the comprehensive exam when the time of the exam's institution was left unspecified (Puckett et al., 1983).

In one experiment about attractiveness' multiple roles (Shavitt et al., 1994), in high elaboration persuasion increased when the endorser's beauty was relevant to the product and it didn't when it was unrelated.

2.6.1.4 Amplifying factors

Additional source factors affect persuasion in virtue of their impact on the previous macro source variables of power, credibility and attractiveness.

- **Speed of speech** can be computed as words per minute, several studies demonstrated that a fast speech increase the perception of source's expertise.

  When elaboration is low, faster speech increases persuasion by increasing the perception of the speaker as an expert (Smith & Shaffer, 1995). This can be explained through the heuristic "fast talkers know their stuff" (unless the message concerns sensitive or intimate issues).

  Otherwise, when elaboration was high, it reduced message processing (and thus the arguments' quality effect).

  When elaboration is unconstrained, moderately fast messages increase message processing and thus the arguments' quality effect (Moore et al., 1986).

- **Majority/minority status** refers to the recipient's consciousness that the message position is supported by either the majority or the minority of people. This factor affects more directly source attractiveness and power rather than credibility. The effect on persuasion has been finally clarified by the ELM framework after years of contradicting researches.

  A majority status is more persuasive than a minority status only when elaboration is low (Kruglanski & Mackie, 1990). That is because it acts as a decision rule, especially when people have no particular interest or knowledge about the issue. Recent experiments have found that source status can act as a peripheral cue even when presented after message processing in low elaboration (Horcajo, Briñol & Petty, 2014).

  When elaboration is unconstrained, source status influences the amount of thinking in relation to the message position that can be proattitudinal or counterattitudinal (in comparison with the recipient's position). Baker and Petty (1994) found that people engage in greater scrutiny of a counterattitudinal message when it is advocated by a majority position, but

if the message is proattitudinal a minority position stimulates greater processing.

When elaboration is high, a majority status can bias processing toward the majority's position in terms of both message interpretation and information recall (Mackie, 1987).

If source status is revealed after message processing in high elaboration, majority increases arguments' quality effect while minority reduces it. In one experiment confirming this process (Horcajo, Petty & Briñol, 2008), the status was referred to the other participants of the experiment.

- **Similarity** is the perception that the speaker shares attitudes or ideologies with the recipient (e.g., values, preferences, dress). This factor affects attractiveness but it threats expertise.

A similar source increases persuasion when elaboration is low (in Mackie et al., 1990, message was presented by either in-group or out-group sources). Furthermore, similarity increases persuasion mostly when it is relevant to the message. In one experiment (Berscheid, 1966), DVDs and CDs sellers were more likely to make a sale if they confess they have the same film/music preferences as customers rather than something else in common. However, if the communicator is perceived too similar to the listener, he may lose expertise. This low elaboration tradeoff is a relevant dilemma for salespeople as for political candidates, the closer to the people the more far from the role. Research claims that similarity is more persuasive in personal and emotional decisions while in factual and functional matters expertise is more effective (Goethals & Nelson, 1973).

When elaboration is unconstrained, the similar source induces more message processing than the dissimilar source (Mackie et al., 1990).

In one of the first experiments about self-validation (Petty, Briñol & Tormala, 2002), source similarity was revealed after message processing in high elaboration (participants received in-group feedback about their thoughts). Only in this condition (in comparison with no in-group feedback) arguments' quality effect was amplified.

- **Number of sources** refers to the number of presenters of the persuasive message both among and within arguments (ranging from all arguments presented by one source to each arguments presented by many sources). This factor enhances the overall expertise behind the message.

When elaboration is unconstrained, multiple sources enhance message processing due to the perception that they represent independent perspectives (Harkins & Petty, 1987). If otherwise the sources are presented as working together in a committee or being similar rather than dissimilar in background, the multiple source effect is reduced.

- **Powerless speech** is the perception that the speaker is not so confident in what he is saying due to the use of what can be called "anti-rhetorical" figures. These obstacles, that definitely reduce expertise, are described in Perloff, 2010:
  - *Hesitation forms*: "Uh", "Umm", "You know.." express lack of certainty;
  - *Hedges*: "Sort of", "Kind of", "I guess" make arguments less definite;
  - *Tag questions*: an affirmative statement is linked with a final question ("Isn't it?", "Don't you think?") suggesting that it is not sure the audience is going to believe the speaker;
  - *Disclaimers*: negation of responsibility such as "I'm not an expert", "It could be a stupid question...", "It seems strange but...";

  Researchers have definitively found that powerless speech reduces persuasion (Hosman, 1989; Burrell & Koper, 1998) by communicating uncertainty and lack of confidence. It can be explained in low elaboration (serving as a low-credibility cue) and when elaboration is unconstrained (distracting audience and limiting their ability to process the message). However, there are some contexts (such as medical consultations; Harres, 1998) in which powerless speech can be effective by communicating goodwill and to appear more down-to-earth than a distant expert ("But basically you're feeling well, are you?" helps doctor to show empathy with patients).

2.6.2 Message Variables

All message dimensions can be divided, in a Platonic fashion, between *matter* (i.e. content) and *form* (i.e. structure and style).

2.6.2.1 Content

- **Sidedness** refers to presenting one perspective on the issue (only the advocated position, *one-side message*) or both sides (the persuader's position and the opposition, *two-sided message*). One could argue that spending time on the advocated side will make it stronger, however omitting the opposition arguments will suggest that something has been hided. A meta-analysis of sidedness (that is a

study of other studies) have been conducted by two communication scholars (Allen, 1998; O'Keefe, 1999) and something quite rare happened, they arrived at the same conclusion: two-sided messages are more persuasive only if the opposition arguments are refuted, if otherwise they are only mentioned the message will be less compelling than its one-sided version. As they explain, refutational two-sided messages besides enhancing the speaker's credibility (both in terms of expertise and trustworthiness) also strengthen the advocated position in high elaboration.

- **Arguments' quality** affects persuasion mostly in high elaboration. An argument supporting an issue is defined strong when, as we saw in the 3 lessons, it highlights the issue's consequences that are most desirable and likely, addresses the main object's functions (according to the audience) and matches the attitude's internal structure. Additional research has found that an unfamiliar argument has a greater impact than a familiar one (Burnstein & Vinokur, 1975), whether novelty is not already included in the previous dimensions awaits further research (Petty & Wegener, 1998).
- **Arguments' quantity** affects persuasion on the base of elaboration: if low, the more arguments and the longer each argument the higher persuasion regardless of their quality (Wood et al., 1985; Petty & Cacioppo, 1984). The heuristics at work is "the more the better". If elaboration is high, increasing the number of strong arguments increases persuasion while increasing the number of weak arguments reduces persuasion (Petty & Cacioppo, 1984; Friedrich et al., 1996).
- **Evidence** is an argument originated from any source other than the speaker, it consists of factual assertations (e.g., everyday observations), quantitative information (e.g., statistics), empirical evidence (results from scientific studies) or opinions from credible sources. Evidence is the best "building block of arguments" (Reinard, 1991, p. 102), obviously it produces more attitude change in high rather than low elaboration. When processed centrally, audience has to clearly understand how evidence supports arguments and it has to be perceived as legitimate (Parrott et al., 2005).
- **Narrative** is any vivid case that happened to one single person (or just few individuals) that is so concrete, emotionally engaging and tangible that can even surpass the solidness of evidence. Imagine how the story of the single person who battled cancer can be more powerful than highly reliable statistical numbers on the issue. The gripping anecdote leads to greater imagination and it easier to access from memory, however it is not necessarily representative of the larger population.

Several studies wondered which one between narrative and evidence is more compelling (O'Keefe, 2002), this time the answer doesn't lie in the likelihood of elaboration (although it seemed very intuitive to say that evidence is better when elaboration is high). The optimal communication strategy should use both evidence and narrative, thus providing two qualitatively different contents and exploiting different kinds of levers (Perloff, 2010).

- **Vividness** was experimented within the ELM as the richness of details that are very concrete and image provoking. This variable is different from Narrative (that is the presence of a single case) or Intensity of language (that is the level of language strength), although they can be combined together.

  After some contradictory results about the vividness effect on persuasion, a recent experiment (Guadagno et al., 2011) specified that when the vividness is central (i.e. referred to the message arguments) it enhances cognitive elaboration, when it is non-central (or off-thesis) it distracts recipients from the point of communication and they will less perceive the difference in arguments' quality. The experiments manipulated vividness by adding concrete details about the individuals in the message (e.g. "he has long hair, strong muscles") or the things they were doing (e.g. "listening an obscene rock & roll song").

- **Unavailability** is the perception that the message is not available to others and thus somehow "exclusive" to the receiver (i.e. *scarcity* of information was discussed in Insights on the topic).

  When respondents were led to believe that the message was unavailable to others, motivation to scrutinize the persuasive message was improved (Bozzolo & Brock, 1992).

- **Emotions** can stem from (Petty & Briñol, 2015): the persuasive message (e.g., fear appeals), the attitude object (e.g., a funny comedian) or contextual factors (e.g., a sad television programme that surrounds an advertisement). One central feature of emotions is their valence: it can be positive (e.g., happiness, surprise, disgust, pride, relief) or negative (e.g., sadness, anger, fear, guilt).

  When elaboration is low, the valence of the emotion will be associated with the attitude object: positive emotions will increase persuasion while negative emotions will have the opposite effect. Several low effort processes could be responsible of this influence: classical conditioning

(Staats & Staats, 1958), use of emotion-based heuristics (Chaiken, 1987), misattribution between emotional state and attitude object (Jones et al., 2009) and direct affect transfer (Payne, 2005).

If the emotion is judged to be relevant in order to evaluate the attitude object (because one of its purpose is to generate an emotion, e.g., a horror movie has to generate fear), when elaboration is high the feeling will be treated as an evidence (Martin et al., 1997).

Fear appeals, used to make the recipient enacting the message recommendations, increase persuasion only in high elaboration because the fearful consequences are treated as arguments. This strategy will be presented separately in the next paragraph.

When elaboration is high, emotions can bias processing on the base of their valence: information that match emotion's valence will be more easily recalled and thus they will affect the individual's interpretation of ambiguous arguments (i.e., positive emotions will increase persuasion; Petty et al., 1993). Furthermore, valence bias processing in another way (Wegener, Petty & Klein, 1994): positive emotions increase perceptions of the likelihood of positive consequences while negative ones seem less likely (the reverse happens for negative emotions). Thus, if negative consequences (of the attitude's object) are presented in the message, sadness will be more persuasive than happiness.

Initial experiments found that when elaboration is unconstrained, *happy* individuals engage in less processing than *sad* individuals (Makie & Worth, 1989), with several processes explaining this phenomenon (Petty & Briñol, 2015). However, subsequent researches (Wegener & Petty, 1994) specified that happy individuals avoid processing only if it might threaten their happiness, as it happens when the message is counterattitudinal. If otherwise it is proattitudinal, happiness increases processing (Wegener, Petty & Smith, 1995).

Anger is another emotion that was studied as a catalyst of thinking. Although results have been contradicting, a recent experiment found the explanation (Briñol et al., 2014): anger has a negative valence but it is also associated with a sense of certainty. In the experiments, it was compared with *surprise* because it is the "opposite" emotion: it is positive in valence

and it is associated with doubt. The test confirmed the *differential appraisal* hypothesis: if individuals focus on the confidence aspect of these emotions (cognitive appraisal), anger produces less thinking than surprise (because it provides certainty about the initial attitude); if instead individuals focus on valence of these emotions (affective appraisal), anger produces more thinking than surprise (because the initial attitude will be seen more negatively). The kind of appraisal can be manipulated by highlighting somehow feelings or rationality, in the experiment Briñol and colleagues asked participants to do a word-completion tasks with words such as "feelings", "emotion" (affective appraisal) or "thought", "elaboration" (cognitive appraisal).

When the emotion is induced after message processing, validation can be either cognitive (the emotion will validate thoughts depending on its certainty) or affective (the emotion will validate thoughts depending on its valence). In the following experiments, mindset was manipulated through the word-completion task.

Happiness and *sadness* has been found to respectively increase and decrease confidence (and thus also arguments' quality effect) both in cognitive and affective appraisal (Briñol, Petty & Barden, 2007).

Anger and *surprise*, instead, affect validation depending on appraisal (Briñol et al., 2014): if it is cognitive, angry individuals were more confident than surprised ones; if it is affective, angry individuals relied less on their thoughts (due to the unpleasant state). The same study was conducted for *disgust* (Wagner et al., 2014), that is negative in valence and associated with confidence.

2.6.2.1.1 Fear appeal

In persuasion, a fear appeal wants to scare people by threatening them that negative consequences will occur if not complying with the message recommendations (Perloff, 2010). This strategy is widely used in public health campaigns such as those about smoking, safe driving and drugs. As Perloff explains, it is not as easy as it seems to scare people for two main reasons. The first one is the *illusion of invulnerability*, which is the expectation that we are less likely to experience negative events than others (Weinstein, 1980). This conviction is rooted on the non-acceptance that life accidents can happen, on the mental image of the typical victim's stereotype (e.g., "only an obese

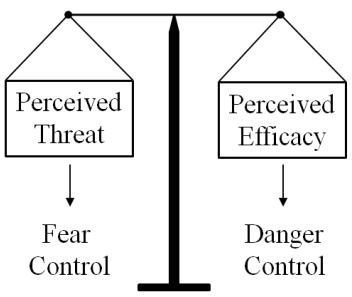
person can have a heart attack") and on the tendency to postpone the costs of risky choices to the future. The second reason making a fear appeal difficult is that even when people perceive the threat, they might reduce fear not necessarily by taking the recommended actions. Many other behaviours can be activated to avoid the unpleasant emotion, such as all the actions we use to calm down e.g., breathing, eating, think to something else).

The most comprehensive approach to predict the dynamics of fear is the Extended Parallel Process Model (EPPM; Witte, 1998), so called because it extends previous work on fear appeal and integrates different processes. Remember from the previous discussion that fear can increase persuasion only in high elaboration, this condition is assumed in this paragraph.

The fear-arousing message leads the individual to evaluate fear as it happens with attitudes, that is considering value (or desirability) and expectancy (or likelihood). These "computations" are referred to both the threat and the recommendations presented in the message:

- **Threat** is perceived on the base of message information about *severity* (the magnitude of the negative consequences) and *susceptibility* (the likelihood that those consequences will occur);
- **Efficacy** of recommended actions is perceived from information about *response efficacy* (causal explanation of how those actions reduce the threat, i.e. desirability of actions) and *self efficacy* (demonstrate that the individual is capable of performing recommendations, i.e. likelihood);

What the model holds is that two processes can occur: **danger control** means the individual will cope with the threat by enacting recommendations (the so called "protection motivation" leads to message acceptance and thus to an external action), otherwise **fear control** means the individual will take actions just to reduce the emotion of fear rather than the problem at hand ("defence motivation" leads to message rejection and thus to an internal action). That is, after an anti-smoking campaign the individual can reduce fear by putting into practice the message's recommendations or he can simply calm down by distracting himself, taking some deep breaths or... smoking a cigarette!



The impact of one process over the other depends on the difference between perceived threat and perceived efficacy (Witte, Meyer & Mertell, 2001): if the message

convinces people they can cope with the threat through recommendations (efficacy > threat) then attitude can change, if instead the message doesn't provide properly the solutions (threat > efficacy) then anxiety will lead to defensively refuse the message. In conclusion, the fear-arousing massage has not only to harness a sufficient level of fear but it has also to channel it into a constructive direction (danger control) by effectively demonstrating how recommendations will alleviate the threat.

2.6.2.2 Structure and style

- **Order of presentation** refers to the situation in which two competing messages have to be presented (for example, why homeopathy works and why it doesn't work), is it better to present one's side message first or second? This issue is important due to memory effects studied in psychology: if we have to recall a list of items (in any order), our mind tends to recall either the first items (*primacy effects*) or the last items we heard (*recency effects*). One experiment (Haugtvedt & Wegener, 1994) found that when elaboration is high primacy effects prevailed (thus it is better to present our position first, then the opposing arguments will make it stronger), while when elaboration is low recency effects prevailed (thus presenting our position in the last position will help to make it more accessible).
- **Conclusion drawing** can be explicit if it is stated together with the message's arguments or implicit if not stated at all. One could argue that allowing the audience to arrive at the conclusion on their own could make the message more accepted by them. On the other side an unambiguous and clear conclusion will make the massage more likely to be mentally positioned, minimizing the possibilities of uncertainty. Although some researches support one side and other researches support the opposite one, a meta-analysis of them (O'Keefe, 1997) found that explicit conclusions are more persuasive than omitted ones. It seems that clarity pays.
- **Framing** means which aspect has been highlighted in the message, it can emphasize the benefits of doing something (*positive framing*, e.g., "If you stop smoking, you will live longer") or the costs of not adopting the behaviour (*negative framing*, e.g., "If you don't stop smoking, you will die sooner"). Although some researches suggested that negative frames are more persuasive than positive ones (Meyerowitz & Chaiken, 1987), following experiments (Maheswaran & Myers-Levy, 1990) have specified that negative framing is more effective when

elaboration is high and that positive framing is preferred when elaboration is low. As previously mentioned, matching emotion with framing will enhance persuasion (Wegener, Petty & Klein, 1994).

Furthermore, framing influences the amount of processing depending on the recipient's expectations: if these expectations are disconfirmed, framing will lead to a greater information scrutiny (Smith & Petty, 1996).

- **Pace** refers to the processing rhythm of the persuasive message. In a self-paced message the recipient follows his own pace (e.g., written, the reader can go back to read again anything he wants). In a externally-paced message (e.g., taped message such as a video or audio) the recipient has no control.

Self-pacing allows greater scrutiny of information and it is preferred when arguments are strong. External-pacing reduces elaboration and thus increases the effectiveness of peripheral cues such as the communicator's credibility or attractiveness (Chaiken & Eagly, 1983).

- **Rhetorical questions** can be used as the message's conclusion instead of an affirmative statement.

According to research (Burnkrant & Howard, 1984), rhetorical questions disrupt message processing when the message is externally-paced (such a video or audio) while they enhance processing when the message is self-paced (written) and they are presented before the arguments.

- **Intensity of language** refers to any language markers that makes the message differs from a neutral position (Hamilton & Stewart, 1993). These can be metaphors, strong and vivid expressions ("baby" instead of "fetus"; "disgusting" rather than "inappropriate") and emotionally charged words ("death", "freedom", "beauty").

Research has found intensity of language is more persuasive when personal involvement is low (low elaboration), when the communicator is perceived as credible and when such language is seen as appropriate for that particular context (for a review: Hamilton & Hunter, 1998). In these conditions, intensity may enhance the speaker's dynamism and evoke a greater number of semantic associations.

Extremity is a specific component of language intensity that refers to any indicator enhancing the degree of the message's valence (e.g., "really", "extremely", "very", "highly"; Bowers, 1963). Research has found that

linguistic extremity increases language processing and enhances the arguments' quality effect when elaboration is unconstrained (Craig & Blankenship, 2011). The explanation proposed was that extremity indicators increased the involvement in the message.

2.6.3 Recipient Variables

These variables refers to the recipient's relatively enduring aspects, such as demographic or personality traits. Personal relevance, need for cognition (NFC) and prior knowledge belongs to this category.

- **Gender** was supposed to differ in susceptibility, early research showed that women were easier to persuade in comparison with men (Janis & Field, 1959). However, after some contradictions emerged a meta-analysis discovered that only 1% of variability was accounted by gender (Eagly & Carli, 1981).

  One explanation that could be found about women higher yielding is that "they are especially concerned with maintaining social harmony and insuring smooth interpersonal relations" (Eagly, 1978, p. 103).
- **Intelligence** is generally associated with decreased persuasion (Rhodes & Wood, 1992), however research shows that intelligence is a multi-dimensional concept (Gardner, 1993) and thus while one dimension could increase cognitive ability another one could increase resistance to persuasion. Another aspect to consider is that perceived intelligence could act as a simple cue: "I'm more intelligent than the source, why should I change my view?" (Petty & Wegener, 1998).
- **Self-esteem** is the overall regard an individual has toward himself. Expectations were to find a negative relation with persuasion (low self-esteem individuals should give up earlier), however some results found the opposite. After a curvilinear relationship was proposed (i.e., medium levels are desirable), a meta-analysis revealed it was right (Rhodes & Wood, 1992).
- **Self-monitoring** is a psychological trait for which people who score high in this dimension tend to adjust their behavior to situations in order to appear socially appropriate. On the other side, low self-monitors prefer to be themselves and are mostly driven by their internal beliefs and values (Snyder, 1974). As it is for NFC, a scale of questions has been developed in order to reveal this personality characteristic (Snyder, 1987). Borrowing from the functional theory, experiments (DeBono, 1987) showed that high self-monitors perceive a greater appeal in arguments expressing a social-adjustive function (e.g., volunteering just for social

cohesion) while low self-monitors are more influenced by arguments expressing a value-expressing function (e.g., volunteering to express justice). This can occur only when elaboration is high.

When elaboration is unconstrained, message processing is increased if presented arguments match the function of either high or low self monitors (Petty & Wegener, 1996). Furthermore, an attractive source is more engaging for high self-monitors while an expert source is more engaging for low self-monitors (DeBono & Harnish, 1988).

- **Dogmatism** is the tendency to close off the mind toward new ideas and accept only what comes from conventional and established authorities (Rokeach, 1960). Using a scale for measuring this trait (the DOG scale proposed by Altemeyer, 1996, tested in Crowson et al., 2008), it has been found that high dogmatic individuals are more resistant to evidence that contradicts their beliefs but they are more susceptible of source expertise (DeBono & Klein, 1993). On the other hand, low dogmatic individuals are more willing to see shortcomings in their view and strong arguments are more appealing than the communicator's credibility. In other words, dogmatism is reversely related to the arguments' quality effect on persuasion.

2.6.4 Context Variables

Context refers to any factor related to the communication setting that can influence the message transmission, in both physical and social terms. This category includes those opportunity factors that have already been mentioned in the ability section of Determinants of Elaboration.

- **Distraction** occurs when the individual simultaneously encounters a persuasive message and engages in one or more tasks, other factors could be any distracting stimuli that undermine cognitive capacity. The effect is a reduction in whatever thoughts would normally be occurred, thus it could enhance persuasion if dominant thoughts were favourable (due to strong arguments) or hamper it in the opposite case (Petty, Wells & Brock, 1976).
- **Repetition** of message could enhance arguments' strength but, when exaggerated, could have a negative effect.

Increasing the number of times a person receives the message allows a better information scrutiny, which will increase persuasion only if arguments are strong (Cacioppo & Petty, 1989). This phenomenon is more

evident when the message is complex.

With high levels of message repetition, irritation becomes a biasing factor (*reactance motive*) that will increase willingness to counterargue and thus it will reduce persuasion (Stewart & Pechman, 1990).

- **Audience reactions** are responses from other message recipients that can noticeably influence persuasion referred to one individual alone.

In one experiment (Axsom et al., 1987), a message with taped applauses was proposed to recipients in either high or low elaboration. As you guess, only when elaboration was low applauses led to more favourable attitudes then no audience reactions. In high elaboration mode they had no effect.

When investigating the effect of hecklers (interrupting the speaker) under high elaboration conditions, it has been found that when the speaker ignored them or provided irrelevant answers, persuasion decreased (others' counterarguments acted as a bias), but this effect can be reduced by providing relevant responses (Petty & Brock, 1976).

- **Forewarning** means anticipating the recipient that he is going to encounter a persuasive message (forewarning of persuasive *intent*) or even anticipating the counterattitudinal position advocated in the message (forewarning of *content*).

Forewarning of *content* motivates to counterargue the advocated position as a reaction to the perceived restriction of freedom (*reactance motive*) only if the recipient has enough time to recall information (if warning occurs immediately before the message, resistance will not increase) and message's topic is personally important (i.e. high elaboration, Apsler & Sears, 1968). In case of forewarning of *intent*, the same effect can be obtained without the time span between warning and message presentation (Petty & Cacioppo, 1979).

In social media marketing, companies could strategically use forewarning to reduce the impact of competitors' communications.

- **Mood** is the recipient general feeling that doesn't stem from the message itself but from contextual factors. Experiments manipulated mood by providing people with either pleasant or unpleasant material prior to message exposure (Petty & Wegener, 1998). Mood is a particular case of emotions (that we already saw), thus mood's multiple roles coincide with emotions' multiple roles.
- **Confidence** is a psychological state in which the person feels certain about himself. According to literature (Briñol & Petty, 2009), it can be used as a cue (heuristics

like "I feel confident, I must agree"), as a piece of evidence (e.g., when deciding whether to apply for a high competitive job) and it can bias processing (confidence is positively valenced, thus it positively biases persuasion).

Confident people engage in less thinking in comparison with less confident people (Tiedens & Linton, 2001). That is because when feeling confidence on our current views, there is little need to seek additional information.

Confidence (evoked indirectly) is misattributed to thoughts and it generates thought confidence. In one of the first experiments about self-validation (Petty, Briñol & Tormala, 2002) participants were asked to recall a personal experience in which they felt confidence after message processing. This increased the arguments' quality effect in comparison with participants who recalled an experience in which they were uncertain.

2.6.5 Recap

In the following graph, all the 38 variables that have been discussed are summarized with some graphical help about their categories.

 **Source**	 **Message**	 **Recipient**	 **Context**
- Power • *Credibility* - Expertise - Trustworthiness • *Attractiveness* - Likability - Physical attractiveness *Amplifying factors*: - Speed of speech - Majority/minority status - Similarity - Number of sources - Powerless speech	• *Content* - Sidedness - Arguments' quality - Arguments' quantity - Evidence - Narrative - Vividness - Unavailability - Emotions • *Structure and style* - Order of presentation - Conclusion drawing - Framing - Pace - Rhetorical questions - Intensity of language	- Gender - Intelligence - Self-esteem - Personal relevance - Prior knowledge - Need for cognition - Self-monitoring - Dogmatism	- Distraction - Repetition - Audience reactions - Forewarning - Mood - Confidence

Figure 2.6.5 Persuasion variables by category.

In this dissertation, the effect of a new variable on persuasion will be presented.

The research question that will be empirically tested is about the relationship between message persuasiveness and the language abstractness/concreteness dimension as defined by the Linguistic Category Model (Semin & Fiedler, 1988), according to which the choice among verbs' and adjectives' categories communicates the abstractness level of statements.

Although this variable seems to belong to Message Structure, it leads to some variations also in Content. Indeed, language abstractness/concreteness could be very similar to Vividness (i.e. richness of concrete details). However, it is a broader dimension because, in addition to imagination that is stimulated by vividness, it affects the message's perception of verifiability (how easily it can be verified) and time enduringness (how likely it will repeat over time).

Chapter 3
THE LINGUISTIC CATEGORY MODEL

One fundamental aspect of social psychology is the medium through which cognitions are linked with social behavior, which is language.

Semin and Fiedler (1988) found that although language is seen as the product of social activities, in turn it exercises an influence on them. It means language is not only a channel but also a device that can be used within different applications.

- **Structure**: it is a convention, a set of rules that is considered the property of a community of speakers. For this reason it cannot be controlled by any particular speaker and has to be accepted as it is;
- **Complex skill**: it becomes a tool that the individual can use to convey a specific sense. Interestingly, the individual can be not necessarily aware that he is using this tool;
- **Practical activity**: it is used to communicate intents and thus to achieve a particular goal or effects;

As a consequence, the authors proposed the linguistic categories that can be used to convey interpretations in terms of abstractness or concreteness when describing a social situation, which is a person's behavior.

The Linguistic Category Model that they proposed is presented in this chapter together with its main applications and effects that have been studied. This discussion constitutes the base of the proposed research question about how language abstractness or concreteness influences persuasion.

3.1 Linguistic Categories and their psychological implications

The Linguistic Category Model (LCM hereafter) explains the categories of language that can be considered a *structure* (because they cannot be manipulated by the single individual), a *skill* (they are a tool that can be used even without knowledge of them) and an *activity* (they are used with a specific purpose).

For the reason why the model is referred to the interpersonal domain and language is used to describe other individuals' actions, the main linguistic devices that have to be categorized are verbs and adjectives. Then, further distinctions can be made as follows (Coenen et al., 2006).

The first LCM's distinction is straightforward: the difference between verbs and **adjectives**. While verbs express either an action (e.g., to walk) or a psychological state (e.g., to love), adjectives refer to the possession of qualities or properties. However these can regards not only persons but also objects, situations and even actions. When referred to actions, adjectives are grammatically called adverbs. Sometimes we can express the qualities of something also by using nouns: after the subject of the sentence is given, a noun that adds new information to it can be considered as an adjective (e.g., "His father is a *thief*"; "Luke said a lie, but the *sweetheart* bought some flowers to make amends"). Also in this case, the qualifying-nouns can be referred to people, objects (e.g., "this bike is a *gem*"), actions (e.g., "she danced *according to tradition*"; "they throw away food, *what a shame*!") or situations (e.g., "rain destroyed all crops, it became a *mess*").

The following LCM distinction is among verbs. These can classified as:

- **Descriptive Action Verbs** (DAVs) refer to any single specific action (i.e., it has a clear beginning and end) that can be visualized in a physical context. For this reason it is an objective description, there is no room for interpretation and there isn't any evaluative component (neutral valence). This category includes all actions that share one physically invariant feature: to *kiss*/*call*/*speak* involve mouth, to *walk*/*kick* involve legs, to *touch*/*grab* involve hands. In the broader terms of unambiguous actions that can be easily visualized, examples can be: *meet, phone, cut, fill, move, grow, push* and so on.
- **Interpretative Action Verbs** (IAVs) refers to any specific action such as DAVs (i.e., it has a clear beginning and end) but the main difference is that they cannot be objectively visualized in mind and thus they are very open to interpretation (as their name suggests). Actions such as *help, tease, hurt, cheat, inhibit, cause, change* can be put in practice in very different ways. In other words, a given IAV can manifests through a multitude of descriptive verbs: to *help* a person in a car accident can be translated with "extract" him out of the car, "call" an ambulance or simply "talk" with him as a reassurance. As we can notice, IAVs are more general and unbind to a specific context. Furthermore, verbs in this category tend to have an evaluative component: *educate, support, cure, improve* have a positive valence while *manipulate, cheat, avoid* have negative valence.
- **State Action Verbs** (SAVs) are very similar to IAVs (i.e., defined beginning and end, evaluative component) but instead they don't refer to an action itself but to the emotional consequences of it: *amaze, surprise, anger, excite*.

- **State Verbs** (SVs) refer to mental and emotional states that are relatively enduring, it means there isn't any defined beginning and end: *admire*, *hate*, *like*, *prefer*, *love* are affective states while *think*, *understand*, *consider*, *accept*, *doubt* are cognitive states.

The model claims that the different categories can be organized along a dimension of **concreteness-abstractness** (Semin & Fiedler, 1991). "Concrete" generally means "referred to a real context/situation" while "abstract" means "untied from a real context". This distinction can be intuitively found in categories, in fact the LCM orders them in increasing levels of abstractness:

1) Descriptive (DAVs, the most concrete);
2) Interpretative (IAVs include also SAVs because they don't differ significantly in abstraction level);
3) State (SVs);
4) Adjectives (ADJs, the most abstract);

This classification is very effective. In the interpersonal domain, saying "Jack gave $5 to a homeless" (descriptive verb) is much more concrete than saying "Jack is altruistic" (adjective). But what exactly are the implications of these two sentences for the audience?

In the original proposition of the LCM (Semin & Fiedler, 1988), the dimensions characterizing the concreteness-abstractness continuum were identified as its psychological implications.

The more abstract the linguistic category the more *informative* it would be about a person and the more *enduring* the quality would appear. When saying "Jack is altruistic" we are not only giving information about the person (rather than a specific action) but also assuming he is always like that.

The features of **enduringness** of the quality ascribed to the person (the degree of temporal stability) and **subject informativeness** (the degree of information about the agent) are logically followed by another dimension of abstract sentences that is **disputability**. It means that the likelihood of disagreement about the sentence will increase with abstractedness.

Concrete categories, on the other hand, are low in the previous dimensions and score high in **situative informativeness** (that is the extent to which information are referred to the specific situation, an adjective doesn't say nothing about that) and in **verifiability** (how much the sentence can be objectively verified by an external observer) that is quite related to disputability.

The five cognitive implications of the concreteness-abstractness dimension are summarized in the following graph:

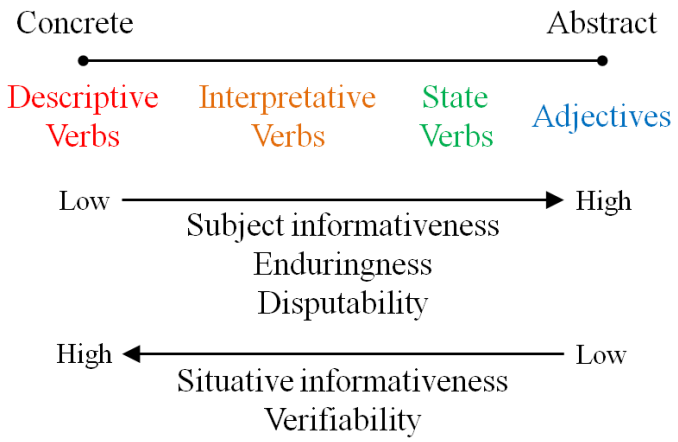


Figure 3.1 Linguistic categories and their psychological implications

As these implications suggest, the level of abstractness that is used to describe a single event may have different consequences. "Jack hits John" is the concrete statement of a behavioral fact, very easy to verify and with little room for dispute. It is the sentence that most probably will be used by people who knows Jack: they know he is not a violent person and that it was a single episode guided by external factors.

If the same behavior is described as "Jack is aggressive", the sentence assumes he has this personality trait and suggests he acts this way in many situations. This generalization is more difficult to verify and thus disputable. In conclusion, using an abstract language to describe a behaviour increases the perception that it is subjectively likely to be repeated by the agent.

3.2 Uses of language categories

Language abstraction or concreteness, as defined by the LCM, can be used by individuals when they want to provide additional information about the person or behaviour they are describing. The experiments that will be described show that when individuals want to give a high weight to a behavior (i.e., it can be reliably expected from that person) they use an abstract language. If otherwise they want to underrate the action, it is treated as a single episode by using concrete words. Language categories were found to be used this way in several contexts.

Experiments about **intergroup relations** (Maass et al., 1989) show that, when individuals describe behaviours of either in-group or out-group members, the abstraction they use depends on the valence of the behaviour. Members of different

Palio teams (the Italian traditional horse race) used language categories to support in-group favoritism and out-group discrimination, a phenomenon referred as the *Linguistic Intergroup Bias*. That is: positive in-group behaviours and negative out-group behaviours were described abstractly (a higher weight was given), negative in-group behaviours and positive out-group behaviours were described concretely (to treat them as one-time events).

Another experiment examined how **stereotypes** about a person can affect the description's abstractness of his behaviour (Wigboldus, 2000). Stereotypes were manipulated by creating expectations about gender or country of origin. Results show what was called a *Linguistic Expectancy Bias*: people use an abstract language when describing stereotype-consistent behaviour (i.e., expectations were confirmed) and a concrete language when the behaviour was stereotype-inconsistent (i.e., expectations were disconfirmed).

The last example of how abstractness is used by communicators in the interpersonal domain was found in **courtrooms** (Schmid & Fiedler, 1998). Defence attorneys tend to use abstract language when referring to the defendant's positive actions and concrete language when referring to negative actions, of course prosecutors follow the opposite pattern.

Recent studies about the linguistic expectancy bias extended the LCM to communication about objects (Schellekens, Verlegh & Smidts, 2010 and 2012). These researches focused on how language abstraction is used in **word of mouth**, namely when people describe their experiences with objects.

In this context the description can be referred to either the user who interacts with the object or the object itself, considering that at a more abstract level the description has to be focused on the object alone:

Abstraction	User	Object
1 (DAV)	"I cannot *call* with this phone"	"This phone doesn't *call*"
2 (IAV)	"I cannot *communicate* with this phone"	"This phone doesn't *work*"
3 (SV)	"I *hate* this phone"	"This phone *hates* me"
4 (ADJ)		"This phone is of *mediocre* quality"

In experiments, however, state verbs referred to objects (as a kind of anthropomorphization) were not used even if this case was considered (Schellekens et al., 2012).

Results of these studies show that consumers use more abstract descriptions when the experience confirms their expectations about the product. If they had a positive attitude toward it, a positive product experience will be treated as the norm (abstract language)

while a negative experience will be treated as the exception (concrete language). The opposite happens when expectations are negative.

Once again, expectancy-congruent interactions are described more abstractly than incongruent ones and this phenomenon was higher when consumers were asked to convince a receiver of the product's high quality in comparison with no persuasion goal (Schellekens et al., 2012).

3.3 Effects of language categories

After we saw that individuals may use language abstraction in a conscious way or not, this paragraph will examine whether it is perceived by recipients and what is its general effect.

One of the first experiments to consider what inferences can be made by receivers (Douglas & Sutton, 2006) found that the use of linguistic categories may convey information not only about the person described but also about the describers themselves. Results show that participants were able to understand how language abstraction was used and make inferences about the describer's personal relationship with the described actor (a friend or a enemy), the attitude toward him (positive or negative) and also the communication goal. Participants were indeed able to rate the describer as likely to want to create a positive/negative impression of the described actor (with a biased perspective over him) on the base of the language he used. The conclusion of the study is that if recipients are able to recognize these intentions, the information transmission may be compromised by language categories.

The study about word of mouth (Schellekens et al., 2010), that we presented in the previous paragraph, built on these kind of researches. Also in communication about product experiences, the recipient was able to make inferences about the language used. Results show that language abstraction affected the perception about the sender's attitude toward the product: if the sender described a positive experience, abstract language leads to infer the sender has a more favourable product attitude in comparison with concrete language (the opposite for negative word of mouth). As a consequence, recipient's buying intentions are found to be increased (or decreased when WOM was negative).

For what concerns the discussion about persuasion in this dissertation, language abstraction could be negative for the communication purpose because it reveals the speaker's biased intentions. The psychological implications proposed by Semin and Fiedler are actually perceived by the receiver, however their effect is damaging for

persuasion. As we shall see, concrete language may carry much higher benefits in terms of cognitive processing, imageability and even perceived truth.

3.3.1 Cognitive processing

A robust finding in experimental researches is that concrete words (e.g., chair, computer) allow a cognitive processing (in terms of understanding and memory) that is superior in comparison with abstract words (e.g., justice, freedom). This processing advantage of concrete words is called *concreteness effect* and it has been found in several psycholinguistic studies such as word recognition, long-term memory, lexical decision and sentence comprehension (for a review see Paivio, 1991). Although the LCM is referred to verbs and adjectives, several psychological findings about concrete and abstract nouns can be extended to it.

Two models have been proposed in order to explain the concreteness effect. According to the *dual coding theory* (Paivio, 1986), there are two representational systems (i.e., verbal and imaginal) and while abstract words are represented only in the verbal system, concrete words are represented in both systems, thus they can be more easily recalled.

On the other hand, *context availability theory* (Schwanenflugel et al., 1991) supports the superiority of concrete words only on the base of verbal processing (without adding the imaginal system): it is easier to recall a context in which concrete words appear than recall a context for abstract words (e.g., what is the context of justice?). Nowadays, neurological researches (Fliessbach et al., 2006; Soylu & Yelken, 2014) found evidence supporting both theories. In conclusion, they are equally necessary in explaining the advantage of concrete words.

3.3.2 Imageability

Since earliest experiments, concrete words were found to be highly associated with imagination, which is the word's capacity to arouse nonverbal images (Paivio et al., 1968).

In Pavio's seminal work (Paivio et al., 1968), 925 nouns were rated by approximately 500 respondents in terms of concreteness-abstractness and imagery. Results show a high correlation between concreteness and imageability (0,83). Citing another following experiment (Altarriba et al., 1999), concrete words registered the highest rates on the imagery scale.

This attribute is significant for the presented discussion about persuasion because the possibility to figure the message in our mind has many effects on attitude change. As we

shall see later, when individuals imagine a possibility, it is subsequently seen as more likely to happen (Koehler, 1991, for a review).

3.3.3 Perceived Truth

One recent research (Hansen & Wänke, 2010) studied the effect of the concreteness-abstractness dimension (intended according to the LCM) on the subjective judgement of the message's truth.

Two experiments found that statements of the very same content were judged as more probably true when they were written in concrete language rather than abstract. This discovery is very appealing when discussing the effects of language on persuasion.

The study went deep on this result and tried to find some explanations. The theoretical base of the research was partially the literature about the concreteness effect (briefly presented before) and the literature about the **truth effect**. According to this finding: the repeated presentation of a statement increases its perceived truth (for a review, Dechêne et al., 2010). This phenomenon was originally studied by Hasher et al. (1977) and later it was called repetition effect (Bacon, 1979), validity effect (Arkes et al., 1991) and finally truth effect (Begg et al., 1992). Whatever the name, two main explanations have been found for it.

The first one is **processing fluency**, which is how the individual can easily process information due to several simplifying dimensions (e.g., conceptual, perceptual and linguistic fluency, for a review see Alter & Oppenheimer, 2009). As Reber and Schwartz (1999, p. 342) concluded "any variable that increases experienced ease of processing is also likely to increase judgments of truth". For example, repeated exposure of sentences during the experiment (Begg et al., 1992) or high colour contrast of them (as in Reber's work) increase their subjective truth.

The other explanation of the truth effect was found in the subjective **familiarity** of the sentence or single words, which is the perception of having encountered them before the experimental stimulus (Bacon, 1979).

Although one could argue that familiarity affects truth perception because it is mediated by processing fluency (and some scholars actually did it), results show that familiarity and processing fluency are independent factors affecting judgements of truth (Brown & Nix, 1996).

In the experiment about language concreteness on perceived truth, Hansen and Wänke (2010, p. 1577) proposed that there are at least three possible reasons (not mutually exclusive) for which linguistic concreteness may influence perceived truth:

1) **Comprehensibility**: as already mentioned, concrete words are more easily processed (Paivio, 1991). Thus, the processing fluency of concrete language could explain its advantage in truth judgements in comparison with abstract language.
2) **Familiarity**: concrete words can be more easily remembered as suggested by the concreteness effect (besides their better cognitive processing). This ease of retrieval can correlate with the perception of familiarity that could explain the truth advantage of concrete language.
3) **Imageability**: as previously discussed, concrete words elicits greater imagination than abstract words and imagery is found to affect the mental perception of how likely an event is (Koehler, 1991). Thus concrete language may gain in truth perception because it stimulates imagery.

Hansen and Wänke studied how these three variables mediate the effect of linguistic concreteness on subjective truth. Results show that only differences in imageability (or vividness) significantly predict differences in truth judgements. This finding is very interesting for the research that is presented in this elaborate.

As the article suggest, "it may be a good strategy to communicate concretely when others have to be persuaded" (Hansen & Wänke, 2010, p. 1586) and the answer has to be found in the imaginative power of concrete language. This dissertation accepts this advice as the starting point of a new research question.

Building on the solid results offered by Hansen and Wänke, the hypothesis that is proposed here is:

H1: Concrete language has a higher effect on message persuasiveness in comparison with abstract language and this effect is mediated by visual imagery.

This has been empirically tested through two experiments that will be presented in Chapter 5.

For now it is essential to briefly analyze the dimension of imageability, better known in the academic literature as Mental Imagery.

Chapter 4
POTENTIALITIES OF MENTAL IMAGERY

The first study about Imagination was **Perky's experiment** (1910) in which respondents were asked to imagine a specific object and "project" it onto a screen they had in front of them. Simultaneously, a slight illuminated coloured representation of the object was actually projected on the screen (e.g., instruction to imagine a tomato were paired with a dim red circle), but it was very faint. When respondents described their imagination, results were stunning: they didn't experience the perception on the screen as actually real but they were sure they just imagined objects very vividly. Furthermore, when asked if they were sure they had imagined those figures, surprise and even indignation were aroused by the "meaningless" question.

The experiment was interpreted as the difficulty to distinguish between self-initiated imagery and real perception (Woodworth, 1938). Following studies confirmed these hypotheses on a neurological basis.

Kosslyn et al. (1997) used the positron emission tomography (PET) to study which brain areas are drawn upon by visual mental imagery and high-level visual perception: they found that 14 brain areas over 22 required by both tasks (two-thirds) were activated in common. Subsequent research used the functional magnetic resonance imaging (fMRI; Ganis et al., 2004), also combining it with more complex technologies (Cichy et al., 2011), and results clearly showed how imagery and perception draw on most of the same neural machinery. For more recent studies that are able to technically explain what are the differences you can see Dentico et al. (2014), what is pivotal to understand now is the power of imagination and how subtle its relation with perception appears.

What was later called the "Perky effect" gave rise to the mental imagery research.

Imagery is described as a process by which sensory information is represented in working memory within different levels of the elaboration continuum (for a review see MacInnis & Price, 1987). This statement is explained in details:

- *Process* means imagery is not an object stored in memory but a way to use existent objects: after a knowledge structure such as the abstract code of birds is activated, the individual may imagine a prototypical bird such as a sparrow.
- *Sensory* means the evocation of imagines may be multi-sensory, thus involving more than one sense. Visual imagery involves only the sight dimension and it is the type of imagery that has received the highest attention in research, followed by

auditory imagery, because they are the most dominant in individuals (White, Sheehan & Ashton, 1977).

- *Elaboration* reflects the extent to which information in working memory is integrated with prior knowledge structures, at the low end of the continuum there is the simple retrieval of an image while at the high end there are processes such as daydreams, fantasies and visual problem solving (Richardson, 1983).

In the following paragraphs we will see what effects of imagination have been found in scientific experiments, what are the stimuli to evoke imagery, what moderates their effect and what are the scales that have been proposed to measure imagination. Furthermore, some experiments will be presented from the most recent researches about the potential of imagination in advertising.

4.1 Imagery Effects

The research area of the imagery consequences have been ordered in high and low imagery processing in the review by MacInnis and Price (1987).

At **low** elaboration levels, imagery can substantially enhance memory for *paired association learning* (linking two words with imagination, Paivio, 1991) and for *incidental learning* (such as a word-recall test that was not expected by respondents, Bower, 1972).

At **high** elaboration levels, imagery has been studied in several contexts (MacInnis & Price, 1987).

- *Problem solving*: visual framing of the problem will require less time to be solved in comparison with discursive framing, then it will determine the solution strategy that is used (Simon & Hayes, 1976); complexity decreases with the number of attributes that can be visualized (they increase the clarity of the image as explained by MacInnis and Price);
- *Probability assessment*: imagery affects perceived likelihood in terms of single events (Koehler, 1991), conjunctive probabilities (when imagining a scenario, probabilities are referred to the whole and not the single events, Kahneman & Tversky, 1982) and future decisions outcomes (elaborated imagery lead to a positive bias, O'Neal, 1974). The relationship between imagery and perceived likelihood was found in several contexts and experiments (for a review see Koehler, 1991): figuring a presidential candidate as the winner makes the event appears more probable; imagine to engage in certain behaviours make them more likely; imaging

to contracting a disease through easy-to-imagine symptoms increases the perceived likelihood of contracting the disease.

- *Purchase intentions and timing*: subjects imagining to subscribe to a cable television service were those that actually did so in following months (Koehler, 1991), then imagination reduces subjects' ability to delay gratification of purchase enhancing the purchase desire (Mischel, 1974);
- *Consumption experience*: imagination can be an experience-substitute (Doob, 1972), can increase the satisfaction for the experience, e.g. books and movies (hedonic consumption activities, Lindauer, 1983), and when referred to a past experiences it can increase intention to repurchase (Hilgard, 1978);
- *Positive feelings*: uncertain events presenting high-imageability cues would favourably enhance imagery processing that, in turn, generates positive feelings referred to the whole experience (Cheng & Lee, 2009). Those feelings were also found to be more durable over time when mediated by imagination.

This findings were used as the base for more recent researches. As previously mentioned, the effects of imagination on advertising will be presented in the last paragraph.

4.2 Imagery-eliciting strategies

The sources that traditionally have been identified as inducing visual imagery are pictures, concrete words and instructions to imagine (for a review, Lutz & Lutz, 1978; Unnava & Burnkrant, 1991). Here they will be discussed in turn.

Pictures are defined as any representation containing at least one element that is not alphabetic or numeric (definition by Lutz & Lutz). Visual information tend to be remembered better than verbal and this effect was found to be mediated by imagery (Alesandrini & Sheiken, 1983).

Research has studied the effect of replacing verbal information with pictures (*supplanting*) and *supplementing* verbal information with pictures. Although results are not conclusive, it was found that learning and attitudes are increased when pictures replace just some of the verbal information (Booher, 1975).

Concrete words have been found to stimulate the generation of images since Paivio's (1968) early work: ratings in concreteness are highly correlated with ratings in imagery. Ratings are available for nouns, verbs (Lippman, 1974) and words commonly used by children (ven der Veur, 1975).

Instructions to imagine refer to any statement that is used to direct the learner to form a mental picture of the concept (definition by Lutz & Lutz). Research shows that this kind of strategy is more effective when individuals have high prior knowledge and there are no external interferences, such as time constraints (MacInnis & Price, 1987). Indeed, imagery instructions are more effective on learning when listening rather than reading them (Brooks, 1967).

4.3 Moderators

The review by Babin, Burns and Biswas (1992) sum up the factors that influence the effectiveness of an imagery-evoking strategy. These moderating variables can thus amplify or hamper their effect on imagination.

- **Individual Differences**

  Scales for measuring individual differences have been categorized on the base of the measured area:

  - *Imagery ability*: refers to the vividness (i.e. clarity) and controllability (i.e. ability to perform image manipulations) of mental imagery. Proposed scales are Betts Questionnaire upon Mental Imagery (Betts, 1909) and Marks' Vividness of Visual Imagery Questionnaire (Marks, 1973);
  - *Imagery content*: it refers to individual differences in the content of fantasies and their use in everyday life, measured by the Imaginal Process Inventory (Huba et al., 1982);
  - *Spatial ability*: it means holding pictures of visual objects in memory and perform mental operations, independent from imagery ability (Richardson, 1983);
  - *Processing style*: it refers to the preferences for using imagery versus verbal (or discursive) processing, measured by the Visualizer-Verbalizer Questionnaire (Richardson, 1977; Childers et al., 1985);

- **Product Type and Needs**

  Some products may discourage imagery processing, such as strictly utilitarian ones (Babin et al., 1992). The need, either utilitarian or expressive, has been found to moderate the imageability of ad exposure (MacInnis & Jaworski, 1989). In one recent experiment (Fennis et al., 2012) the need was studied in its interaction with the propensity to experience visual imagery (measured by Mark's VVIQ).

- **Knowledge/Familiarity**

  The higher the prior knowledge and familiarity with the stimulus that has to be imagined, the more imagination will be enhanced (MacInnis & Price, 1987).

- **Opportunity**

  The opportunity to imagine may influence the effect of imagery-eliciting strategies (MacInnis & Jaworski, 1989), as it happens with simultaneous tasks. This factor coincides with Distraction from the ELM.

- **Product Involvement**

  This moderator was introduced in Miller and Marks (1996), they started from considerations of the ELM and found that measured "enduring product involvement" moderates the influence of sound effects but not the influence of a vivid verbal message on imagery, feelings and attitudes.

4.4 Measurement

The measurement of imagery was initially referred to individual differences (the proposed scales were discussed in the previous paragraph). The first attempt to measure the extent of imagination provoked by imagery-eliciting strategies was asking respondents to write their imagery experience (Lutz & Lutz, 1978) with the main disadvantage of translating sensory information in verbal information.

Ellen and Bone (1991) investigated the existing literature in order to find the most relevant dimensions for mental imagery and they proposed a multi-item scale to measure the effects of the main imagery-eliciting strategies. 19 items were identified within 4 areas:

- *Quantity*: questions asked how many pictures came to mind while listening the ad;
- *Ease*: what was the difficulty and how quickly images came to mind;
- *Vividness*: several dimensions were proposed (clarity, details, intensity, definition...);
- *Links*: ability to activate other information in long-term memory, questions asked if the ad reminded other times in life or past memories.

This scale was experimented in radio advertising. However, when it was used in following experiments (Bone and Ellen, 1992), some items were abandoned.

Babin and Burns (1998) proposed a modified scale for mental imagery using more rigorous procedures. The dimensions they found were quantity, vividness and elaboration (where quantity included ease and elaboration was an extension of the *links*

dimension), for a total of 14 Likert-type items. Scale development and scale validation were based on experiments about print advertisements.

Following research criticized the scales proposed by Ellen and Bone and by Babin and Burns: "these are reasonably good scales but, since each was developed using advertisements from a single medium, their robustness in other advertising media is questionable" (Miller, Hadjimarcou & Miciak, 2000).

Miller et al., for this reason, proposed a psychometrically rigorous scale that can work for advertising in print, radio and television and that includes some dimensions ignored by the previous scales. The identified areas are quantity, modality (multi-sensory experience), vividness and valence (attitude toward the images) for a total of 16 items (Likert and semantic differential).

Although the scale proposed by Miller et al. is not the official standard that is used in research (sometimes Babin and Burns' scale is preferred), several studies found it useful and reliable (Walters, Sparks & Herington, 2007; Lee & Gretzel, 2012).

4.5 Recap

In order to synthesize the arguments that have been treated, a graph is proposed here in order to faithfully integrate the frameworks presented in Babin et al. (1992, p. 623) and in MacInnis and Price (1987, p. 476).

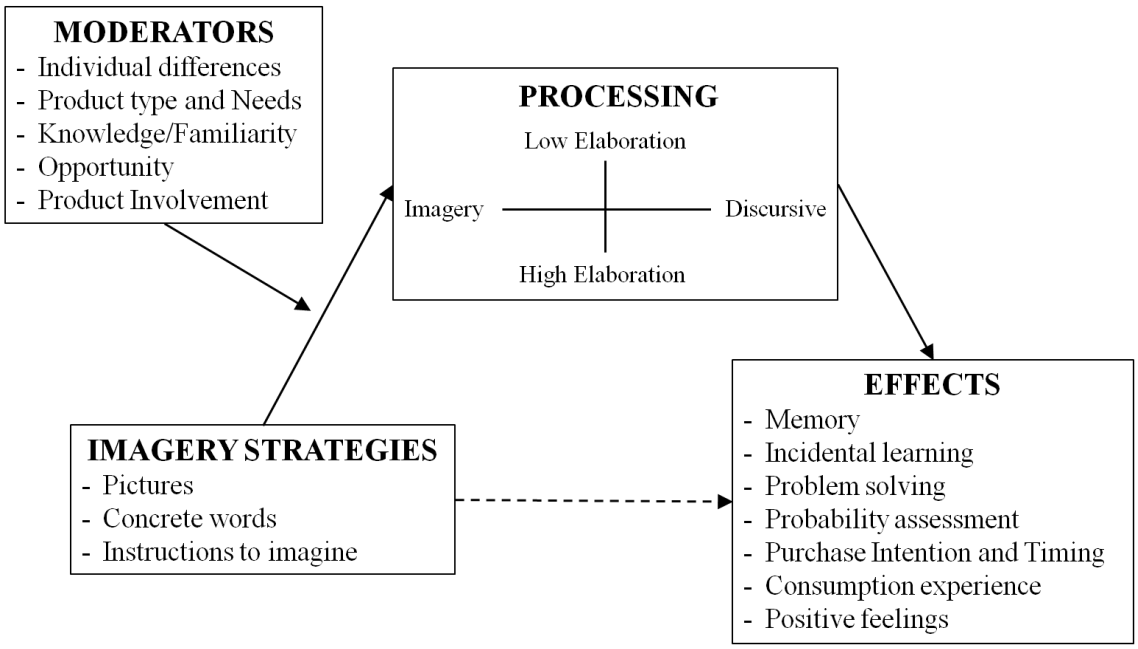


Figure 4.5 Imagery strategies, processes, moderators and effects.

The graph represents a mediated effect (Strategies → Processing → Effects) that is simultaneously moderated by the factors previously discussed. Mediation effect means

the independent variable (imagery strategies) doesn't exert a direct effect on the dependent one (the contexts we saw) but an indirect effect that is mediated by a measured factor (i.e., imagery/discursive processing). Moderators can amplify or reduce the effect of one variable over another.

The empirical analysis that is presented in this dissertation builds on this framework. Study I will support a mediation effect (with Visual Imagery as the mediator) and Study II will also introduce one moderator.

4.6 Advertising

In this paragraph some very recent experiments will be briefly presented. They explain the power of imagination for consumers and how it can be used in order to amplify the ad's impact and even overcome some structural limits that a marketer has to address. These are how to reduce the uncertainty customers face for *experience products* (i.e. such as travels) and how to compensate the lack of sensory experience in the online selling, a distribution mode that is empirically growing in relevance. As we shall see, imagery evoking has proven to be one of the solutions for these challenges.

- In one study about **tourism print advertising** (Walters, Sparks & Herington, 2007), they searched the best combination of the 3 imagery strategies in influencing the consumer's elaborate consumption vision. Mixing pictures (concrete or pallid) with concrete words and/or instructions to imagine, they found that concrete pictures + instructions to imagine had the greatest effect on consumption vision that directly determine the level of interest and attraction to the destination (Lubbe, 1998). However, results revealed that imagery evoking was the key, because it mediated the effect of the advertisement on the consumers' consumption vision.
- Another study in the same sector was about **travel planning websites** (Lee & Gretzel, 2012). After they tried all possible combinations among narratives, pictures and sounds, they found that only pictures make a significant difference on consumer attitudes (rather than a combination of the previous elements). Furthermore, this finding was empirically explained by imagination: it mediates the effect of pictures on consumer attitudes and, in addition, it enhances significantly attitude strength and confidence.

  A contemporary study found another significant effect of imagery for websites (Argyriou, 2012). Results showed that vividness mediates the positive influence of animations on the consumers' self-reported intentions to revisit the website.

- One experiment about **mobile advertising** (Gavilan et al., 2014) found that imagery mediates the effect of the type of ad on *trust* toward the ad and exerts a positive influence on *purchase intention*. The experiment showed to university students (the broader segment of "millennial users") different *clothes* advertisements in a 2 × 2 factorial: SMS (text only) vs MMS (picture + text) and informational (focus on product attributes) vs transformational (focus on the product experience: consumers enjoying themselves while wearing it). After imagery was measured in three dimensions (quantity, vividness and elaboration, Babin & Burns, 1998), results revealed that MMS and the transformational mode were more effective on ad trust and purchase intention. The reason was imagery processing: MMS generate images that are more vivid and elaborate than SMS (even if quantity was higher for SMS) and transformational ads better stimulates imagination than the abstract description of product characteristics.
- Finally, one study about **online product presentation** (Yoo & Kim, 2014) analyzed the power of imagination in *clothing* e-commerce for college women (frequent online shoppers for apparel as revealed by Denis & Fenech, 2004). Results show it is more effective, in terms of behavioral intentions, to present clothes with a relevant consumption background (e.g., situated in an elaborate setting depicting a lifestyle) than with a solid white background. The reason is (you guess it) imagination, better stimulated by a real visual setting for the product. This finding is appealing because it shows one of the ways to compensate the limits of online purchasing.

  Furthermore, concrete text decrypting consumption background was found to increase mental imagery depending on the Style of Processing measured by the Visualizer-Verbalizer Questionnaire (Richardson, 1977).

Chapter 5
EXPERIMENTS PRESENTATION

The aim of this research is to study the effects of language abstractness or concreteness on message persuasiveness.

In this chapter, two experiments will be presented. Both of them will examine how language influence persuasion, considering the crucial role of visual imagery suggested by past researches.

Study I proposes a mediation framework that has been tested through a written message about a university course. Study II wants to confirm the previous results and add Personal Experience as a new variable, proposing this way a moderated mediation framework. This experiment provided respondents with a video message about the homeopathic medicine.

5.1 STUDY I

This first study will broadly examine how language abstractness or concreteness affects the persuasiveness of communication, aimed to convince about an idea.

The hypothesis that will be tested is rooted on past researches that have been presented in previous chapters. The study which mostly constitutes the base is the one about perceived truth (Hansen & Wänke, 2010), it demonstrated that concrete language is perceived as truer than abstract language.

This finding could be very close to the proposed research question and it could predict that concrete language is also more persuasive than abstract language.

Furthermore, results by Hansen and Wänke showed that visual imagery mediated the effect of concrete language on perceived truth. As previously discussed in Chapter 3, mental imagery (evoked by pictures, concrete words or instructions to imagine) is a powerful mean that is able to influence assessments, feelings, learning and other effects.

Thus, building on these studies, the hypothesis that will be tested in the first experiment presented in this dissertation is:

H1: Concrete language has a higher effect on message persuasiveness in comparison with abstract language and this effect is mediated by visual imagery.

The theoretical framework that is suggested here is a mediation effect represented in the following graph:

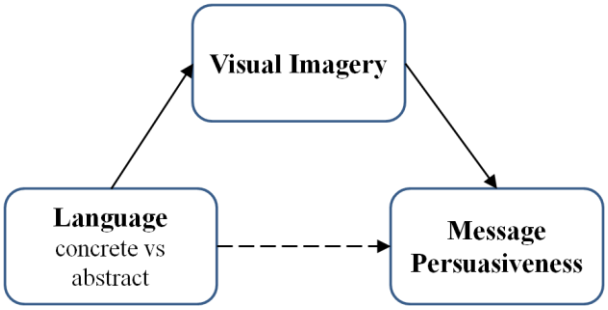


Figure 5.1 Mediation effect of Visual Imagery between language and persuasion.

The stimulus that is used in the experiment is a text message sustaining the effectiveness of a university course, presented in abstract language to half the participants and in concrete language to the other half (approximately). The sample of subjects for each group was selected randomly so that, on average, there are no group differences that could account for variations in measurements between them.

After measuring the groups' ratings of persuasiveness and visual imagery for both messages, it will be possible to demonstrate which language is more persuasive and whether imagination provides an explanation for this.

5.1.1 Method

Subjects. A total of 139 undergraduates at the Luiss Guido Carli University of Rome participated in the experiment, the mean age was 23 (SD = 2,3) and 79 of them were males. They received an email that was sent to all participants of two university courses (one of the second year and one of the fifth year of Economics) and some of the participants of a Public Speaking course (offered by the university for free).

Materials. Two messages were prepared in order to present the university free course about Public Speaking. One was written in abstract language and the other in concrete language according to the LCM (Semin & Fiedler, 1991). They are presented below in English, the original messages that were used in the experiment (in Italian) can be found in the Appendix.

Abstract Message	**Concrete Message**
The course of Public Speaking is regularly taken by Alberto Castelvecchi at Luiss. Alberto is an expert of different communication methods and he is extremely able to make the lesson exciting and rich of contents. Undoubtedly he is a versatile and distinct person.	The course of Public Speaking is regularly taken by Alberto Castelvecchi at Luiss. During the course, Alberto will present some slides about the principles of public speaking and he will explain some relaxing techniques, by showing for example how to swell the belly when

The course program is highly varied and unpredictable. All contents are proven to be intensely educational and to make students satisfied of the course. Principles learned by participants are strongly advanced and transversal to many contexts. The course will be absolutely effective in teaching how to speak in public.	breathing. Among all exercises, participants will move to make lines and will speak loudly in order to learn how to modulate voice. Furthermore, they will meet up in groups with the purpose of writing a speech that, at the end of the course, they will expose to the class. The course will improve this way the capability to speak in public.

The categories of the LCM are highlighted in the messages: adjectives, descriptive, interpretative and state verbs. Remember that adverbs are considered adjectives.

Although the messages are highly differentiated according to the LCM, intuitively it is easy to see the difference in terms of abstractness/concreteness. When language is abstract, the message seems less easy to verify, more subject to disputes and it communicates a temporal stability of events (they are likely to repeat themselves). When language is concrete, the message seems more objective, describing a single event and more easy to visualize. In terms of persuasive intent, both messages seek to create a positive attitude toward the course by convincing of its effectiveness with an explicit conclusion.

Pre-test. Before starting the experiment, 32 students from the Luiss University took part in a pre-test in order to ensure participants would have perceived the concreteness or abstractness of the messages. After reading one of the messages, they were asked to rate the language from 1 (*most concrete*) to 4 (*most abstract*), that is the scale proposed by Semin and Fiedler (1989).

The comparison of results revealed the messages were differently perceived: the concrete message was rated $M = 1{,}93$ ($SD = 0{,}45$) and the abstract set was rated $M = 2{,}47$ ($SD = 0{,}62$), $p < 0{,}05$.

Procedure. Respondents received an email asking to open a link to a survey, powered by Qualtrics that is an online free platform to design surveys. In the first stage, respondents were asked to read carefully the text, which was either abstract or concrete. In the second stage, they were asked to answer to few questions. These are presented in the following paragraph, then gender and age were asked.

The original questionnaire can be found in the Appendix.

Dependent Measures.

- Visual Imagery was measured through some questions taken from the scale proposed by Ellen and Bone (1991), based on quantity, ease, vividness and links of imagery. 7 Likert questions asked the extent of imagination on a scale from 1 to 7, the aim was to create a composite index if the correlation alpha was sufficiently high.
- Message persuasiveness was measured in three ways. The first asked "how persuasive was the message" from 1 to 10 (indirect measure of persuasion). The second asked "on the base of the message, how much do you think the Public Speaking course is effective?" from 1 to 10 (direct measure of persuasion). The effectiveness dimension is one item that can be used to infer the attitude toward the course. Finally, the third asked subjects to rate the course on four 5-point semantic differential scales (negative/positive, boring/interesting, useless/useful, difficult/easy) in order to create a composite index measuring in broader terms the attitude toward the course. This is another direct measure of persuasion typically used in Petty's experiments.

5.1.2 Results

In order to test empirically the model of fig. 5.1, three linear regressions have to be ran as the three statistical relationships that have to be tested. For each of them there will be an independent variable (X) whose effect is computed on a dependent variable (Y), depicted below as X → Y. The three variables presented in fig. 5.1 will be recalled as Language (abstractness vs concreteness), Imagery (visual mental imagery) and Persuasion (message persuasiveness).

1) **Language → Imagery**

   Visual Imagery was expressed as a function of language, coded as 0 when concrete and as 1 when abstract. While language is a dichotomous variable, imagery ranged from 1 to 7. It was planned to make a composite index of the items from Ellen and Bone's scale, although they were found to be inter-correlated, the language effect on the index was not significant. However, a significant main effect of Language on Imagery was found when the latter was measured by one single item that was "how vivid were the images that came into your mind?" (from 1 = *nothing* to 7 = *a lot*), that was actually used in Hansen and Wänke (2010). Results are $\beta = -0{,}38$, $t(138) = -2{,}12$ and $p = 0{,}03$, it means the more concrete the language the higher the evoked imagination. This result replicates past findings on visual imagery.

2) **Imagery → Persuasion**

In the second stage, persuasion was expressed as a function of imagery. An effect was found when imagery was measured by "how vivid were the images that came into your mind?" and persuasion was measured by two of the three ways previously discussed.

When measured as "on the base of the message, how much do you think the Public Speaking course is effective?" the effect of imagery on persuasion was: $\beta = 0,44$, $t(138) = 5,13$ and $p = 0$.

When measured as "how persuasive was the message" the effect of imagery on persuasion was: $\beta = 0,40$, $t(138) = 3,28$ and $p = 0,001$.

Both cases are highly significant and can be interpreted as: the higher the evoked imagination the higher the message's persuasiveness. Unfortunately, the measure of course's attitude as a composite index wasn't possible because index items were not inter-correlated.

3) **Language → Persuasion**

In order to find an empirical support for the proposed mediation model, a linear regression has to demonstrate that the direct effect of language on persuasion is not significant and, on the other hand, the indirect effect is significant.

The direct effect was found not significant for both measurements of persuasion. Considering the "course efficacy" measure, it was $\beta = 0,01$, $t(138) = 0,07$ and $p = 0,94$. Considering the "message persuasiveness" measure, it was $\beta = -0,18$, $t(138) = -0,72$ and $p = 0,46$.

The indirect effect was found significant for both measurements of persuasion, respectively $\beta = -0,17$ (CI: -0,39 and -0,006) and $\beta = -0,15$ (CI: -0,35 and -0,006).

On a statistical basis, results support the mediation model that was proposed in H1. It is depicted here with the coefficients obtained by the previous linear regressions.

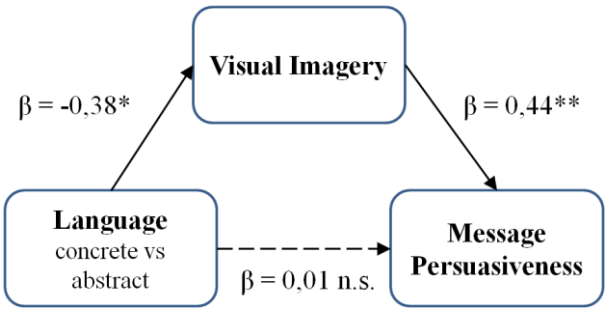


Figure 5.1.2 Mediation effect of Visual Imagery between language and persuasion with empirical results.

The beta reported for the Imagery-Persuasion relation considers Persuasion as measured by the "course efficacy" instead of "message persuasiveness" measure. That is because the former is a more direct measure of persuasion, it has a higher significance (even if it is marginal) and it has been used in Study II.

5.1.3 Discussion

Previous research found some differences in the perception of abstract and concrete language. While the former is better able to communicate stable and predictable characteristics, the latter allows a better comprehension, memory and imagination of contents. Study I extends what was found about language concreteness and perceived truth (Hansen & Wänke, 2010), results confirms the hypothesis that language concreteness is more persuasive than language abstractness because it evokes a higher imagination.

In the experiment, the public speaking course seemed more effective when the message described concretely the lessons rather than giving abstract qualities and judgements, even if the latter was much more explicit and extreme in supporting the advocated position.

Why visual imagery makes the difference? Answers can be found in the mental imagery research. As we saw, imagination involves many of the same brain areas that are activated during real perception. As such, images can be confused with reality and thus they can be more easily stored in memory, make events seem more likely, increase satisfaction and evoke positive feelings in comparison with abstract concepts.

5.2 STUDY II

The second experiment of the presented empirical analysis has two objectives. The first is to give solidity to the previous findings by varying some experimental parameters, such as message content, its channel and the modality of collections. Indeed, the message sustained the effectiveness of the Homeopathic medicine, it was presented as a video and responses were collected in-lab.

The second goal is to introduce a new variable that it is expected it works as a moderator of the language effect on persuasion, in other words it can hamper or amplify the effect.

The proposed moderator is **personal experience**, that is having already approached the experience presented in the message (i.e. a homeopathic examination) or not. We can assume direct experience to be a powerful base for imagination, it gives the building

blocks to create new images in our mind. As already mentioned, mental imagery research suggests that moderators such as prior knowledge and familiarity with the stimulus enhance imagination of it (MacInnis & Price, 1987).
For this reason, the hypothesis that will be tested is the following:

H2: The mediation effect of visual imagery between language concreteness and message persuasiveness is stronger when there has been a personal experience of the message's object.

The model that is proposed here is a moderated mediation effect depicted in the following graph:

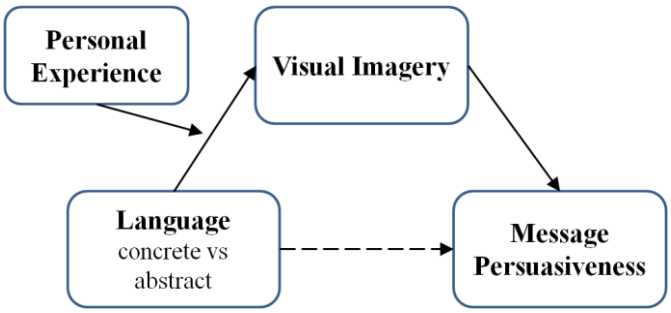


Figure 5.2 Moderated mediation of Visual Imagery on persuasion.

This framework replicates the finding of the previous Study and adds a new variable acting as a moderator: having experienced a homeopathic examination or not.
The stimulus is a video message sustaining the effectiveness of this medicine, presented in abstract language to half of the participants and in concrete language to the other half. The two groups were formed randomly so that, on average, any variation in measurements can be attributed solely to the manipulated (independent) variable.
Once again, ratings of persuasiveness and visual imagery will be measured for both messages together with the measurement of personal experience. This way it is possible to make a statistical analysis in order to test the moderated mediation model that was previously proposed.

5.2.1 Method

Subjects. A total of 158 undergraduates at the Luiss Guido Carli University of Rome participated in the experiment, the mean age was 21 (SD = 1,7) and 97 were males. They were randomly approached in the university rooms and invited to take part in a marketing survey (answers were collected through an electronic device).

Materials. Four videos were registered in order to present the homeopathic medicine by either a doctor or a consumer and using a language that was either abstract or concrete. However, the expertise dimension wasn't found to have any effect, thus materials will be referred as two videos differentiated only by language according to the LCM (Semin & Fiedler, 1991). The message that is communicated by the speaker is written below together with the pictures of the two speakers, the original messages (in Italian) can be found in the Appendix.

Figure 5.2.1 Subjects who performed the video messages.

Abstract Message	**Concrete Message**
The homeopathic doctor is an expert of the symptoms' causes, he is unbeatable in this kind of research. The measurement machinery, namely the electronic acupuncturer, is highly effective and reliable. It is extremely precise and technological in order to measure both disequilibrium's causes and substances that will solve them with the maximum certainty. For this reason, the homeopathic medicine is absolutely effective as a cure.	During the examination, the homeopathic doctor tells to the patient the symptoms' causes through a measurement machinery, which is the electronic acupuncturer. The doctor gives him two electrodes and after pressing some parameters on the machinery, he looks the results on the display. At the end, the doctor writes a chart with all the disequilibrium that have been found and the substances that the patient has to ingest in order to resolve the problem. Both disequilibrium and substances are found through the electronic acupuncturer. For this reason, the homeopathic medicine works as a cure.

One again, the categories of the LCM are highlighted in the messages: adjectives, descriptive, interpretative and state verbs. Persuasive intent was to create a positive attitude toward the homeopathic medicine by sustaining its effectiveness. Depending on the initial attitude, persuasion goal could be shaping, reinforcing or changing the attitude.

Procedure. Respondents were asked to watch one video (of approximately 1 minute, they were chosen randomly) and answer to few questions (see below), then gender and age were asked.

The original questionnaire can be found in the Appendix.

Measures.

- Language abstractness/concreteness is measured as a manipulation check by asking how much abstract or concrete were the words used in the message from 1 = *most concrete* to 4 = *most abstract* (Semin & Fiedler, 1989).
- Visual Imagery was measured by a single Likert question asking "how many images did the message evoke in your mind?" from 1 = *no one* to 7 = *a lot*.
- Message persuasiveness was measured by asking "on the base of the message, how much do you think Homeopathic Medicine is effective?" from 1 to 10. This is the direct persuasion measure that was used in Study II.
- Personal Experience is the moderator variable that is added in this experiment. It was measured by asking to respondents whether they had at least one homeopathic examination (yes or no, dichotomous variable).

5.2.2 Results

The manipulation check revealed a significant difference in the perception of language: the abstract message received an average score of 2,52 (SD = 0,67) and the concrete message received an average score of 2,21 (SD = 0,56), $p < 0,05$.

In order to test the moderated mediation model proposed in figure 5.2, three linear regressions have to be ran.

1) **Moderation effect**

   The empirical test of the moderator variable (i.e. personal experience) expressed imagery as a function of language (coded 0 when concrete and 1 when abstract), personal experience (coded 1 when absent and 2 when present) and the interaction between them (language × personal experience). Results revealed a non significant effect of personal experience on visual imagery ($\beta = -0,61$, $t(157) = -1,80$ and $p = 0,07$) and a highly significant main effect of language on imagery ($\beta = -1,73$, $t(157) = -3$ and $p = 0,003$), explaining that the more concrete the language the higher the imagination (as suggested by past imagery research). The moderation effect is supported by a significant effect of the interaction language × personal experience: $\beta = 1,14$, $t(157) = 2,48$ and $p = 0,01$. This result explains a positive relationship

among variables that can be interpreted as follows: when the language is concrete, the absence of personal experience allows greater imagination (M_{exp} = 4,18, SD = 1,54; $M_{no\text{-}exp}$ = 4,57, SD = 1,01; $p < 0,05$), when the language is abstract, the presence of personal experience allows greater imagination (M_{exp} = 4,56, SD = 0,96; $M_{no\text{-}exp}$ = 4,01, SD = 1,10; $p < 0,05$). These results are represented in the following graph.

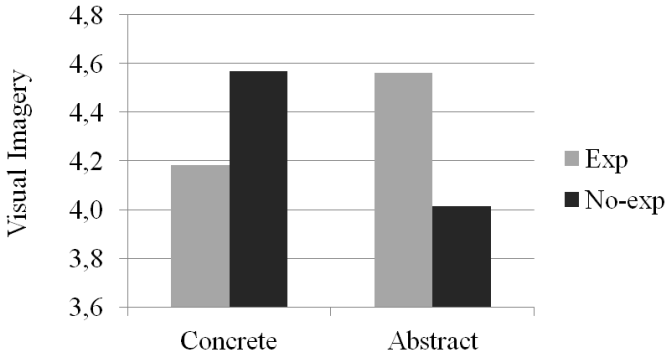


Figure 5.2.2a Level of Visual Imagery for Language × Personal experience Interaction.

Up to here there are good reasons to refuse H2. Results show that when respondents had a homeopathic examination, abstract language was more imagery-evoking and in absence of the personal experience concrete language is the most effective in imageability.

2) Mediation effect

This stage replicates the findings of Study I, that is visual imagery mediates the positive effect of language concreteness on message persuasiveness. Indeed, a linear regression that considers persuasiveness as a function of imagery (from 1 to 7) and language (0 = concrete; 1 = abstract) demonstrates that language has a non significant direct effect on persuasiveness ($\beta = 0,35$, $t(157) = 1,19$ and $p = 0,23$) while imagery has a significant positive effect on persuasiveness ($\beta = 0,27$, $t(157) = 2,09$ and $p = 0,03$). These results together with another one from the previous stage (the effect of language on imagery, $\beta = -1,73$) confirm and strengthen the findings of Study I: concrete language increases message persuasiveness in comparison with abstract language and this effect is mediated by visual imagery. Although some parameters have been changed, results remained the same.

3) Moderated mediation

The third stage provides the empirical base to accept or refuse H2. A linear regression was used to test if the effect of language concreteness on message

persuasiveness is simultaneously mediated by visual imagery and moderated by personal experience.

The analysis revealed a significant index of moderated mediation (0,32, CI: 0,03 and 0,95), however the moderator effect can be reliably demonstrated only in one direction. Results show that, when respondents didn't experienced homeopathic examination, the mediated effect of language is significantly negative (β = -0,16, CI: -0,42 and -0,02), thus it is necessary to refuse H2 and say that concrete language is more persuasive than abstract language when there is no personal experience. The opposite is not supported by results, indeed when respondents had at least one homeopathic examination, the mediated effect of language is positive but it is not significant (β = 0,15, CI: -0,05 and 0,68). Thus it is not possible to conclude that when there is personal experience abstract language is more persuasive than concrete language.

The statistical analysis refuse H2 and support the opposite version: the mediation effect of visual imagery between language concreteness and message persuasiveness is stronger when there hasn't been a personal experience of the message's object. Results are represented graphically with regression coefficients.

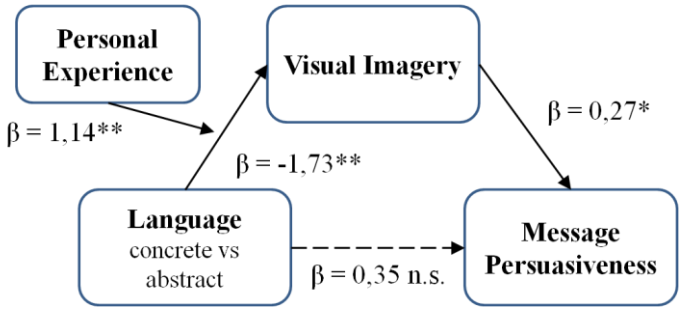


Figure 5.2.2b Moderated mediation of Visual Imagery on persuasion with results.

Notice that 1,14** refers to the interaction (language × personal experience) and that -1,73** refers to the effect without the moderator.

5.2.3 Discussion

The present study confirms what was found in Study I, that is language concreteness is more persuasive than language abstractness because it evokes a higher imagination. Furthermore, it considers the effect of personal experience with the message's object, namely the homeopathic examination.

Results contrast with predictions of past researches, which sustain that moderators such as knowledge and familiarity with the stimulus increase its imageability (MacInnis &

Price, 1987). It is intuitive to think that, if a person actually had the medical examination, more images should come in his mind when reading concrete words about it. However, what the analysis reliably demonstrated is that concrete language evokes greater imagination in the absence of direct experience in comparison with its presence.
One possible explanation is that relevant experience could be a limit to imagination, that is probably because it forces images to be linked to the specific context that has been experienced.
In this experiment, maybe participants who experienced the examination were mentally focused only on that event and images were specific to that context (e.g. the doctor office, his face, his instruments). Other respondents had the possibility to evoke images from much more memories.
Thus, an experience-free individual could use concrete words to make many associations and evoke images from several contexts. On the other hand, who had a personal experience could draw images mainly from that situation, facing this way a constraint and being more difficult to persuade.

5.3 General Discussion

The two experiments that have been proposed analyzed the effect of language abstractness/concreteness (as defined by the Linguistic Category Model) on message persuasiveness. Consistently with existing literature, concrete language was found to have a higher persuasive power in comparison with abstract language. The empirical tests used two modalities of presentation about different topics: a written message about the efficacy of a university course and a video message about the efficacy of the homeopathic medicine. In both studies, messages containing mostly descriptive action verbs (DAVs, concrete language) were more correlated to the perception of the topic's efficacy in comparison with messages containing mostly adjectives (ADJs, abstract language). Results show this effect is mediated by visual imagery that is mostly stimulated by concrete words and that explains their better communication power.
Furthermore, Study II revealed one of the possible moderators of the mediated effect "Language → Imagery → Persuasion". Personal experience was surprisingly found to negatively affect the imageability of concrete words. Thus, subjects who didn't have any homeopathic examination were more susceptible to concrete words when evaluating the efficacy of homeopathic medicine.

5.4 Research Limitations

The experiments presented in this dissertation may suffer of some circumstances that restrict the validity of found results, considering both the methodology and the content of experiments.

The first one refers to the *sample* of respondents. In both experiments they were undergraduate students, thus the sample representativeness of the whole population is limited to certain socio-demographic variables such as age, education (they were studying Economics, Law or Political Sciences), nationality (they were all Italians) and probably income.

The second one refers to *data collecting*. In Study I respondents privately answered to an online questionnaire, it could be good for answers sincerity but it could be bad for quickly superficial answers.

In Study II respondents insert data into an electronic device (i.e. a tablet) in presence of the experimenter. This method faces the opposite situation: answers were more pondered but, however, they could be influenced by motives of impression management and social pressures.

Other limitations to the results that were found about persuasion and language concreteness could come from the object of the experiment. Considering the *content* of messages, both of them were referred to interpersonal situations in which a person exhibits a behavior. That was necessary in order to better put into practice the LCM that was originally thought for the social domain. Contents were the Public Speaking course offered by the same university of respondents and a Homeopathic examination: the course professor and the homeopathic doctor were the individuals on which the message was focused. As such, experiments were referred to services, which are very different in terms of evaluation process in comparison with products. However, it doesn't seem to be any factor that could make concrete language more persuasive only when referred to services.

5.5 Managerial Implications

Results of this empirical analysis provide some suggestions that can be readily used by marketers.

As already mentioned in Chapter 1, a better understanding of persuasion variables is useful for several marketing contexts, such as advertising, social media, WOMM and online reviews.

In all these contexts, a concrete language (made of descriptive verbs rather than adjectives) is a better communication strategy. In **advertising** it can contribute to the creation of a positive attitude toward the product. Here managers should test the imaginative power of their commercials, evoked by concrete words or also instructions to imagine and pictures. Imagination exerts a significant effect when presenting product attributes. Furthermore, this effect must be particularly considered when customers didn't have the experience of the product or service. When the goal is attitude shaping toward a completely new topic, concrete language will have a higher impact than abstract one.

For what concerns **social media** and **WOM marketing**, a higher attention should be paid on the language that is used. When the company has to convince customers or they present peers' evaluations, concrete descriptions are more effective in opinion change than generic and intangible sentences. As a consequence, marketing messages should be tested in terms of concreteness level. Then, when stimulating WOM, the company should ask customers to describe what concretely they experienced instead of too evaluative judgements that may lack imagery power. Furthermore, when monitoring consumer discussions in social media and forums (semantic analysis), the company can consider the concreteness of language (computed on the base of words and verbs score in terms of concreteness) as one of the proxies of influence potential. Thus, besides the valence of discussions, it is possible to consider their social impact in terms of persuasiveness.

Finally, **online reviews**' effectiveness on customers can be considered by including some concreteness indicator. Managers could make a composite index of the review influence based not only on consumers ratings of its effectiveness but also on some review attributes such as judgement certainty, sender expertise, opinion extremity and language concreteness. This index could be used to manage WOM, the firm could for example found the best reviews among positive ones and increase their visibility. On the other hand, most influent negative reviews will be directly addressed by publicly providing an explanation or even a solution to the presented problem.

Language concreteness can be explicitly presented as one of the features of online reviews (an algorithm automatically computes words' scores). This way e-commerce companies can provide customers with another tool to select among the huge amount of peers' evaluations.

5.6 Future Research

One of the most interesting area to explore about the effect of language abstractness/concreteness on persuasion is the multiple role hypothesis. That means study the effect of language at different points of the elaboration continuum in order to scientifically prove its effect within a consolidated model of persuasion.

Existing literature has highlighted the difference of imagery (evoked by concrete words) in high and low elaboration (MacInnis & Price, 1987). It was found that, when elaboration is low, concrete words can enhance learning. Thus, considering the previous discussion, experiments could found empirical evidence that concrete language could act as a simple **cue** by facilitating message comprehension and memory. As a consequence, this variable could serve as a heuristic: "the more clear the more credible" or, for the reason why concrete words can be easily remembered, it can act as an availability heuristic ("the easier the recall the more true it is"). Considering high elaboration, imagination evoked by concrete words was found to exert many effects that could bias the elaboration process: probability assessments, positive feelings and perceived truth. Within the **bias** role, language would work in a completely different manner in comparison with low elaboration processes: vividness should be higher and more directly affect persuasion.

The other role that could be experimented it is **catalyst** to thinking, it means how language concreteness can influence the extent of elaboration. In this case, one could argue that it could increase attention to the message when it is not expected. Product category could determine some expectations about the language that will be used: food or cosmetics are described more concretely than luxury products. Disconfirming expectations could increase the extent of elaboration and thus enhancing the arguments' quality effect.

The multiple role hypothesis can explain how the language dimension can interact with other variables when it influences the amount of thinking. If it enhances elaboration, simple cues such as source expertise, similarity and majority status will have a reduced effect on persuasion.

Conclusion

The aim of this dissertation was to discuss in details the determinants of persuasion and to empirically contribute to researches in this area by experimenting the effect of the concrete/abstract dimension of language (on the base provided by the related academic literature).

The interest on persuasion was driven by a recent hot topic in marketing research, which is Word of Mouth (WOM). Several trends were presented in order to demonstrate the relevance it gained due to the digital revolution we are facing today. Related areas such as social media, WOM marketing and online reviews (besides the traditional advertising) were showed as greatly benefiting from the awareness of what influence people.

As a consequence, persuasion was extensively explained. The structure of presentation was given by the Elaboration Likelihood Model: psychological processes were divided between high- and low- elaboration processes, then the effect of persuasion variables was considered, where possible, according to the 5 roles suggested by the multiple role hypothesis (argument, bias, self-validator, cue, catalyst).

Several persuasion variables (38), together with the parameters determining the role they will assume, were identified as the keys to the power of persuasion. All variables were related to source, message, recipient and context and were discussed on the base of the available scientific findings.

One new variable was proposed in this dissertation, which is the abstract/concrete dimension of language. It was explained through the Linguistic Category Model (LCM) which claims how different language categories (DAVs, IAVs, SVs and ADJs) vary in terms of abstraction and its related psychological implications. One experiment that was presented (Hansen & Wänke, 2010) found that concrete language increases the ratings of perceived truth and this effect is mediated by imagination. Given the relevance of this finding when analyzing the language effect of persuasion, the topic of visual imagery was analyzed.

The discussion reported a neurological explanation of the imagination's power, indeed two-thirds of brain areas are activated in common by both perception and imagination. Then some applications were presented. In advertising, for example, visual imagery was found to significantly affect consumers' attitudes and intentions in contexts where they avidly search for some decision rules, such us experience goods and online purchasing.

Combining the literature on the LCM together with that one about Visual Imagery, it was proposed that concrete language is more persuasive than abstract one and that its effect is mediated by imagination.

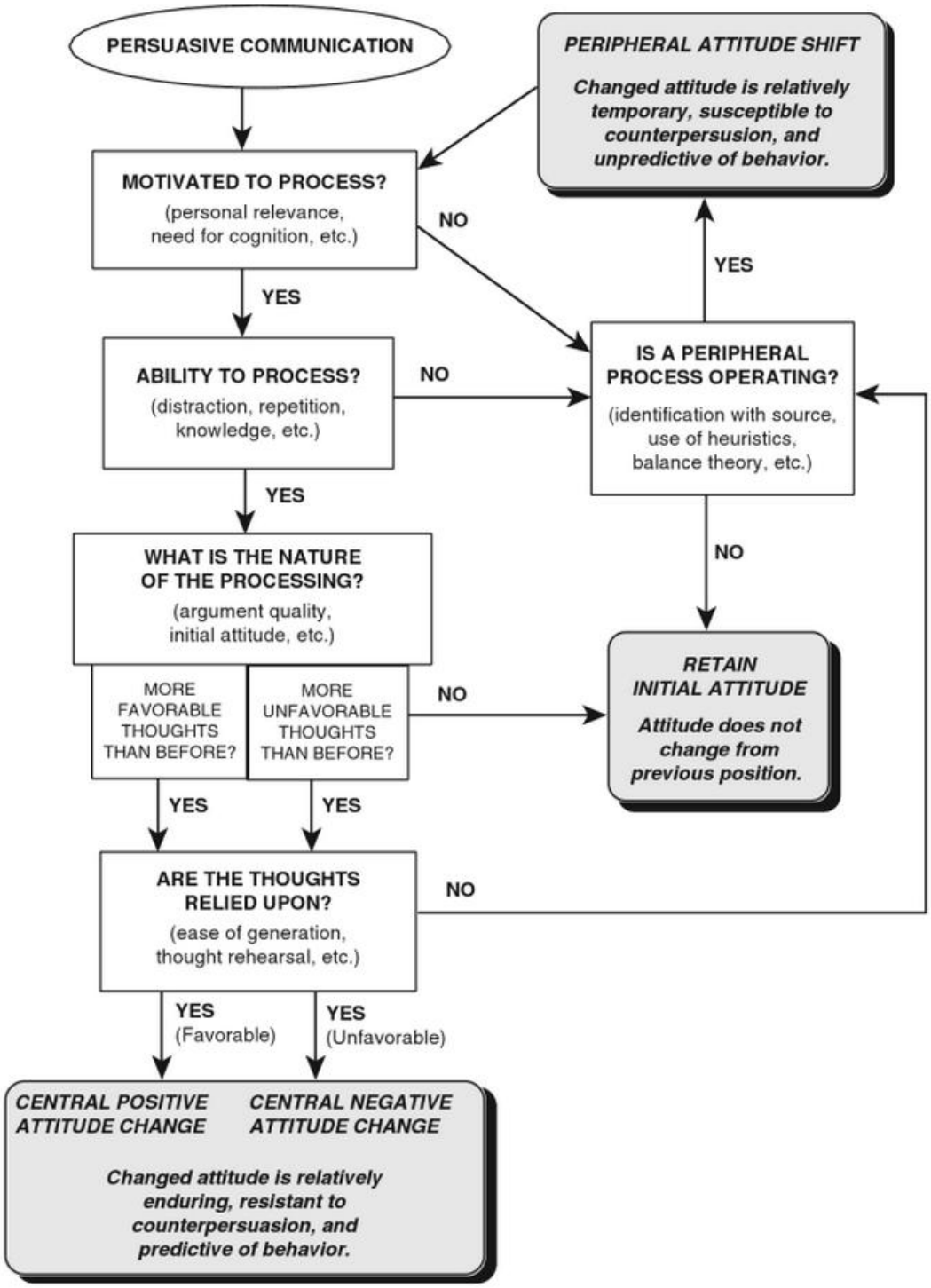
Two experiments provided empirical support for this hypothesis. The same message was written in abstract (more ADJs) and concrete language (more DAVs). Respondents who saw the concrete message reported a higher perceived efficacy of its object (either the Public Speaking course or the homeopathic medicine) in comparison with subjects who saw the abstract message. Data demonstrates that the direct effect of language on persuasion is not significant while the indirect effect mediated by visual imagery can be reliably supported. Thus, concrete language has a higher imagination power that, in turn, makes the message more persuasive.

Furthermore, Study II provided an unexpected result about the moderating role of personal experience: subjects who previously had at least one homeopathic examination were those on which concrete language had the lowest effect on imagination. This finding could support the idea that direct experience limits the individuals' imagination potential to the specific situation they experienced, reducing this way the amount of images that can be freely evoked.

The contributions of this dissertation can be used as practical advices in the marketing areas that were suggested when talking about WOM: advertising could be tested in terms of imaginative potential (above all when presenting a new product/service), company's communications in social media will be more persuasive if set in concrete language, monitoring can consider concreteness as a proxy of influence in semantic analysis, WOM marketing could ask customers to concretely describe their product experiences, online reviews could benefit from a concreteness indicator for both companies and customers.

Appendix

Content A.1 Schematic depiction of the Elaboration Likelihood Model



Source: Petty & Briñol, 2012, p. 227.

Content A.2 Messages and Questionnaire of Study I

Concreto	**Astratto**
Il corso di Public Speaking è tenuto regolarmente da Alberto Castelvecchi presso la Luiss. Durante il corso, Alberto presenterà delle slides con i principi da seguire per parlare in pubblico e spiegherà alcune tecniche di rilassamento, mostrando ad esempio come gonfiare la pancia per respirare. Tra i vari esercizi, i partecipanti si disporranno a file per parlare a voce alta imparando così a modulare la voce. Inoltre, si incontreranno a gruppi per scrivere un discorso che, alla fine del corso, esporranno in piedi davanti alla classe. Il corso migliorerà così la propria capacità di parlare in pubblico.	Il corso di Public Speaking è tenuto regolarmente da Alberto Castelvecchi presso la Luiss. Alberto è esperto dei vari metodi di comunicazione al pubblico ed è estremamente capace di tenere una lezione stimolante e ricca di contenuti. È indubbiamente una persona poliedrica e distinta. Il programma del corso è molto variegato e imprevedibile. Tutti i contenuti sono testati per essere densamente educativi e per rendere gli studenti soddisfatti del corso. I principi acquisiti dai partecipanti sono altamente avanzati e trasversali a molti contesti. Il corso sarà assolutamente efficace per imparare a parlare in pubblico.

1) Quanto astratto o concreto percepisci il linguaggio utilizzato nel testo che hai letto?	Da 1 (molto astratto) a 4 (molto concreto)
2) In che misura le parole utilizzate nel testo che hai letto hanno evocato immagini nella tua mente?	Da 1 (per niente) a 7 (moltissimo)
3) Leggendo le parole del testo precedente, quante immagini ti sono venute in mente?	“
4) Quante facile/difficile è stato per te associare delle immagini alle parole utilizzate nel testo che hai letto?	“
5) Quanto lentamente/velocemente le immagini sono emerse nella tua mente mentre leggevi il testo?	“
6) Quanto erano chiare le immagini che ti sono venute in mente leggendo il testo?	“
7) Quanto erano vivide le immagini che ti sono venute in mente leggendo il testo?	“
8) In che misura le parole utilizzate nel testo che hai letto ti hanno fatto venire in mente altri momenti/situazioni della tua vita?	“
9) Alla luce del messaggio, quanto ritieni che il corso sia efficace da 1 a 10? Con 6 = sufficiente	Da 1 a 10
10) Quanto è stato persuasivo il messaggio da 1 a 10? Con 6 = sufficiente	“
Alla luce del testo che hai letto, quanto ritieni che il corso	

sia: 11) Negativo:Positivo 12) Noioso:Interessante 13) Inutile:Utile 14) Difficile:Facile	 Da -2 a +2 “ “ “
15) Parleresti del messaggio ad un conoscente?	Sì/No
16) Condivideresti ora l’articolo su un social media (ad esempio, Facebook, Twitter, ecc..)?	“
17) Hai già frequentato il corso di Public Speaking alla Luiss?	“
18) Hai già frequentato un corso generico di Public Speaking?	“
Età, Sesso	

Content A.3 Messages and Questionnaire of Study II

Esperto	**Inesperto**
Sono Angelo Massimi, sono un medico omeopata e professore di omeopatia presso l’Istituto di Medicina Omeopatica, e ho appena cominciato a dirigere un progetto di ricerca nazionale su alcune sostanze omeopatiche. In questo video vorrei parlarvi brevemente della medicina omeopatica.	Sono Mattia Moretti, in questo video vi parlerò brevemente di medicina omeopatica. Sono un sostenitore di questa disciplina che ho scoperto di recente e che ho poi approfondito su un sito internet.

Concreto	**Astratto**
Durante la visita, il medico omeopata comunica al paziente le cause dei sintomi tramite un macchinario di rilevazione, ovvero l’elettro-agopuntore. Il medico porge due elettrodi al paziente e dopo aver digitato i parametri sul macchinario osserva i risultati sul display. Il medico va infine a compilare una tabella, riportando i disequilibri trovati e le sostanze che, se ingerite, risolvono il problema. Sia i disequilibri che le sostanze sono ottenuti tramite l’elettro-agopuntore. Per questo motivo, la medicina omeopatica funziona nella cura del paziente.	Il medico omeopata è esperto delle cause dei sintomi, egli è imbattibile in questo tipo di ricerca. Il macchinario di rilevazione, ovvero l’elettro-agopuntore, è della massima efficacia e affidabilità. Questo è estremamente preciso e di altissima tecnologia non solo per la misurazione delle cause dei disequilibri ma anche per la ricerca della sostanza che con totale sicurezza le andrà a risolvere. Per questo motivo, la medicina omeopatica ha la massima efficacia per la guarigione.

1) Quanto sei interessato alla medicina omeopatica?	Da 1 (per niente) a 7 (moltissimo)
2) Considerando solo il titolo che presenta, quanto ritieni esperto lo speaker?	“

3) Quanto le parole utilizzate hanno evocato immagini nella tua mente?	“
4) Quanto le informazioni riportate ti risultano verificabili?	“
5) Quanto astratte o concrete percepisci le parole utilizzate?	Da 1 (molto astratte) a 4 (molto concrete)
6) Alla luce del messaggio, quanto ritieni che la medicina omeopatica sia efficace da 1 a 10? Con 6 = sufficiente	Da 1 a 10
7) Quanto è stato convincente lo speaker da 1 a 10? Con 6 = sufficiente	“
Cosa ne pensi di questo singolo messaggio riguardo la medicina omeopatica?	
8) Noioso:Interessante	Da -2 a +2
9) Inutile:Utile	“
10) Ambiguo:Inequivocabile	“
11) Complesso:Semplice	“
12) Parleresti del messaggio ad un conoscente?	Sì/No
13) Mostreresti il video ad un conoscente?	“
14) Condivideresti il video su un social media?	“
Qual è la tua esperienza con la medicina omeopatica?	
15) Me ne hanno parlato	Sì/No
16) Ho usato più volte farmaci omeopatici	“
17) Mi sono informato per mio conto	“
18) Ho fatto una o più visite omeopatiche	“
19) Andrai a prestare maggiore attenzione ai prodotti omeopatici?	Da 1 (per niente) a 7 (sicuramente)
Età, Sesso	

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