Can you tell why some reviews result more helpful than others?

An empirical analysis of utility votes in online consumers reviews adopting the abstractness-concreteness framework of the Linguistic Category Model.

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To my family

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ABBREVIATIONS AND ACRONYMS

WOM = Word-of-Mouth

OWOM = Online Word-of-Mouth

eWOM = Electronic Word-of-Mouth

NWOM = Negative Word-of-Mouth

PWOM = Positive Word-of-Mouth

SEO = Search Engine Optimization

SNSs = Social Networking Sites

ROI = Return on Investment

LCM = Linguistic Category Model

DAVs = Descriptive Action Verbs

IAVs = Interpretive Actions Verbs

SVs = State Verbs

Adjs = Adjectives

LIB = Linguistic Intergroup Bias

CHAPTER ONE:

INTRODUCTION TO THE WOM ENVIRONMENT

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1.1 INTRODUCTION: STATEMENT OF THE PROBLEM AND AIM OF THE RESEARCH

An ever increasing number of marketers are recently trying to exploit the opportunities given by consumer-generated buzz, since the power of a more trustworthy, peer-to-peer communication has a certain appeal in building brand awareness, in innovation adoption, in product diffusion and, pragmatically, the impact of sales[1].

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[1] More a more in depth analysis, please refer to: Chevalier J.A., Mayzlin D., *The effect of word of mouth on sales: Online book review*, Journal of Marketing Research, Vol. XLIII, Aug 2006, 345-354.

Therefore, although Word-of-Mouth (WOM) is usually generated spontaneously, an increasing number of companies are pro-actively intervening in an effort to stimulate and manage WOM activity[2].

Managed WOM may operate at an individual or organizational level.

Companies as a whole are nowadays aware of the potential issues associated with celebrity endorsements, since celebrities can become unfashionable or attract bad publicity: Michael Jackson, O.J. Simpson and Eric Cantona are noticeable example[3].

In this chapter, we first introduce the characteristics of both traditional and online Word-of-Mouth, then we present a literature review with the aim to understand the findings and the opportunities still on the table, for consumers but above all for companies.

1.2 "AS IS" SITUATION: WHAT COMPANIES DO

Among well known and most used marketing strategies that companies can put in place and that it has been successfully did in the last decades, a place of honor goes to the so-called referral marketing.

It consists of a remuneration program in which an actual customer has an incentive (usually, it is a financial incentive, a certain amount of money given by the company/institution) in order to suggest the company or the service to other people, thus enlarging the customers' base.

This is the case, for example, of TV or Internet subscriptions, but also banks and financial institutions.

Intuitively, the incentive should enhance the willingness of each customer to recommend the product or service more effectively and to be sure that the friend will follow the advice in order to be rewarded.

In this way, the persuasiveness effect of WOM and its range of action is amplified.

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[2] Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/096525498346658.

[3] Example from: Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/096525498346658.

Indeed, a more scientific study has been conducted with the aim to detect the real impact in terms of customer acquisition of this marketing strategy[4].

Since referral marketing can be considered a form of WOM marketing and since in the last years there is a lot of buzz around WOM considered to be the new marketing tool that will partially replace traditional marketing, then this study is a good attempt in proving its financial effectiveness.

The research confirms referral marketing as a good way to attract higher quality customers in a power-saving mode, meaning that it is financially convenient to exploit the WOM cascade effect that this tool generates.

The study also demonstrates that referred customers, compared to not-referred ones, deliver higher margins at the beginning, higher retention and higher customer lifetime value.

An explanation has been given by the authors in what it has been called the "better-matching mechanism", that has roots in the fact that the actual customer knows better the company that provides the service/product on one side, and his/her friends on the other side, thus leading to higher margins.

Referral marketing, although largely used, is only one of the myriads of possibilities that WOM process offer, both in terms of range of tools to promote peer-to-peer communication, but also to understand all the info that this communication contains.

1.2.1 Dos and Don'ts: how to exploit the content of OWOM

Nowadays many companies[5] have taken the opportunity to turn into a profitable business what only few years ago was just a perception, regarding the powerful impact of online consumers reviews on performance and reputation[6].

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[4] The study was conducted over a period of three years and followed the customer referral program of a leading German bank that paid customers 25 euro for each new customer they brought in.
The research was then published by: Schmitt P., Skiera B., Van den Bulte C., *Referral Programs and Customer Value*, *Journal of Marketing* Vol. 75 (January 2011), 46 –59.
[5] Examples of famous companies are: Reputation.com; Reputation ranger; Review Trackers; etc..
[6] For a general picture of what compagnie can do, refer to:
http://webmarketingtoday.com/articles/How-to-Monitor-Yelp-Other-Review-Sites/
http://www.socialmediaexaminer.com/tools-monitor-online-reputation/
http://en.wikipedia.org/wiki/Reputation_management

Although they offer a wide range of services, there is still room for more sophisticated research and applications.

It has already been said that no company can avoid to consider and monitor the online world, and in fact in US in 2012 the expected expenditure was estimated to be around $700 million (more than double the 2011 investment) on tools or platforms that enable medium and small companies to monitor online consumers opinions[7].

In fact, "what is said about" in the cyber space is strictly linked to the concept of business's reputation.

Reputation management is sometimes associated with unethical conducts such as astroturfing review sites[8], censoring negative complaints and using SEO[9] tactics.

If there is a mismatch between how the company perceives itself and how others may perceive it, pushing down negative results is never a solution.

Companies must resist the temptation to create false account and write fake, positive reviews, since it is not going to work in the world of transparency that Internet is more and more becoming.

On a business's perspective, more important than avoiding negative publicity or getting feedbacks is getting early signals or even trying to anticipate the market trends and grabbing opportunities as first movers, creating or interpreting rising needs of the consumers, or reducing the risks in launching products innovation or, more, using online feedback to influence product development.

Nowadays, in order to understand the sentiment of the online consumers and browsers, companies can rely on simple tools like the one provided by Google Alert, that helps you to collect the online content related to your business, on multi-site monitoring, on more or less sophisticated sentiment analysis, on comparisons between your company's reviews and your competitors'.

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http://www.reviewtrackers.com/

[7] Source: Wall Street Journal article, 6th Aug 2012, reporting a research by BIA/Kelsey.

[8] Astroturfing is a practice that consists in creating false positive reviews, using anonymous accounts and sometimes behind a monetary reward.

[9] SEO stands for Search Engine Optimization and it is "the process of affecting the visibility of a website or a web page in a search engine's "natural" or un-paid ("organic")search results". Definition source: http://en.wikipedia.org/wiki/Search_engine_optimization.

Current research, though, is finding new ways to get more out of OWOM: in particular, relating to our field of study, receiving an analysis on the kind of wording used may detect how customers perceive the brand behind the single product or service experience; linguistic analysis of online reviews is also important in influencing purchasing behavior, thus contributing to increase firm performance, and so on.

1.3 WOM: IS IT REALLY WORTH OF STUDYING?

It is a generally accepted notion in consumer behavior that Word-of-Mouth communication plays an important role in shaping consumers attitudes and behaviors[10].

But what make WOM really worth of studying?

Real life has plenty of examples in which WOM plays the major role in innovation adoption, in products diffusion, in enhancing brand awareness with resulting increase in sales.

To have a sense of the impact of WOM in terms of numbers, Berger[11] reported that social talks generate more than 3.3 billion daily brand impressions[12]; another research by McKinsey[13] demonstrates that "*word of mouth is the primary factor behind 20 to 50 percent of all purchasing decisions* (p.2).... *marketing-induced consumer-to-consumer word of mouth generates more than twice the sales of paid advertising in categories as diverse as skincare and mobile phones* (p.8)".

In the travel sector, 84% of hotels web sites visitors declare that their purchase choice is shaped by review sites, such as Tripadvisor, and, in total, online reviews influence over $10 billion a year in online travel purchases[14].

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[10] Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

[11] Berger J., *Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research.*

[12] Keller and Libai, 2009.

[13] Bughin J., Doogan J., Wetvik O.J., *A new way to measure Word-of-Mouth marketing*, McKinsey Quarterly, Apr 2010.

[14] Source: Vermeulen I. E., Seegers D., *Tried and tested: The impact of online hotel reviews on consumer consideration,* Tourism Management 30 (2009) 123–127.

We report below famous cases of Online WOM that aroused a great deal of interest for a significant part of consumers and that create real "diplomatic accidents" for the brands, due to the spreading power of the Internet.

On the 12th of September 2004 an anonymous consumer disclosed that the U-shaped Kryptonite lock could be easily opened with a ballpoint pen.

Within few days, the news spread on the Internet and the online word-of- mouth rapidly forced Kryptonite to announce a free exchange program just 10 days after the accident for any affected lock[15].

In 2009, a song titled "United breaks guitars" affected negatively the company value by around $180 million in value to United Airlines stockholders, after just 4 days that the video was online.

The song is all about the bad managed complaints by the airline customer service towards David Carroll, a Canadian musician whose $3.500 guitar was broken during a transfer flight by United Airlines.

After nine months of useless negotiations, the musician decided to share with Internet population his experience, posting the song on YouTube on the 6th of July 2009.

Within one day, the song reached 150.000 views, and reached over half a million clicks after only 3 days, and the stock price, because of the bad publicity, decreased by 10% ($180 mill in value in few days).

By the mid of September, the song gained 13.3 million visits, and in December the song was ranked by Time magazine N°7 over Top 10 viral song of the year.

These examples all demonstrate the power of online WOM in conveying news and sharing opinions, influencing others' decisions, but also affecting firm performance, as was for example the case of United Airlines.

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[15] Case reported by Duan W., Gu B., Whinston A. B., *Do online reviews matter? - An empirical investigation of panel data,* Decision Support Systems 45 (2008) 1007–1016.

In fact, managing negative reviews have been always crucial, but since the resonance of the event is greater thanks to new technologies and companies cannot control the spreading of information, it is a "must" to focus more and more on consumers especially after the purchase moment and to turn positive the megaphone of the Internet communication.

1.3.1 WOM origin and definition

Described as "*the world's most effective, yet least understood marketing strategy*"[16], WOM received attention from practitioners and researchers only in the last 40 years, but it is not a recent phenomenon at all.

Cavemen already shared their knowledge on the animals to hunt or where to look for food, but of course the advent of social media made it easier and faster to share opinions to a wider and wider audience.

Historically, the first statement that recognizes the importance of word-of-mouth in interpersonal influence is the *Rethoric* by Aristotle (Fourth Century BC), that has been defined as "*the most important single work in the history of speech craft*"[17].

In the book, the author especially highlights the persuasiveness of three major elements that a speaker had to manage: *ethos*, *pathos* and *logos*.

While *ethos* and *pathos* attain more at the ethical and emotional appeal of the speaker in a more personal manner, *logos* is considered by Aristotle as the main pillar of a reasoned speech.

But we need to wait some centuries before we can rely on a more comprehensive literature regarding interpersonal communication.

WOM has been definitely recognized as an important leverage by the very first edition of Kotler's marketing management textbook in 1967, where the author

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[16] Berger J., *Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research.(From: Misner 1999).*
[17] By Thonssen and Beard, 1948, as reported by Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/09652549834 6658.

recognized that "*advertising is one of several influences on a person's behavior and probably less important – because it is known to be self-serving – than such influences as peers and personal observation*"[18].

The first organic study on WOM has been conducted by Arndt in 1967[19], who investigated how product-related conversations could affect purchasing behavior.

In his research, he defines WOM as an oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non commercial, regarding a brand, product or service[20].

Since WOM a consumer-dominated channel of marketing communication, thanks to the fact that the sender is independent of the market (no direct monetary incentives), it is hence considered to be more reliable and trustworthy than traditional company controlled communications[21].

1.3.1.1 OWOM vs traditional communication media

A general accepted thought regarding the influence of WOM communication states that WOM plays a central role in shaping consumers' buying behavior and opinions toward a brand or a product.

Traditional communications theory considers WOM as having a powerful influence on behavior, especially on consumers' information search, evaluation, and subsequent decision making[22].

In this sense, worth noting is a Nielsen (2009) study that found 70% of the consumers to trust recommendations from unknown online consumers more than advertisements in traditional media such as TV and radio[23].

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[18] Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/096525498346658.

[19] Arndt, Johan (1967), "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, 4 (3), 291-295.

[20] Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/096525498346658.

[21] More info in: Brown J., Broderick A. J., N. Lee, *Word of mouth communication within the online communities: conceptualizing the online network*, Journal Of Interactive Marketing Volume 21 / Number 3 / Summer 2007.

[22] Brown J., Broderick A. J., N. Lee, *Word of mouth communication within the online communities: conceptualizing the online network*, Journal Of Interactive Marketing Volume 21 / Number 3 / Summer 2007.

Another study[24] revealed that word-of-mouth was actually much more effective in influencing consumers' behavior than mass media (newspapers, magazines, and radio advertising) or personal selling in the purchase of household goods and food products[25].

The product diffusion literature[26] already provides the basis for the discussion about the dynamics in marketing communication effectiveness.

In fact, the theory of diffusion can be regarded as a communications theory that details how information about an innovation is transmitted via mass media and interpersonal communications, and different people have different propensities to rely on one of the two communication media and this propensity tend to change over time.

Specifically, relying on external communication such as TV advertisements tends to be higher initially but decreases over time, while internal communication such as WOM is usually lower initially but increases and peaks around the time that the external influence is declining[27].

Moreover, compared to traditional media communication tools, WOM is perceived to be more trustworthy and relevant, thus reducing consumer resistance[28].

Another study[29] on the relative effectiveness between advertising and WOM using Dynamic Linear Model technique found that in categories where new products are released in sequential stages (movies, for example) traditional advertising is more

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[23] Info reported by: Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[24] By Katz and Lazarsfeld (1955).

[25] Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

[26] Bass 1969; Rogers 1983.

[27] To deepen this topic: Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[28] Yi-Wen Fan, Yi-Feng Miao, Yu-Hsien Fang & Ruei-Yun Lin, *Establishing the Adoption of Electronic Word-of-Mouth through Consumers' Perceived Credibility*, International Business Research; Vol. 6, No. 3; 2013.

[29] Bruce et al. (2012).

effective in the early stage of the product life cycle (PLC) and word of mouth is more effective as consumers gain more experience with the product.

In conclusion, research from the diffusion literature to more recent studies have demonstrated the existence of a dynamic relationship between traditional advertising and WOM, suggesting that both OWOM and traditional communication have an impact on firm performance[30].

These findings are especially interesting as firms are going to consider OWOM interactions with traditional media when making marketing resource allocation decisions, although the issue is not new in the marketing field.

1.3.1.2 WOM vs viral marketing: is there any difference?

In order to explore electronic Word-of-Mouth (eWOM), we have to define other key concepts (viral marketing and word-of-mouth) and their relationships.

Viral marketing has been referred as "*word-of-mouth advertising in which consumers tell other consumers about a product or service*"[31].

Vilpponen and colleagues in 2006 tried to summarized the various definitions that have been given to Viral Marketing versus WOM, in order to understand the differences, if they exist, between viral marketing, WOM and eWOM.

They reported that, while all these definitions share the notion that viral marketing is a consumer-to-consumer process and that it is related to word-of-mouth communication, they differ in all other aspects.

Some researches link viral marketing with advertising thus making impossible to consider WOM and viral marketing as substitutable, given the fact that advertising

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[30] In particular to gain more insights on this topic please refer to: Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[31] For this definition, we advice to refer to: Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

can be defined as "*any paid form of non-personal presentation of ideas, goods, or services by an identified sponsor*"[32].

In order to have an organic view of the different definition of Viral Marketing compared to WOM, a table has been reported below (**Table 1**).

	Definition	Consumer-to-consumer	Advertising	WOM	Network externalities	Network	Computer-mediated communication
Rosen (2000)	"WOM is the aggregate of all person-to-person communication about a particular product, service or company at any point in time"	X		X			
Modzelewsky (2000)	"true viral marketing differs from word-of.-mouth in that the value of the virus to the original consumer is directly related to the number of other users it attracts"	X		X	X		
Montgomery (2001)	"a type of marketing that infects its customers with an advertising message, which passes from one customer to the next like a rampant flu virus"	X	X	X			
Subramani and Rajagopalan (2002)	"viral marketing, sometimes described as word-of-mouse publicity, is a tactic that leverages the considerable power of individuals to influence others in their online networks using computed-aided communication media such as email, instant messaging and online chat"	X		X		X	X
Phelps and al. (2004)	"the process of encouraging honest communication among consumer networks"	X		X		X	
De Bruyn and Lilien (2004)	"goal of electronic referral marketing is to use consumer-to-consumer communication as opposed to company-to-consumer communications, to disseminate information about a product or service, hence leading to its rapid and cost effective market adoption"	X		X			

Table 1: Comparisons of definitions of Viral Marketing.
Source: Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

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[32] Quote by Alexander 1964, reported by Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

It seems that viral marketing is actually all about word-of-mouth, therefore we can simply rely on Arndt definition of Word-of-Mouth, as *oral, person-to-person communication between a receiver and a communicator which the receiver perceives as a non-commercial message, regarding a brand, product, or service[33]*.

Some researcher noticed that WOM can also be referred to an organization, thus shortening the distance between viral marketing and WOM[34].

1.3.2 WOM characteristics

Word of mouth is a complex phenomenon and, although researchers are trying to give an organic, complete view, it has a multitude of potential origins and motivations, self-serving or altruistic, and studies are still ongoing.

A well thought-out framework that tries to include all the elements of WOM communication is presented by Berger (see **figure 1**).
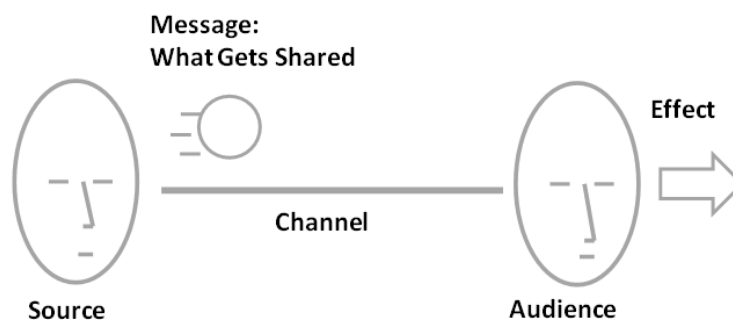
Figure 1: Visual depiction of Key Communication Factors
Source: Berger J., *Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research.*

[33] See: Arndt, Johan (1967), "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, 4 (3), 291-295, definition reported by:
Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.
[34] For other info: Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254, DOI: 10.1080/09652549834 6658.

The author explains the five elements of WOM communication as follow:

1. <u>Source</u>, or communication sender;
2. <u>Message</u>, or thing that is being communicated;
3. <u>Audience</u>, or person that is receiving the message;
4. <u>Channel</u>, or medium through which the message is being shared;
5. <u>Effect</u>, or consequence of the communication.

Although very useful in quickly capturing the main elements of WOM, it is important to be aware that not all the products generate the same buzz.

Numerous studies pointed out that the product, the event or anyway the object must be interesting to be talked about.

Moreover, products have been classified as *Search or Experience goods*[35]:

- *Search goods* are products that consumers can evaluate before purchase, according to specific attributes, and the evaluation occur by instrumental cues.
  Example: electronics, ..
- *Experience goods*, instead, are difficult to describe using specific attributes since impressions and experiences vary from consumer to consumer.
  The evaluation happens by affective cues.
  Example: recreational services, such as movies, travels, ..

Researchers agree that the OWOM volume, especially in terms of product reviews from other consumers, is mostly related to experience goods rather than search goods, enhancing consumer search and purchase behavior[36] towards experience goods.

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[35] Classification by Nelson 1970, proposed in this form by Xia L., N. Nasr Bechwati (2008), *Word of Mouse*, Journal of Interactive Advertising, Vol 9 No 1 (Fall 2008), pp. 3-13, DOI:10.1080/15252019.2008.10722143.

[36] Cheung C. M.K., Thadani D. R., *The Effectiveness of Electronic Word-of-Mouth Communication: A Literature Analysis*, 23rd Bled eConference eTrust: Implications for the Individual, Enterprises and Society June 20 - 23, 2010.

Last but not least, we report a classification by McKinsey[37] that is worth mentioning, especially in a firm's perspective.

They identified three forms of WOM:

1. *Experiential* word of mouth;
2. *Consequential* word of mouth;
3. *Intentional* word of mouth.

The first form accounts for 50/80% of WOM activity in almost every product category, resulting from a consumer direct experience with products or services.

A classical example reported by McKinsey is a complaint to airlines for a lost luggage, a very similar case to Dave Carroll's United Breaks Guitars.

Consequential WOM "*occurs when consumers directly exposed to traditional marketing campaigns pass on messages about them or brands they publicize* (p.4)" and it is easy to imagine that the impact of this kind of communication is stronger than the advertising campaign itself.

Taking into consideration both direct and pass-on effect of a marketing campaign can help marketers in maximizing effects and investments.

The last one is the least common, since it came directly from companies triggering positive buzz with celebrity endorsements.

Few companies are nowadays involved in intentional Word-of-Word because of existing difficulties in measuring the effective impact (ROI) and success of this tool.

1.3.3 From Word of Mouth to Word of Mouse

The expression "word-of-mouse," first coined by Jon Zilber in 1991, refers to online user generated feedback, or online WOM recommendations, using a computer mouse[38].

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[37] Bughin J., Doogan J., Wetvik O.J., *A new way to measure Word-of-Mouth marketing*, McKinsey Quarterly, Apr 2010.

Word-of-mouth used to be considered as spoken, face-to-face communication but today[39] computer-mediated communication like blogs, message boards, discussion forums, news groups[40], emails, consumer review websites, virtual consumer communities and social networking sites (SNSs) can also be included in the definition of the so-called electronic peer-to-peer communication.

To have a general understanding of the phenomenon of online reviews among other forms of OWOM, some significant data is to be shared: the number of online users' reviews has reached 116 million and it is still on the rise[41], and, at the same time, 83% of Internet shoppers reported that their purchasing decisions are based on online product evaluations and reviews[42].

Not only online reviews are the majority of eWOM communication in terms of volume, but they also reflect user experience and consumer satisfaction, which are mainly viewed as a source of product information.

In fact, in an online environment, consumers never touch the product and depend on electronic word-of-mouth to help them making purchase decision.

Other kinds of WOM, on the contrary, deal more with consumer expectation, which could be heavily influenced by social structure.

Going back to the general notion of eWOM, while it has some characteristics in common with traditional WOM communication, it differs in several dimensions.

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[38] Quote reported by: Stringam B. B., Gerdes J. Jr (2010), *An Analysis of Word-of-Mouse Ratings and Guest Comments of Online Hotel Distribution Sites*, Journal of Hospitality Marketing & Management, 19:7, 773-796, DOI: 10.1080/19368623.2010.508009.

[39] According to: Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254.

[40] Vilpponen A., Winter S., Sundqvist S., *Electronic word-of-mouth in online environments: exploring referral network structure and adoption behavior,* Journal of interactive advertising, vol 6 no 2 (spring 2006), pp. 63-77.

[41] eMarketer, February 2009.

[42] Opinion Research Corporation, July 2008.

To summarize the most important features of eWOM communications[43]:

1. eWOM communication possess unprecedented scalability and speed of diffusion, unlike traditional WOM, in which the information was shared among small groups;

2. eWOM is a one-to-many process, similar to the mass media communication, while traditional WOM had narrowed boundaries (see below **Figure 2**);

3. eWOM is a low-cost and bidirectional communication, with companies being able to receive and respond back feedbacks[44];

Offline strong (complete line) & weak (dashed line) network flows.
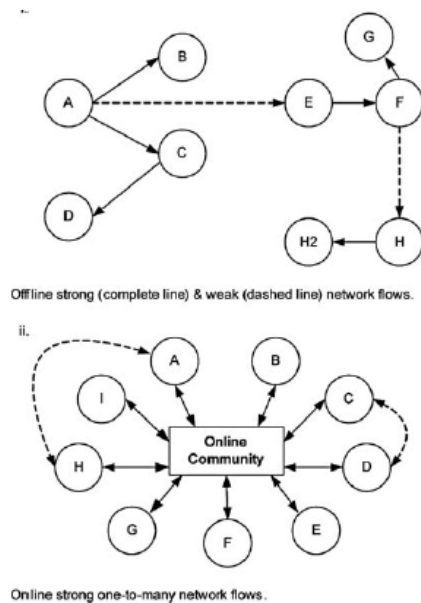
Figure 2: Offline vs Online network flows

Source: Brown J., Broderick A. J., N. Lee, *Word of mouth communication within the online communities: conceptualizing the online network*, Journal Of Interactive Marketing Volume 21 / Number 3 / Summer 2007.

4. eWOM communications involve multi-way exchanges of information in asynchronous mode, meaning that information in the form of eWOM does not need to be exchanged at the same time when all communicators are present;

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[43] For a more comprehensive analysis please consider: Cheung C. M.K., Thadani D. R., *The impact of electronic word-of-mouth communication: A literature analysis and integrative model*, Decision Support Systems 54 (2012) 461–470.
[44] Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424.

5. eWOM communications are more persistent and accessible. Most of the text-based information presented on the Internet is archived and thus would be made available for an indefinite period of time;

6. eWOM communications are more measurable than traditional WOM, in terms of quantity, quality, format and persistency. This is mainly the reason why, although WOM is not a recent phenomenon, literature and interests flourished with the advent of the Internet, when it became easier to develop a measurement framework;

7. in eWOM the sources of information are individuals who have little or no prior relationship with the information seeker, so that consumers' inferences about the trustworthiness of the information can only be the review itself[45];

8. eWOM is usually unsolicited, meaning that the recipients are not looking for the information[46];

9. Reputation as "experts" on internet by someone who writes many reviews (Ex. Blogs,..).

Finally, in the context of Word-of-Mouth research, the birth of the Internet gave visibility to a phenomenon that still happens mainly offline, in ways that are so natural that common people do not even recognize them as a WOM phenomenon.

In fact, people happen to exchange opinions regarding experiences, products or brands in the everyday life with their friends and acquaintances, and this face-to-face WOM, accounts for 75% of total WOM versus a much lower percentage, around 7%,which happens online[47].

Therefore, it is important to consider the drivers and the peculiarities of both online and offline WOM, while noting that almost all the studies have been conducted on the online Word-of-Mouth for easiness of analysis and amount of data in terms of

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[45] Xia L., N. Nasr Bechwati (2008), *Word of Mouse*, Journal of Interactive Advertising, Vol 9 No 1 (Fall 2008), pp. 3-13.
An example of transactions based on cooperation and trust thanks to a well designed feedback mechanism is eBay. For more in depth info, refer to: Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424. http://dx.doi.org/10.1287/mnsc.49.10.1407.17308.
[46] Moreover, De Bruyn and Lilien noticed that there is little literature in addressing the unsolicited WOM communication, especially the electronic one.
[47] Berger J., *Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research,* reporting a 2009 Keller and Fay research.

volume, valence and variance that are available, so that we can consider it to be a proxy of the offline WOM[48].

Moreover, the impact of the conventional offline WOM communication is limited to the family and friends boundaries, with the influence decreasing over time.

These limitations are overcome by the possibilities offered by the Web, thus allowing the communication to reach millions of Internet users and to definitely change the relationship between companies and consumers, from a one-way to a two-ways communication pattern.

The eWOM, then, becomes one of the most influential channels of communication in the marketplace[49].

1.3.4 OWOM and Social Media

WOM and social networks have become in the last years, one of the most discussed topics in the marketing science literature[50] but they still need to be investigated further from consumer behavior.

As Internet-based WOM transmitted through social media has become a determining factor that drives return on investment (ROI) (WOMMA 2010), eWOM branding via Social Networking Sites (SNSs) is seen as a necessary element in the promotional mix[51].

Social media include a variety of online media platforms using social networking sites such as Facebook, Twitter and LinkedIn, video-sharing sites such as YouTube, and photo sharing sites such as Flicker and Picasa.

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[48] This concept is underlined also by: Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[49] Evidence on this topic is given by: Yi-Wen Fan, Yi-Feng Miao, Yu-Hsien Fang & Ruei-Yun Lin, *Establishing the Adoption of Electronic Word-of-Mouth through Consumers' Perceived Credibility*, International Business Research; Vol. 6, No. 3; 2013.

[50] On this field of study, we suggest to consider: Berger J., Stephen A.T., *Creating Contagious: How Social Networks and Item Characteristics Combine to Drive Persistent Social Epidemics.*

[51] Shu-Chuan C., Yoojung K., *Determinants of consumer engagement in electronic word‐of‐mouth (eWOM) in social networking sites*, International Journal of Advertising, Vol. 30, 2011, pp. 47–75.

The growing importance of Social Media in shaping consumers' preferences is mainly due to the fact that they have now reached a "critical mass" (at least in the US), meaning that each platform has a significant number of participants.

For example, Facebook, in the 3rd quarter of 2012, overcame 1 billion active users and in the 1st quarter of 2014 monthly active users reached 1,28 billion[52].

What is the possible gain for firms in engaging Social Media interactions?

38% of executives felt that the primary value of using social media was increased opportunities to reach broad and diverse audiences while 29% identify as a value source the possibility to connect directly with consumers in low-cost efficient ways[53].

Another research[54] revealed that social media will have the biggest impact on capturing: customer insights (87%); driving innovation (77%); improving customer service (75%); giving employees a greater voice (72%); and keeping the company culture vibrant (70%)[55].

Facebook was named the most valuable social tool for doing this (67%). It was followed by blogs (60%), LinkedIn (58%), Twitter (46%), and FourSquare (44%)[56].

Literature on the relationships between Social Networking Sites and eWOM is really narrow, but it is worth citing a 2011 study for the effort in giving a conceptual framework to eWOM in Social Networking Sites (SNSs), examining three aspects: *opinion seeking, opinion giving* and *opinion passing[57]*.

Past researches have frequently viewed opinion seeking and opinion giving as two important dimensions of offline WOM.

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[52] Source: statista.com.

[53] For the research data source please refer to: Kesavan R., Bernacchi M. D., Mascarenhas O. A. J.*, Word of Mouse: CSR Communication and the Social Media*, International Management Review Vol. 9 No. 1, 2013, 58.

[54] By Wall Street Journal/Harris poll.

[55] Kesavan R., Bernacchi M. D., Mascarenhas O. A. J.*, Word of Mouse: CSR Communication and the Social Media*, International Management Review Vol. 9 No. 1, 2013, 58.

[56] KRC Research, 2011

[57] For a more comprehensive understanding, please refer to: Shu-Chuan C., Yoojung K., *Determinants of consumer engagement in electronic word‑of‑mouth (eWOM) in social networking sites*, International Journal of Advertising, Vol. 30, 2011, pp. 47–75.

It is stated that consumers with a high level of opinion-seeking behavior tend to search for information and advice from others when making a purchase decision while individuals with a high level of opinion-giving behavior, better known as opinion leaders, may exert great influence on others' attitudes and behaviors

In cyberspace, however, interactivity enables dynamic and interactive eWOM where a single person can take on the multiple roles of opinion provider, seeker and transmitter.

Opinion-passing behavior is more likely to occur in an online social context, as the unique characteristics of the Internet can facilitate multidirectional communication, and with a few clicks of the mouse, consumers can 'spread the word' on a global scale[58].

1.4 LITERATURE REVIEW: ON THE SHOULDERS OF GIANTS.

The framework of analysis concerning eWOM mainly distinguishes between:

1. Market-level analysis;
2. Individual-level analysis.

In the first series of studies, researchers focused on market-level parameters, such as product sales and using objective panel data, such as the rate and the valence of consumer reviews to examine the impact of eWOM messages on product sales.

The major studies in this field are Chevalier and Mayzlin (2006), Dellarocas, Zhang, and Awad (2004) and Duan, Gu and Whinston (2008), Gopinath and Krishnamurthi (2014).

In the second field of research, instead, eWOM is considered a process of personal influence, in which communications between a communicator (sender) and a receiver can change the receiver's attitude and purchasing decision.

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[58] Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424. http://dx.doi.org/10.1287/mnsc.49.10.1407.17308.

Most interesting research in this field have been conducted by Berger, Yi-Wen Fan 2013; Hennig - Thuraut (2004), Xia and Bechwati (2008).

1.4.1 Market-level analysis

At this point of our research, we made it clear the importance of WOM as one of the most influential resources of information transmission since the beginning of human society.

The impact of the WOM dynamics on firm performance and sales, however, was limited when discussing the conventional, offline WOM communication, but it has become of primary concern with the Information Technology and Social Media rising.

The limitations of the traditional interpersonal communication, such as the limited target of friends and acquaintances and the decreasing influence over time, left place to the advantages of the Internet in terms of possibility to reach a wider audience (possibly, all over the world), with enduring messages.

In recent years, then, companies try to exploit this opportunity, leveraging online WOM as a new marketing tool[59].

It has therefore flourished an important literature that tries to investigate the dynamics between eWOM and firm performance, with mixed results.

Most of the research takes into consideration sample not surprisingly coming from experience goods and in particular from the movie or music industry.

Using descriptive variables such as the amount or volume of OWOM, the valence of the buzz and the degree of dispersion of the posts across different online forums, researchers tried to link OWOM to firm performance measures such as sales[60], sales rankings[61]and stock returns and prices.

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[59] Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424. http://dx.doi.org/10.1287/mnsc.49.10.1407.17308.

[60] Duan W., Gu B., Whinston A. B., *The Dynamics of Online Word-of Mouth and Product Sales – An Empirical Investigation of the Movie Industry*, January 2008, Forthcoming at Journal of Retailing.

[61] Chevalier J.A., Mayzlin D., *The effect of word of mouth on sales: Online book review*, Journal of Marketing Research, Vol. XLIII, Aug 2006, 345-354.

One renewed paper[62] presented three new distinct forms of OWOM valence - attribute focused, emotion focused, and recommendation focused, finding that rational messages (for example, attribute-oriented advertising) wears out a bit faster than emotion-oriented advertising.

Moreover, the volume of OWOM does not have a significant impact on sales. This suggests that, in our data, "what people say" is more important than "how much people say."[63]

A very interesting finding that sheds light on the relationship between OWOM and product sales is the existence of a positive feedback mechanism[64].

WOM, then, leads to more product sales, which in turn generate more WOM and then more product sales, meaning that WOM not only drives consumer purchase but it is also an outcome of product sales.

Prior studies on WOM failed to identify this link because they used to consider WOM as an exogenous variable.

However the results on the determinants of the impact of OWOM on sales are still mixed and deserve deeper consideration.

For what concern OWOM volume, unlike Krishnamurthi, it was considered straightforward that it is positively associated with product sales, as confirmed by numerous studies, while the effect of OWOM valence is still controversial.

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[62] We refer to: Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[63] Gopinath S., Thomas J. S., Krishnamurthi L., *Investigating the Relationship Between the Content of Online Word of Mouth, Advertising, and Brand Performance*, Vol. 33, No. 2, March–April 2014, pp. 241–258.

[64] To deepen this topic please refer to: Duan W., Gu B., Whinston A. B., *The Dynamics of Online Word-of Mouth and Product Sales – An Empirical Investigation of the Movie Industry*, January 2008, Forthcoming at Journal of Retailing.
A caveat in considering these findings is in the product category of their experiment: in fact, movies are a unique type of experience goods and the results from the industry do not necessarily generalize to other retailing sectors. They found that both a movie's box office revenue and WOM valence significantly influence WOM volume. WOM volume in turn leads to higher box office performance.

In fact, on the one hand it has been found that improvement in volume and valence of a book's review leads to an increase in sales[65], while other studies[66], with a similar data set from Amazon.com, found that WOM valence is not related to sales[67].

Another study[68] on music industry, pointed out how future sales are correlated to the volume of blogs posts on an album but also this is affected by the fact that reviews can come from mainstream sources or to the fact that the album is released by a renewed label.

This is fairly in contrast with the finding of other research[69] that showed a consumer preference for recommendations from other consumers over professional reviews by critics, especially for experience goods.

It has to be said, however, that, due the increasing influence that blogs and bloggers are able to exert, they are not anymore perceived as innocent as it uses to be, thus the predictive power of chatter might disappear along with the predictive power itself[70].

Finally, there are studies that attempt to identify a quantitative measure for the impact of OWOM, very similarly on what other researchers have already done in the Social Media field when talking about social media ROI, for example.

One piece of this research that is worth mentioning comes from the consulting firm McKinsey[71], that developed the concept of Word-of-Mouth equity, representing "*the average sales impact of a brand message multiplied by the number of word-of-mouth messages*(p.5)", that change accordingly to different product categories.

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[65] Please refer to: Chevalier J.A., Mayzlin D., *The effect of word of mouth on sales: Online book review*, Journal of Marketing Research, Vol. XLIII, Aug 2006, 345-354

[66] Chen et al., 2003.

[67] Mixed results on the impact of volume and valence come also from Chintagunta P. K., Shyam G., Sriram V. (2010), *The Effects of Online User Reviews on Movie Box-Office Performance: Accounting for Sequential Rollout and Aggregation Across Local Markets*, Chicago Booth School of Business Research Paper *No. 09-09.*

[68] By: Vasant D., Chang E. (2009), *Does Chatter Matter? The Impact of User-Generated Content on Music Sales*, *Journal of Interactive Marketing*, Vol. 23(4), 300-307.

[69] Like for example: Dellarocas C., Zhang X., Awad N. (2007), *Exploring the Value of Online Product Reviews in Forecasting Sales: The Case of Motion Pictures*, Journal of Interactive Marketing, Vol. 21(4), 23.

[70] Vasant D., Chang E. (2009), *Does Chatter Matter? The Impact of User-Generated Content on Music Sales*, *Journal of Interactive Marketing*, Vol. 23(4), 300-307.

[71] Bughin J., Doogan J., Wetvik O.J., *A new way to measure Word-of-Mouth marketing*, McKinsey Quarterly, Apr 2010.

This framework tries to capture the volume as well as the impact of each WOM communication, reflecting "*what is said, who says it, and where it is said*(p.5)".

A useful summary is represented in below (**Figure 3**).
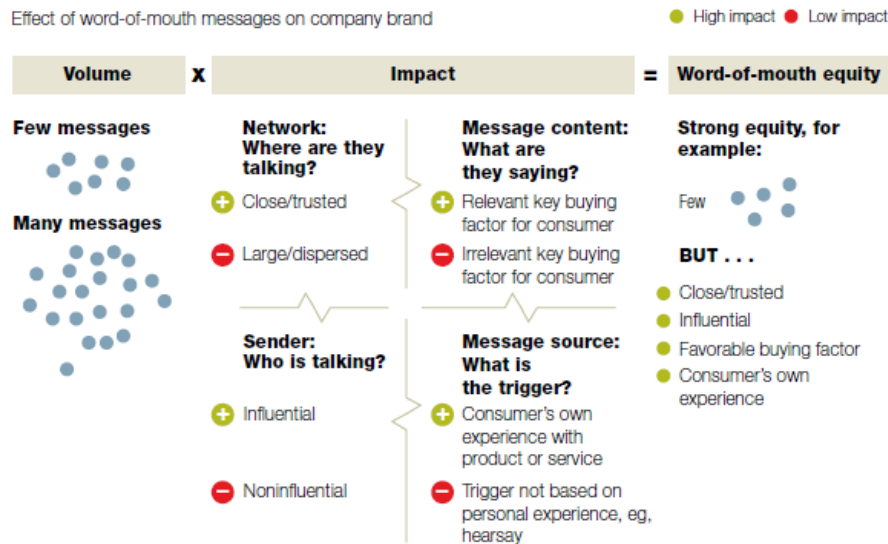
Figure 3: Measuring Word-of-Mouth equity: a new way to measure WOM

Source: Bughin J., Doogan J., Wetvik O.J., *A new way to measure Word-of-Mouth marketing*, McKinsey Quarterly, Apr 2010.

Going through the different studies, let us understand the difficulties in finding consistent results regarding WOM and firm performance.

It has also been investigated the reasons behind these discrepancies[72]; it has been found that most of studies are different in terms of influence to take into consideration (some studies consider the impact of the reviews persuasive effect, other the awareness effect, etc..).

As previously noticed in the dissertation, most of researcher consider Word-of-Mouth as an exogenous variable, while only few of them depicted the causality interrelation between sales and WOM when the latter is endogenous.

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[72] Duan W., Gu B., Whinston A. B., *The Dynamics of Online Word-of Mouth and Product Sales – An Empirical Investigation of the Movie Industry*, January 2008, Forthcoming at Journal of Retailing.

Finally, a difference in product quality must be taken into account when linking WOM to an increase in sales in cross-sectional analysis.

Considering these *caveat*, researchers[73] analyzed the persuasive and awareness effect of online user reviews on movies' daily box office performance, with reviews accounting both as input and an output of movie sales.

This consideration let them identify the volume – so, the awareness effect - and not the rating of the online reviews to have the major impact on movie sales; it means that WOM process itself and not increasing positive reviews do affect sales.

1.4.2 Individual-level analysis

When talking about individuals, word-of-mouth literature focus on motivations behind the peer-to-peer communication and its effects on other consumers.

Berger found that word-of-mouth can affect consumers' behavior through two key routes: awareness and persuasion.

The first effect states that word-of-mouth can inform people that a product or behavior exists and it is particularly important for new, unknown, or low-risk products and ideas.

The second point's aim is to shape other consumers' opinions, behavior and social identity that consumers associate to a product, thus changing purchasing behavior; it is more important when the uncertainty is high.

Another way, of course, to reduce risk is to elevate the review or recommendation credibility, since it has been proved to be a first determinant in consumers' decision making process[74].

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[73] Particularly referring to: Duan W., Gu B., Whinston A. B., *The Dynamics of Online Word-of Mouth and Product Sales – An Empirical Investigation of the Movie Industry*, January 2008, Forthcoming at Journal of Retailing.

[74] Yi-Wen Fan, Yi-Feng Miao, Yu-Hsien Fang & Ruei-Yun Lin, *Establishing the Adoption of Electronic Word-of-Mouth through Consumers' Perceived Credibility*, International Business Research; Vol. 6, No. 3; 2013.

An interesting finding for our research states that pragmatic descriptions about product attributes, defined as high-quality eWOM, are more effective, credible and thus more persuasive than emotional descriptions (low-quality eWOM)[75].

The buying process is therefore influenced not only by the volume of the buzz but also by the information content of the WOM communication, as previously stated when reporting the Krishnamurthi study.

Another study identifies cognitive personalization[76] as partly contributing to the different effects of online reviews, both for search and experience goods; for example, if the reader feels aligned with the sender then the review will be perceived as more trustworthy and useful, thus having a major influence on the purchase decision process.

Finally, it is interesting to mention a research that attempted to understand the motivations behind OWOM communication[77].

Examining a sample of 2,000 consumers who participated in Web-based opinion platforms and reviewing the main literature on the topic, they found 11 motivations that consumers may have in engaging in OWOM communication: "*concern for other consumers, desire to help the company, social benefits received, exertion of power over companies, post-purchase advice seeking, self-enhancement, economic rewards, convenience in seeking redress, hope that the platform operator[78]*".

Their findings have implications for companies that want to understand how to help supporting consumers with more useful and influential reviews.

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[75] For more info about this study, refer to: Yi-Wen Fan, Yi-Feng Miao, Yu-Hsien Fang & Ruei-Yun Lin, *Establishing the Adoption of Electronic Word-of-Mouth through Consumers' Perceived Credibility*, International Business Research; Vol. 6, No. 3; 2013.

[76] Defined as "the extent to which readers find resonance in the review and think about how they would feel in a situation described in the review", it can be influenced by different factors such as "reader's affect intensity, the nature of the product, and the content of the review", Xia L., N. Nasr Bechwati (2008), *Word of Mouse*, Journal of Interactive Advertising, Vol 9 No 1 (Fall 2008), pp. 3-13, DOI:10.1080/15252019.2008.10722143.

[77] Hennig - Thuraut T., Gwinnerk P., Walshg G., Gremlerd. D ., *Electronic Word-Of-Mouth Via Consumer-Opinion Platforms: What Motivates Consumers To Articulate Themselves On The Internet?,* Journal Of Interactive Marketing Volume 18 / Number 1 / Winter 2004.

[78] To have the complete literature review that lead them to summarize consumers' motivations in this way, please consult: Hennig - Thuraut T., Gwinnerk P., Walshg G., Gremlerd. D ., *Electronic Word-Of-Mouth Via Consumer-Opinion Platforms: What Motivates Consumers To Articulate Themselves On The Internet?,* Journal Of Interactive Marketing Volume 18 / Number 1 / Winter 2004.

1.4.3 PWOM and NWOM impact

A field of research on OWOM impact that deserves a separate analysis concerns the different effect of positive and negative WOM communication, that still show controversial results.

Interesting surveys have been conducted to assess the impact that a dissatisfied customers have and the findings are not reassuring.

 It seems that 90% or more among dissatisfied clients, with the service they receive will not buy again or come back they will each of those tell his or her story to at least 9 other people, and 13% of those unhappy former customers will tell their stories to more than 20 people[79].

Arndt[80] was the first studying the difference between positive and negative WOM: he found that negative WOM has twice the impact of positive WOM on purchase.

Marketers during the years seem to generally agree that NWOM has more impact than PWOM.

Studies have supported this "negativity effect", meaning that, because of the rarity of the negative information, NWOM generates surprise and capture more attention than PWOM, then the former is judged as more useful while the latter could be presumed.

However, other studies present different findings.

Researches on the impact of PWOM and NWOM on brand purchase probability discovers that for familiar brands the impact of PWOM is generally greater[81].

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[79] Data reported by Buttle F. A. (1998), *Word of mouth: understanding and managing referral marketing*, Journal of Strategic Marketing, 6:3, 241-254.
The research was conducted for the White House Office of Consumer Affairs and it is cited by Desatnick (1987).
[80] Arndt, Johan (1967), "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, 4 (3), 291-295.
[81] East R., Hammond K., Lomax W., *Measuring the impact of positive and negative word of mouth on brand purchase probability*, Intern. J. of Research in Marketing, Vol. 25 (2008) 215–224

More recent studies, in assessing the drivers of virality, not only confirm that PWOM content is more viral and thus spread further than NWOM, but they also found that virality is affected by physiological arousal[82].

Finally, there are investigations on whether negative WOM could positively affect sales by impacting on product awareness[83].

Thus, PWOM and NWOM appear to be similar forms of behavior.

1.5 GAP OF LITERATURE

Despite the rich and ever-growing literature, there is still room for improvement.

In fact, a critical review can analyze the existing literature both for content that has been so far researched as well as the methodology adopted in the analysis.

Concerning the topics related to WOM and eWOM, some of them have to be further investigated while others need to be built basically from scratch.

On a market level analysis, studies to understand the impact of WOM on sales has been conducted on the experience goods, specifically on the movie industry, while little has been done regarding WOM impact on other products in the same category, and basically research never dealt with search goods, which is surprising as the results are possibly significantly different.

Moreover, the variables that have been taken into consideration are mostly volume and valence of the reviews, with little and often not comprehensive attention to other elements: for example wording, credibility and interactions between different online platforms, applications and websites (e.g. information that may be found in social media and surfing the internet).

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[82] Content that evokes high-arousal (both positive or negative emotions) is more viral, while content that evokes low-arousal emotions is less viral. For a more in depth analysis we advice: Berger, J., Milkman K. (2012), "What Makes Online Content Viral?" Journal of Marketing, Vol. 49(2), 192-205.
[83] For more info on the kind of study, please refer to: Berger J., Sorensen A. T., Rasmussen S.J. (2010), *Positive Effects of Negative Publicity: When Negative Reviews Increase Sales*, Marketing Science, 29(5), 815-827.

Thus, not only a company must monitor its own site and reviews, but it must benchmark it with the information spread on the Web regarding similar business entities, in the same time frame.

Regarding the methods used to get information on sales, data are mostly collected retrospectively, sometimes months or years after the communications have occurred, thus provoking erroneous recollection[84].

Other studies on purchasing behavior, instead, are based on lab experiments, thus suffering the limitations and biases due to the fact that these studies are only a simplified representation of reality, distorted by subjective impressions and influenced by the behaviors of a limited set of participants.

For what concern, instead, the individual level analysis, literature tried to understand the variables that affect the receivers of OWOM[85], putting great effort in determining the effectiveness of the single variables but without taking into consideration the interaction among them and the entire purchasing decision process.

In fact, most studies only measure the final result of WOM communications, declined in the consumers that bought or not the product, ignoring the intermediate stages in the decision making process.

Those studies are therefore insufficient for determining how WOM communications affect purchasing decisions[86].

Many studies focus only on recipients who were looking for information, then addressing consumer that are already interested in a certain product and precluding

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[84] On this topic an important study has been conducted by: East R., Uncles M. D., Romaniuk J., Hand C., *Distortion in retrospective measures of word of mouth,* International Journal of Market Research, Vol. 55, No. 4, 2013.

[85] For example, the volume or the length of the reviews, as found by Yi-Wen Fan, Yi-Feng Miao, Yu-Hsien Fang & Ruei-Yun Lin, *Establishing the Adoption of Electronic Word-of-Mouth through Consumers' Perceived Credibility*, International Business Research; Vol. 6, No. 3; 2013.

[86] For a first hand introduction on these topics, please refer to: De Bruyn A., Lilien G. L., *A multi-stage model of word-of-mouth influence through viral marketing*, Intern. J. of Research in Marketing 25 (2008) 151–163.

the possibility to assess the reasons why some WOM communications have little or no influence at all[87].

Finally, the topic that we are going to address in this dissertation and that will be comprehensively treated in the next chapter deals about linguistic studies that can be applied to OWOM: although some research on sensitivity analysis has been conducted in order to discriminate between positive and negative WOM and get meaningful information out of it, there is more that can be done in understanding the kind of wording that people used to describe their experiences.

1.6 CONCLUSIONS

The way people's behavior is changing also depend on the advent of online feedback mechanism, since more and more people now rely on online reviews for decisions that only few years ago would be addressed to advertisement or professionals[88].

Therefore, understanding how online feedbacks are affecting activities related to the organization is crucial.

Some researchers and practitioners[89] viewed the potentials of OWOM as a complementary marketing tool to advertising for brand building and customer acquisition; it gives insights on what consumers need and think for product development and quality control.

This brief descriptions of threats and opportunities related to WOM are the basis for the introduction of next chapter's Linguistic Theory.

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[87] For a more in-depth analysis: De Bruyn A., Lilien G. L., *A multi-stage model of word-of-mouth influence through viral marketing*, Intern. J. of Research in Marketing 25 (2008) 151–163.

[88] Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424.
http://dx.doi.org/10.1287/mnsc.49.10.1407.17308.

[89] Among them, worth noting is: Dellarocas C., (2003), *The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms*, Management Science Vol. 49(N°10):1407-1424.

CHAPTER TWO:

THE LINGUISTIC CATEGORY MODEL AND ITS APPLICATIONS

2.1 INTRODUCTION

In this chapter will be introduced the framework that will be used to analyze the realm of the OWOM.

In order to give a definition of the psychological implications and the importance of this field of studies, we report an enlightening example below[90].

"Bob misses a day at school and when asked does not tell the true reason to the teacher. This event may be coded, among other things, as either *Bob is dishonest* or *Bob lied.* Whereas the first sentence conveys decontextualized information and involves a categorization of Bob, the second sentence maintains a reference to the situational conditions".

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[90] Example from: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4, 558-568.

Practical implications coming from these research mostly concern how the linguistic categories, that will be exhaustively treated in the following paragraphs, can be used in real life situations: how language influences perception and how perception influences language?

This chapter is mainly divided into three sections: in the first one, there is an introduction of the framework upon which is based our analysis and also all the literature of the field: the Linguistic Category Model (LCM).

Then , we will address the main findings and implications, in particular when coming to the link between OWOM and language; finally, we identify the gap of literature and some advices for the future.

2.2 LCM: WHAT DOES IT MEAN?

2.2.1 Language and LCM

A definition of language that most suits the kind of studies that we will approach in the next paragraphs, has to do with its social domain.

To understand social behavior, in fact, language has to be considered as a tool that carries communication and makes social interaction possible.

In this sense, the chief function of language is "to drive attention to specific facets of the same events rather than others" [91] , thus shaping the way people perceives events, behaviors, even inanimate objects.

This view opens radically different perspectives upon language, especially when coming to the last decade of information overload in which consumers more and more need their attention to be focused on specific messages.

For example, a recent research[92] reported the results of four experiments: it shows that consumers are more likely to focus on details and local properties of an event or

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[91] This idea is well accepted by most of the researchers in our specific field; in particular, clear references are in: Semin G. R., *Language Puzzles: A Prospective Retrospective on the Linguistic Category Model,* Journal of Language and Social Psychology Volume 27 Number 2, June 2008.

[92] Stapel D. A., Semin G. R., *The magic spell of language: Linguistic categories and their perceptual consequences*, 2007, Journal of Personality and Social Psychology, Jul:93(1):23-33.

an object when concrete terms are used, while abstract terms drive the perception to global properties.

The determination of the concreteness or abstractness of the verbs follows the framework of the Linguistic Category Model (LCM)[93], and this classification has been extensively used in the literature when discussing the linguistic implications on Interpersonal behavior, first, but it has also been applied in politics, personnel selection[94] and, recently, in product related conversations, specifically, in Online Word-of-Mouth.

The importance that language assumes in understanding the social interaction does not ignore the impact that several other factors have in creating a meaningful communication[95].

In any case, having the possibility to better understand this social tool, can be informative when coming to the OWOM world, where written communication itself must be sufficient to take decisions, since no face to face relationship exists, thus limiting consumers' judging to few variables.

2.2.2 LCM pioneers: theoretical background

The development of theories on the use and effects of language and all its facets is attributed to the innovative framework called Linguistic Category Model.

The authors' intuition at that time was to locate cognition outside of the individual, rather than in the head of the person[96], thus anticipating more recent studies about cognition as located in the interpersonal domain.

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[93] The first study that suggested the usage of these 4 categories is by: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4, 558-568.
[94] Rubini and Menegatti comprehensively treated language biases both in politics and in personnel selection areas.
[95] Examples of other factors are non-verbal communication, the past relationship between the sender and the receiver and the context in which the communication takes place.
[96] Semin G. R., *Language Puzzles: A Prospective Retrospective on the Linguistic Category Model,* Journal of Language and Social Psychology Volume 27 Number 2, June 2008.

The Linguistic Category Model (LCM) was originally born as a sort of guide to study the language used by people to describe situations and behaviors, with the aim to understand the relationship between social cognition and social reality.

In order to determine the impact of language abstractness, Semin and Fiedler identified four different clusters:

		Examples:
1.	DAVs or *descriptive action verbs*	Touch, visit, wake up, watch, etc..
2.	IAVs or *interpretive action verbs*	Help, hurt, inhibit, etc.
3.	SVs or *state verbs*	Like, admire, abhor, etc.
4.	Adjs or *adjectives*	Friendly, jealous, offensive, patient, etc..

To each of these kind of verbs and predicates is associated a different level of increasing abstractness, from DAVs to Adjs, in describing behaviors.

The first one, that represents the most concrete level, refer to descriptions of events and behaviors which can be defined as non-interpretative and rather observable.

An example is "Kirk hits Matt" [97], which clearly conveys the representation of an event with no interpretation.

Afterward, the authors located the Interpretive Action verbs (IAVs) that, although referring to observable behaviors as well, are not preserved by a limited interpretation and subjective perception of the action.

"Kirk hurts Matt" can be a good example.

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[97] Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010.

State verbs (SVs) represent the third category, in which the LCM includes descriptions related to a person in a situation[98], and a clear example can be "Kirk hates Matt".

In this case, the verb is different from the first two categories in the sense that it does not refer to a situation but, rather, to the psychological state of one person (Kirk, for example) in relation to another (in our example, Matt).

It is clear, then, that the four categories are here divided into two subsets, mainly verbs and adjectives, depending on their level of concreteness-abstractness: DAVs and IAVs describe concrete and observable behaviors, while SVs and Adjs do not maintain a linkage with a specific behavior event, but rather refer to the subject disposition toward the other person and for this reason the statements cannot be verified by an external observer.

Finally, there are Adjectives (Adjs), that represent the most abstract category: they usually generalize the behavior to a personality trait of the subject, thus making it become a more stable, although unverifiable, characteristic.

Although the classification can be quite straightforward, it is not always easy in real life distinguishing the four categories, with special regard to DAVs and IAVs.

Therefore, the authors used the following criterion: DAVs describe a behavior event involving "*at least one physically invariant feature shared by all actions to which the term is applied (e.g., kiss always involves the mouth, phone always involves the phone, kick always involves the foot, etc.). In contrast, there is no physically invariant feature in the case of IAVs [...](e.g., there is no single common feature shared by the different instances of helping, hurting, challenging, etc.).*"[99].

The research conducted by Semin and Fiedler tested five dependent variables, that give more insights on the characteristics of each linguistic category: *subject*

[98] Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4,558-568.
[99] Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4,558-568.

informativeness, situative informativeness, verifiability, disputability and enduringness.

Subject informativeness refers to the amount of information that each sentence contains about the subject: the hypothesis is that from DAVs to Adjs this information increases.

Saying that A is calling B (DAV), A is hurting B (IAV), A respects B (SV) and A is helpful reveal different degrees of information about the subject.

Situative informativeness is symmetrical to the previous criterion, identifying how much information is contained in each of the four level sentences regarding the situation in which the subject is.

This feature goes in the opposite direction than subject informativeness: Adjs are not revealing much about a concrete situation while DAVs are directly associated with real events (A is calling B, A is phoning B, A hits B, etc..).

This leads the authors to infer the degree of *verifiability* of the four clusters: since the information on concrete situations is decreasing from DAVs to Adjs, the level of verifiability follows the same pattern, being the observer able to verify sentences containing DAVs more accurately since they are less subject to interpretation.

Concerning *enduringness,* it shows an increasing pattern while going from DAVs to Adjs: this is linked to the subject informativeness, since more temporal stability is associated to personality traits and adjectives that refer to qualities of the subject, rather than to the situation in which the subject is described.

Finally, *disputability* represents the degree to which the sentence can be disputed: it is assumed to be increasing from DAVs to Adjs, since it is considered to be a function of the concreteness-abstractness of the four categories.

2.2.3 Interpersonal domain findings and implications

Based on the linguistic categories' research that we just summarized, a growing literature has flourished.

Studies on the categories that Semin and Fiedler named IAVs and SVs reported, for example, findings regarding verbs causality.

For sentences presented in the form of subject-verb-object, the causality of behavior expressed by the verb is attributed to the subject, in IAVs, whereas to the object, in SVs.

A clarifying example is the following[100]: in the sentence *Bob helps Mike* (IAVs) the cause of the behavior is Bob's helpfulness rather than Mike's helpworthiness. On the contrary, in the sentence *Ted likes Paul* (SVs) Paul's likability rather than Ted's likingness is the cause of the behavior.

The reason why we have this distinction in causal information might be attributed to the fact that while IAVs refer to voluntary behaviors, SVs usually describe cognitive or uncontrollable states.

This finding on the locus of causality adds psychological insights on top of the four categories.

The major result on LCM sheds light on the different degrees of the four linguistic categories on the concreteness-abstractness dimension.

Studies confirmed that the level of abstractness increases from DAVs to Adjs, implying that the more we move from the concrete to the abstract level category, the more the term we refer to is informative about the person and shows more temporal stability.

Thus, moving from DAVs to Adjs, there is a shift from context-specific sentences to person-specific sentences. To have a better understanding of what this means, we can choose the same example used previously: *Bob helps Mike* (IAVs) means that Bob helps other people too and Mike is helped by others; in *Ted likes Paul* (SVs), instead, the tendency to generalize the psychological state of Ted regarding Paul is not as much as in the previous statement, being SVs more person-specific.

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[100] The example is reported by: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4, 558-568.

On the other hand, however, SVs are mostly generalized when talking about the time frame of the action, meaning that Ted will like Paul for a longer time period (thus the action is more enduring than for IAVs).

Being more abstract categories less informative about the situation, it has been showed that they are also less verifiable and more subject to disagreement.

In fact, if IAVs take into account the "observer perspective"[101] (because the verb refers to observable, less disputable behaviors), SVs refers to subjective, non observable states of the subjects, giving rise to a less neutral description.

These experiments confirmed the effect of the five criteria that where included in the study[102] as dependent variables: subject informativeness, situative informativeness, verifiability, disputability and enduringness.

A comprehensive summary of these findings is represented in the graph below (**Table 2**), that shows the pattern of the criteria and characteristics of the four linguistic dimensions in the LCM.

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[101] Notation used by: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4,558-568.
[102] Here we refer to the findings by Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4,558-568.

LINGUISTIC CATEGORIES

DAVs	IAVs	SVs	Adjs
ACTIONS		PSYCHOLOGICAL STATE	QUALITIES OF PERSON
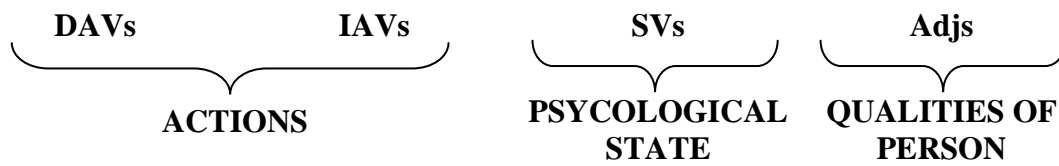
CRITERIA

-	**Subject informativeness**	+
+	**Situative informativeness**	-
+	**Verifiability**	-
-	**Disputability**	+
-	**Enduringness**	+
+	Affected by variation in situation	-
+	Neutral description	-
Context specific	⟶	Person specific
Concreteness	⟶	**Abstractness**

Table 2: Characteristics of the four linguistic categories as emerged by the study by Semin and Fiedler (1988).

Other studies developed from this theoretical background: for example, Linguistic Category Model, in an extended form that included also a nouns category, has been used in political communication area, where the theory of Linguistic Intergroup Bias (LIB) confirmed out-group antagonism and in-group favoritism as a consequence of the combination of abstractness and valence[103].

Research analyzed also the actor-observer bias in close relationship context: self and other attribution when describing the same event differs in a way that partners attributions prevail at the abstract level, while self-attributions are more likely at a concrete level of action verbs[104], overcoming the classical explanation in which the

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[103] To deepen this topic, please refer to: Anolli L., Zurloni V., Riva G., *Linguistic Intergroup Bias in Political Communication*, The Journal of General Psychology, 2006, *133*(3), 237–255.

[104] Experiments in this sense have been conducted and reported by:
-Semin G. R., Fiedler K., Finkenauer C., Berkel I., *Actor-Observer bias in close relationship: the role of Self-Knowledge and Self-Related language*, Personality and Social Psychology Bulletin, Vol. 21, N°5, May 1995, 525-538.

different knowledge of the self and the other is considered to be the reason of this discrepancy.

These studies are included in the wider research field of Linguistic Intergroup Bias (LIB) that confirms the mainstream idea that people communicate desirable in-group (or favoritism) and undesirable out-group behaviors more abstractly than their opposites[105].

This means that people expects negative behaviors from out-group people to be stable whereas positive behavior is considered to be changeable and not repeatable, while the reverse is valid for in-group people.

Finally, studies started to indentify also the cultural differences when applying and drawing the conclusions of the LCM.

In particular, different approaches are found when comparing the East and the West[106]: western people are more likely to describe both the self and other by personality trait words than do East Asians.

This cross cultural finding can be justified both saying that Western people emphasize more the individual, but also that they prefer nouns and adjectives for social descriptions.

The most interesting study that relates this research on language to products and, thus, that studied the interrelations between language and OWOM is presented in the next chapter and, together with the LCM model framework, will be the base of our empirical research.

-Semin G. R., Fiedler K., Koppetsch C., *Language use and attributional biases in close personal relationships*, Personality and Social Psychology Bulletin, Vol. 17, N°2, April 1991, 147-155.

[105] For the framework and the experiments on this research please refer to: Maass A., Salvi D., Arcuri L., Semin G., *Language Use in Intergroup Contexts: The Linguistic Intergroup Bias*, Journal of Personality and Social Psychology 1989, Vol. 57, No. 6, 981-993.

[106] For this topic, please refer to: Kashima Y., Kashima E. S., Kim U., Gelfand M., *Describing the social world: How is a person, a group, and a relationship described in the East and the West?*, Journal of Experimental Social Psychology 42 (2006) 388–396.

2.3 LANGUAGE AND OWOM

In the first chapter we introduced the concepts of traditional Word of Mouth (WOM) and Online or Electronic WOM, underlying that, although organic studies about these topics have been conducted only in the last 40 years, they are not new phenomena.

WOM is actually born when language have been developed, even in its original, primitive form.

The majority of the past research on WOM that embraced what can be considered a linguistic view point were limited to the analysis of the impact of positive and negative WOM.

Language abstraction has been only recently applied to WOM scenarios[107], with the aim to examine the language used by consumers in Word of Mouth, for both negative and positive product or service reviews.

In the next paragraphs, we will consider their findings.

2.3.1 Beyond the interpersonal domain

Schellekens and her colleagues examined for the first time in the field of the Linguistic Category Model, the implications of language abstraction in products and not behavior experiences, going beyond the interpersonal domain application.

It is not so obvious that the findings regarding behavior events could be applied tout-court to products descriptions.

There are important differences between person's behavior and products' behavior, first of all because products cannot chose to behave differently in different situation[108].

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[107] Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010.

[108] Schellekens et al. (2010) reported the example of a fountain pen, that, "is not eager to write a high-quality article and cannot refuse to write low-quality work", in Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010.

These features of products may lead consumers not to change their language abstraction depending on their attitudes toward the products; moreover, in WOM, the focus is all on the interrelations between products and consumers, thus the descriptions of a product experience is centered more on what consumers' feel and think about the product.

The research, then, was formulated in order to understand the relation between the a priori consumers' attitudes toward the products and the abstractness-concreteness of the language used to describe the product's experience.

The hypothesis was that consumers holding un unfavorable brand attitude and having a negative experience will use more abstract language to describe the product.

Indeed, the study in open-ended products descriptions confirms this hypothesis, demonstrating that consumers use more abstract language when describing products experiences that are in line with their a priori expectations.

It has to be noticed that these studies have been tested in order to demonstrate that the effect of product experiences on language abstraction is not due to a difference in the valence of the description.

We summarize this finding in the table below (**Table 3**).

DAVs	IAVs	SVs	Adjs
Concreteness ⟶			**Abstractness**
Experience NOT congruent with a priori attitudes ⟶			**Experience congruent with a priori attitudes**
-**Negative** experience but **favorable** brand attitude ⟶			-**Negative** experience and **unfavorable** brand attitude
-**Positive** experience but **unfavorable** brand attitude ⟶			-**Positive** experience and **favorable** brand attitude
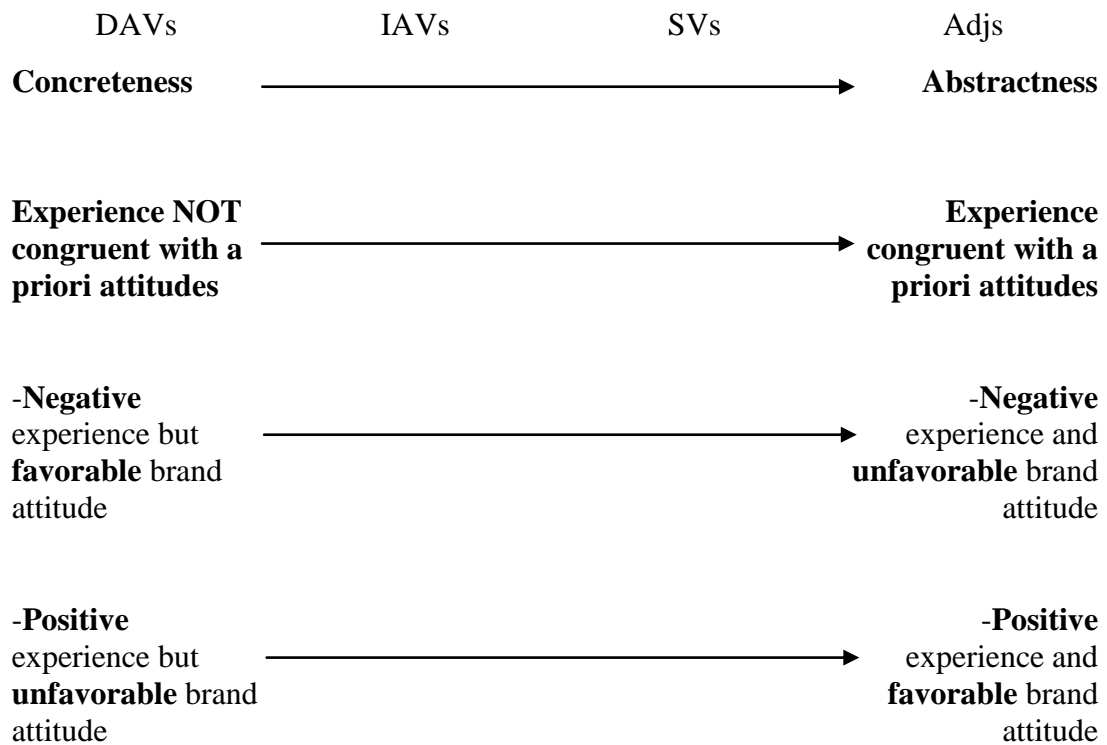
Table 3: Language abstraction in open-ended product description: findings

This result can be explained by the fact that consumers that had a product experience congruent with their prior expectations use a language (more abstract) that conveys the idea of temporal stability and enduringness[109]: the negative experience is thus viewed as typical of the brand and likely to be replicated.

On the contrary, when the experience in not congruent with the a priori consumers' attitudes, consumers talk about the products as a one-time event that it is not going to last, or to be replicated in the future (thus, they use a more concrete language).

A useful point has been found regarding the luxury business: a more abstract language is preferred to describe luxury products by both consumers and advertisers than it is done with ordinary products[110].

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[109] This finding was previously mentioned when talking about Semin and Fiedler (1988) research.
[110] To know more about this topic please refer to: Hansen J., Wänke M., *The abstractness of luxury*, Journal of Economic Psychology 32 (2011) 789–796.

On the other side, abstract product descriptions are perceived as more luxurious than concrete product descriptions; these findings have been mainly attributed to the fact that this special product category is perceived as psychologically distant.

Another research following the road opened by Schellekens treated the concreteness of language on the inference on truthfulness of the information provided in OWOM[111].

As in all the studies based on Linguistic Category Model framework, concreteness is not to be confused with richness in details, since this analysis will lead to completely different findings and, although it can give voice to interesting thoughts, it is not our priority at this moment[112].

The authors based their research on the inference that concreteness is linked with vividness and realness of the events, thus the same content will be judged as more probably true when written in concrete rather than in abstract language.

A note to be added is that if the sender is challenged by the receiver, the former tend to rephrase the communication in a more abstract term.

This is an interesting finding for marketers who can now rely on another insight in order to mitigate the trustworthiness issue which is intrinsic in Internet based communication.

2.3.2 Language abstraction on the receivers' side

The previous findings are useful in order to understand the receivers' perception about the senders' product attitudes.

In fact, the use of a more abstract language in negative WOM makes the receivers infer that the senders' attitudes toward the products is unfavorable, while for positive WOM the senders' attitudes is positive.

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[111] The research mentioned is: Hansen J., Wänke M., *Truth From Language and Truth From Fit: The Impact of Linguistic Concreteness and Level of Construal on Subjective Truth*, Personality and Social Psychology Bulletin 2010, 36.
[112] Just for sake of completeness, for studies that suggested the richness in details to affect reliability judgments please refer to: Akehurst 1996, Johnson 2006.

The reverse is observed if the receivers notice concrete language in WOM descriptions: inference can be made that the senders' product experience is not aligned with previous attitudes.

Also in this case, the authors conducted experiments correcting for differences in valence among the four statements on the concreteness-abstractness dimension, confirming that differences in valence are not significantly changing the findings.

This study demonstrates that language abstraction in WOM have an influence on receivers when making an inference on the senders' attitudes.

Recalling the Linguistic Category Model as postulated by Semin and Fiedler, abstract descriptions (SVa and Adjs) link an event or a behavior to dispositional factors, while concrete descriptions (DAVs and IAVs) to situational factors, such as single events.

Then, in their analysis, abstract language generalizes behaviors to the level of the actor (to the psychological state for SVs and to the qualities of the person for Adjs), or, as in Schellekens research, to the level of the product.

The fact that language abstraction has an impact in inferring the opinion of the sender by the receiver is important when coming to consumer behavior in WOM.

Both in this and the previous chapter, it has been underlined the importance of people's opinions: especially when taking the form of OWOM, comments and reviews have a huge impact on products' sales, on brand image and perception, on firm performance, on purchase intention, etc..

Of course, one of the main issues that is related to OWOM is the trustworthiness[113] of the comments and the sender.

This insight can be useful when trying to infer other's opinions or to be convincing when expressing our opinions.

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[113] This topic has been deepened in the first chapter, where it has been underlined that, on the one hand, being not self referential made online reviews to be more powerful in influencing other people opinions and behaviors; on the other hand, the trustworthiness of a review made by un unknown reviewer is limited.

Moreover, marketers that want to maximize the impact of positive WOM on purchase intentions are better to use abstract rather than concrete descriptions, when formulating or suggesting these messages.

On the contrary, in order to minimize the impact of negative WOM, marketers can express the same opinions using a more concrete language.

Finally, these findings give also some insights in understanding consumers' satisfaction with a new product, for example: analyzing the level of abstractness/concreteness of online reviews can help companies in understanding if the product or service experience has been in line with consumers' expectations.

For example, if a negative review is written using a concrete language, the company can infer that the consumer is unsatisfied with the specific product or service, while is generally positive toward the brand. On the contrary, if the negative review is written in abstract language this would mean that the current experience is not changing the stable unfavorable opinion about the brand.

2.3.3 Language abstraction on buying intention

Does language abstraction have an impact in terms of purchase intention?

Adding the recent research by Schellekens on top of the LCM developed by Semin and Fiedler, interesting considerations can emerge.

It has been said that abstract language conveys more dispositional inferences than concrete language, thus leading consumers to infer, in our case, at the level of the products or the brand.

Then, abstract descriptions will lead to a higher purchase intention when the experience is positive, since it means that there is consistency between senders' attitudes and real experience.

In fact, purchase intention for positive experiences will be higher in case abstract language rather than concrete language is used: the former, in fact, make the

receivers infer that the opinion of the sender is generally positive and the product experience only confirmed what the brand or the product usually is.

The latter, instead, conveys the idea that the underlying sender 's opinion about the brand or the product is negative and that the positive experience described is an *unicum,* not likely to be repeated.

On the other hand, of course, if the experience reported is negative, then abstract descriptions will lower the purchase intention much more than concrete ones.

Although this concept can appear to be quite reasonable, it is not so obvious that abstract WOM increases purchase intention and that it is more persuasive than concrete WOM.

Starting from the same conclusions by Semin and Fiedler (1988), it is also possible to arrive at an opposite inference about the effect of language abstraction on persuasiveness of the description.

In fact, in the previous paragraphs, abstract language has been described as less verifiable, more likely to be subject to disagreement and more person specific than situation specific.

Moreover, they noticed that an attribute of concrete descriptions is vividness[114], which in turn conveys persuasiveness effects.

Therefore, these attributes can definitely have opposite effects than previously mentioned, that is they can reduce the persuasiveness of abstract language and lower the buying intention.

Regarding this dispute, Schellekens et al. (2010) provide us with an insightful study, in order to detect which effect is stronger and the final outcome.

The study was organized by simulating reality: the participants to the experiment received four WOM comments about a product (one for each linguistic category) and were asked to indicate the purchase intention for the products.

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[114] This topic has been reported by Semin and Fiedler (1988), citing the research by Kim, Kardes, and Herr 1991; Kisielius and Stemthal 1984.

The study revealed that purchase intention was higher when abstract rather than concrete language was used in positive word of mouth comments, while in negative word of mouth this would lead to a lower purchase intention.

This study provides, for what we know, the very first evidence of the effect that language abstraction have on the receiver's side in WOM communication, when the topic is not the description of a behavior event but a product.

Also for this study, the findings are already adjusted for differences in valence of the statements.

This is an important hints for consumer behavior: in fact, knowing that the use of abstract language in positive WOM is more persuasive in terms of purchasing intention than concrete language, can help marketers when coming to products or service reviews.

2.4 GAP OF LITERATURE

The studies that have been conducted and that we reported here constitute a first background on top of which we will build our research.

Here, the theoretical background of the Linguistic Category Model is not under discussion; instead, since the same framework has been applied recently to other fields of study, more related to ours than personal behavior, we will analyze what is left for future research.

In fact, while there is a quite large amount of research on WOM, little attention has been given to date to language that consumers used when describing product and service experiences.

Even though they opened an interesting field of studies that is worth further investigation, being the first to apply the Linguistic Category Model outside the context of interpersonal behavior, research just started and there might be other

variables that influence the level of language abstraction in consumers' word of mouth[115].

In fact, language used in Online Reviews and consequently the findings and the impact on receivers can be different depending on the product category to be considered, at least when making the difference between search and experience goods.

In the next chapters we will try to give an explanation to a specific aspect, the link between language abstractness and help worthiness of the reviews, as explicitly expressed in OWOM, but there are plenty of interesting research questions on the topic, that can help marketers to better understand their consumers.

For example, how the findings on language abstractness and purchasing intentions will change depending on the different clusters of consumers that write the review[116]? And how this will affect receivers' perspective?

How language can help to detect the truthfulness of a review? How the sentiment expressed in the review might change the language used? How companies can thus limit the impact of negative reviews while enhancing the effects of the positive ones?

Moreover, studies on language deepen the sentiment analysis on the impact of PWOM or NWOM on brand perception, image and firm performance, since the positive or negative statements expressed in the reviews reveal different meanings, depending on which of the four linguistic categories is used.

Other limitations in past research are identified also in the method that has been used: laboratory experiments are simplified representation of reality[117], in which a limited number of people express their hypothetical behavior.

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[115] In particular, we are here citing the work by: Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010, that has been followed also by a rather interesting analysis specifically related to the luxury industry by: Hansen J., Wänke M., *The abstractness of luxury*, Journal of Economic Psychology 32 (2011) 789–796.
[116] Here, we refer for example to the possibility to filter reviews depending on the kind of consumers (e.g. on Booking.com reviews can be divided among: Families, Couples, Group of friends, Solo Travelers, Business travelers).

It can be biased by the specificity of the sample (certain people of certain age of a certain geographical area and with quite similar backgrounds), thus the findings might not be generalized.

In literature it has been confirmed that laboratory studies can possibly be biased because they present people with decontextualized sentences, that are not context related and thus led people to just confirm the implicit semantics[118].

In addition, findings are often based on studies with a small mean difference, thus the impact in real life might not be noticeable, still remaining reliable.

Interesting findings that come from the language analysis are the ones that link luxury and language abstractness[119], but they suffer the specificity of the industry: the relation explained in the research, in fact, is strictly linked to the intrinsic characteristics of the luxury products, being perceived as a psychologically distant category compared with ordinary goods.

Therefore, these findings, although interesting, cannot be generalized.

Of course, there are still many aspects to be analyzed regarding the effect and the impact of wording in shaping consumers' buying decision, receivers' and senders' opinions and inference about brands and products, and, mostly, in helping companies to get the most out of their related reviews.

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[117] For example, in the last study reported by Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010, the experiment on purchasing behavior was conducted giving participants four statements for each of the four different product categories for which they had to express their purchasing intention. Real purchasing decisions, though, can follow a different pattern, being based on an higher number of reviews to be consulted, the statements are there presented out of a context while in real life they usually come in a more or less detailed open-ended reviews, etc..

[118] This limitation has been highlighted explicitly by :Anolli L., Zurloni V., Riva G., *Linguistic Intergroup Bias in Political Communication*, The Journal of General Psychology, 2006, *133*(3), 237–255.

[119] A firsthand knowledge about this topic can be found in: Hansen J., Wänke M., *The abstractness of luxury*, Journal of Economic Psychology 32 (2011) 789–796.

2.5 CONCLUSIONS

Language is one of the main channels of social communication, thus it is increasingly useful to understand other people's opinions, especially if they significantly impact your business.

Analyzing the level of abstractness of the language that consumers use in product reviews could help companies to determine, for example, the extent to which a product experience was congruent or incongruent with a consumer's expectations on the brand, so an inference can be made on brand perception.

In fact, if an unfavorable review is written in concrete language, one could infer that the writer is generally positive about the brand or product.

Specifically, the findings assessing how language influence purchasing decision suggest that senders who aim to maximize the positive impact of favorable word-of-mouth messages on buying intentions should use abstract language.

On the contrary, communication about unfavorable aspects should be presented in concrete language in order to minimize its negative impact on buying intentions.

This finding is really meaningful when companies ask consumers for opinions, reviews and comments, since they may shape the content of the review with suggested statements that enhance purchasing intentions or utility of the review.

This application is going to be our background to examine language abstraction in online word of mouth, specifically, in customer reviews.

3.1 INTRODUCTION

In previous chapters, it has been highlighted the close relationship between *concrete language* and *truthfulness* of the message[120].

However, even though the recipients of a message written in a concrete manner are more likely to perceive the message content as true[121], it has also been demonstrated that abstract language enhances purchase intentions and, being endurable, confirms positive (or negative) ideas on a brand, a product or a service[122].

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[120] Hansen J., Wänke M., *Truth From Language and Truth From Fit: The Impact of Linguistic Concreteness and Level of Construal on Subjective Truth*, Personality and Social Psychology Bulletin 2010, 36.

[121] Regardless of the actual truth of the message itself, that of course cannot be verified.

[122] In previous chapters it has been underlined as this research represents a first attempts to transfer the linguistic studies into the marketing field. For what concern our analysis, the most important indications are linked to the recipients' inferences about the senders' product/brand attitudes, thus influencing the persuasiveness of a more abstract message versus a concrete one, thus directing
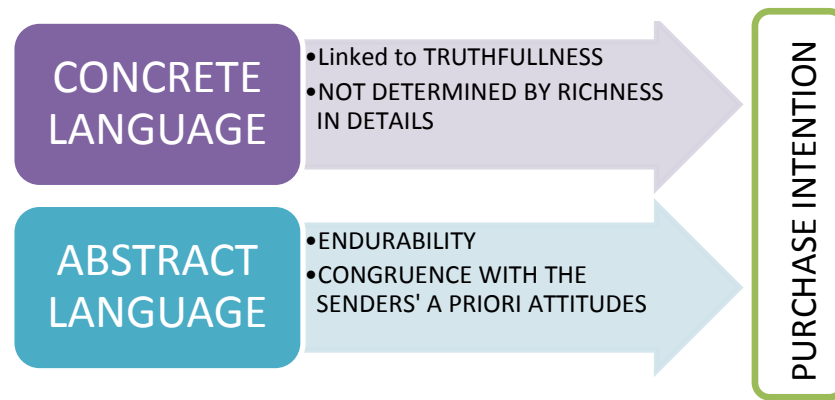
Figure 4: Concrete vs abstract language dilemma: impact on purchase intention.

In order to demonstrate the influence of concreteness/abstractness of language on the receivers' side, this research took utility votes as a proxy for believability and truthfulness of the Online Reviews, indicating language as one of the main drivers shaping purchase intention (no matter in this regard if positively or negatively).

The utility votes associated to online reviews are considered to be reliable since they are directly expressed by consumers with no incentives or constraints.

The following analysis, then, not only takes into consideration a different variable that is measurable with a certain degree of confidence, but also it applies a methodology not inferring results from lab experiments, but starting from real life data to make inferences on general principles.

As anticipated in previous sections, the two following studies will take place within the OWOM environment.

In particular, the choice of Amazon has not been random, but dictated by two main reasons: first of all, this is the major website selling products (Amazon) online[123], thus it can be assumed to collect and reflect more generalized behaviors, representing a differentiate and widespread sample of consumers.

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consumers' purchase behavior. Source: Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010.

[123] Just to have a sense of the numbers, Amazon is a Fortune 100 company, selling books at first, and then expanding in electronics and all kind of appliances. It is considered the largest "single source of Internet consumer reviews", as for 2010 data.

Second point, being it the pioneer in its fields, the information collected and available are more reliable and representative of consumers, so this research collected data from its international (with a pool of US consumers mainly) website.

This chapter is organized as follow: a first part is devoted to the explanation of the sample selection and technology used to conduct the analysis; then, there is a second part in which the methodology applied and the hypothesis are treated; finally, in the last part the main findings are disclosed.

3.2 RESEARCH STRUCTURE

A preliminary analysis has been conducted in order to understand how to structure our research.

First of all, we needed to determine which data were more significant for our analysis: as we are going to underline later on in the dissertation, not all the OWOM can be assimilated and considered to be the same.

There exist, in fact, at least two broad categories: *search goods* and *experience goods,* that we already described in the first chapter.

For our analysis we selected specific product categories belonging to both the products baskets, with the aim to identify the peculiar trend that characterize OWOM.

We acknowledge that findings from a separated analysis of the two categories can provide different results, being the content of the communication and thus the language used different.

Therefore, we provide a comparative analysis between two categories, in order to understand if and where eventually they differ. Considering the volume that the experience goods generates, we will keep more attention on the dynamics of the latter.

As extensively explained later on in the dissertation, the research has taken place in order to answer to an increasing demand by companies to understand and target consumers in the cyber space, and at the same time, to extend the action range of

positive communication diffusion to the larger number of consumers in the most effective way.

We therefore selected the most important platform where people share opinions about products online (namely Amazon) and identified the most relevant categories for the research.

Using a proprietary software, data have been extracted and normalize in an xls file, where an analysis on the Linguistic peculiarities of each reviews has been conducted.

Findings drawn from this study are then reported and commented.

3.2.1 Hypothesis Development

The aim of this research is mainly to explain the relationship, if this exists, between language and usefulness of online reviews.

Specifically, the pattern of concreteness-abstractness identified by previous studies in the Linguistic Category Model and all the five implications that have been tested[124] are now applied for the first time to the analysis of the OWOM regarding products reviews, therefore going beyond the interpersonal domain.

In fact, as exposed in the previous chapters, findings can be different if the LCM framework is applied to the analysis of behaviors or inanimate objects.

A first analysis outside the interpersonal domain showed that abstract language reflects a prior expectation of the consumer, and, if this holds in the real world of online reviews, it would imply that the more the language used tend to be abstract, the more the potential consumers feel the review to be in line with the brands promises and with the reviewer previous experiences.

On the contrary, reviews perceived as on a one-shot event or experience, as they are if the language used is more concrete, convey the idea that the event is not going to be replicated or to last, thus discouraging the next potential consumers to based its purchasing decision on them.

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[124] Semin G. R., Fiedler K., *On the causal information conveyed by different interpersonal verbs: the role of implicit sentence context*, Social Cognition, 1988, Vol. 6, N° 1, pp 21-39.

These considerations lead us to infer that the usefulness of a review can follow the same pattern.

Our first hypothesis, then, is:

> H1a: The more the language used in online reviews to describe products or services experiences belonging to *experience goods* category is *abstract*, the more the potential consumers is going to find them useful.

The other way round, for concrete language the vice versa will be valid, and a study has been conducted on a sample selected from a basket of *search goods* consumers' reviews.

> H1b: The more the language used in online reviews to describe products or services experiences belonging to *search goods* category is *concrete,* the more the potential consumers is going to find them useful.

Another research question that it has been considered interesting is related to the way the sentiment of the review shapes its perceived usefulness, explained by language abstractness/concreteness.

Is a negative review (positive) more useful when written in a concrete (abstract) language?

Therefore, a second test has been implemented in order to detect if being a review positive or negative do have an impact on the receivers' side.

> H2a: A positive review is more useful when written in an abstract language than in a concrete language.

> H2b: A negative review is more useful when written in a concrete language than in an abstract language.

If this second test will not be significant in its findings, thus our first hypothesis, if confirmed, can be generalized without considering the impact of the sentiment of the review.

Moreover, it would be an additional confirmation of the psychological explanation behind these findings: in fact, if this is the case, it would mean that enduringness is going to prevail on the other variables[125].

On the contrary, the fact that a more concrete language has been proved to be less disputable and subject to a personal reinterpretation thus more verifiable and more situative informative can overcome the enduringness and the congruency of the abstract language on the receivers' mind.

In addition, judging the psychological motivations behind utility votes, a note must be done in adding other studies' findings: in fact, truthfulness can be an important variable in determining the usefulness of a review and we already demonstrated that the more the review is written in a concrete, thus vivid and real, language the more is considered to be reliable.

3.3 SAMPLE SELECTION

The ratio behind our research and hypothesis has also been guided by the kind of products that we chose as our sample.

In fact, when we described OWOM in the first part of the research, it has been said that *experience goods* rather than *search goods* are more reviewed by potential consumers in terms of volume.

So, the former are far more significant than the latter in representing the universe of the entire OWOM; thus our results can be generalized with a good approximation and results from our tests are far more useful.

Moreover, the two product categories are significantly different: *search goods* in fact are products that consumers can evaluate before purchase, according to specific attributes, like for example electronics; this create in the potential consumer an existing idea about the product, also before approaching product-specific OWOM.

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[125] Details about this topic in chapter 2. Main source: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4, 558-568.

Experience goods, instead, attain to a more personal judgment, thus varying from consumer to consumer.

A good representation are movies, books and travels, which it has not to be said, are difficult to be described using universal and specific attributes.

Here below it has been reported some example of reviews[126] from each of the abovementioned categories, in order to better enhance the differences (**Figure 5**).

Figure 5a: Example of Appliances Review

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[126] The examples reported above have been extrapolated from the basket of reviews that we used in our test, thus they provide a good representation of the peculiarities of the two goods categories.

> 15 of 17 people found the following review helpful
> ★★★★☆ **Quite a book**, February 22, 2004
> By **Mike Holt** (Johnson City, TN) - See all my reviews
> **This review is from: Of Mice and Men (Paperback)**
> Overall, John Steinbeck's Of Mice and Men is really a good book. Even though it's rather short, it delivers its message quite well. The book opens with George and Lennie near the Salinas River south of Soledad, California. Lennie is a big, loveable guy who isn't very smart, but is easily pleased. Lennie loves to stroke soft things, and has a mouse in his hands that he accidentally killed by petting it too hard. Lennie's portrayal is extremely sympathetic and sentimental, but I couldn't help but like him, regardless of his flaws. George is the little man behind Lennie; he acts as the big man's brain in guiding him and keeping him out of trouble. The two travel and work together and have a friendship unlike anything most other characters in the novel have ever experienced. The book really got me to feel like I knew the characters, especially Lennie, and to pity them. The underlying theme of man's innate loneliness and his need for companionship is a bit dark and pessimistic for my taste, but is delivered tactfully with the repeated story of George and Lennie's farm where Lennie will be able to tend rabbits while the two live off the fatta the lan' offers hope so the book can be easily stomached by someone with a more optimistic worldview. All things considered, I would definitely recommend this book for everyone to read; the ideas behind it should be considered by all.
>
> Help other customers find the most helpful reviews   Report abuse | Permalink
> Was this review helpful to you? Yes   No   💬 Comment

Figure 5b: Example of Books Review.

Figure 5a, coming from Amazon books, belong to the experience goods category, while figure 5b, from Amazon appliances, is a typical search goods example.

Namely, for our research, a sample of review for each category has been selected from the abovementioned website.

In particular, regarding experience goods related reviews, they have been selected from:

- **Amazon.com**, we tested our hypothesis on **Books (Fiction & Literature; History; Health, fitness & diet)**. A total of **476 reviews** has been selected, of which **156 have been excluded** because not in line with the significance criteria that we stated. They cover a period of time that goes from the 6th April 1998 to the 11th September 2014.

For what concern, instead, search goods, the sample has been extrapolated from:

- **Amazon.com**, choosing the category **Appliances (small appliances in kitchen & dining).** A total of **938 reviews** has been selected, of which **340**

have been excluded because not in line with the significance criteria that we stated. They cover a period of time that goes from the 1st July 2000 to the 19th August 2014.

The criteria that has been used for Amazon's reviews in order to get significant results from our test is that all the reviews that have less than 10 utility votes associated (meaning that less than 10 consumers expressed a preference in terms of utility for that specific review) has been excluded, in order to guarantee a not-biased analysis[127].

For the study of the products reviews belonging to the experience goods category, we selected a total of 928 online reviews, of which 772 have been considered to be significant and thus were used in our study, accounting for both Books and Hotels.

For the search goods, instead, from a total of 938 reviews, a significant analysis could have been conducted on 598 reviews.

3.4 DATA COLLECTION

The data mentioned above have been collected directly from the related Websites, using a proprietary Software[128].

The technology here implemented in one of the most up to date in the field of the Big Data analysis.

The platform allows the design of "Big Data Contextual Processing workflows", that combines semantic structures and information flow in order to transform unstructured data into relevant smart data.

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[127] In fact, as will be explained later on in the dissertation, the tests for Amazon reviews has been conducted collecting reviews in clusters of % usefulness and, in order to avoid having a 100% utility cluster biased by few people expressing their votes, we decided to exclude less than 10 votes review from our analysis. (In fact, a lot of reviews have associated a number of votes that would have amount to 100% utility: 1 of 1 people expressed the following review helpful, 2 of 2, 3 of 3, and so on).

[128] The platform is patent pending, so we cannot disclose specific info on the functioning of the software that are not already publicly available.

The Software's Contextual Workflow is mainly structured in 3 phases:

1) **Modeling and Acquire**.

This phase consists of the design of the acquisition processes capable to extrapolate Big Data directly from Website;

2) **Normalize and Transform**.

This phase is founded on a NPL (acronym for "natural language processing") which, in the specific case, was structured in order to be able to extract semantic data [specifically, verbs and adjectives];

3) **Analyze and Actuate**.

Filter, combine and integrate the data to create views and queries that enable reasoning and inference, and allow delivering of Smart Data in a user friendly way [on an excel file in our case, that let the author managing the data for the LCM analysis].

Thanks to this up to date technology, it has been possible not only to collect a significant amount of data, but also to organize them in a actionable way.

For sake of completeness it has to be said that, nowadays, a software able to identify and classify nouns, verbs and adjectives based on linguistic rather than semantic criteria does not exist yet, but, because of the growing interest of companies, it is under development.

Below, it has been reported a comprehensive list of the kind of data that we were able to extrapolate and that constitute the base of the following studies:

- Number of review
- Author
- Date
- Link to the review
- Number of people that found it useful
- Title
- Number of Stars (review's opinion of the related products/service)

- Number of verbs
- List of verbs
- Number of Adjectives
- List of Adjectives

3.5 DATA ANALYSIS

One of the innovation of the present research is the fact that is not based on surveys or lab experiments to get the link between a dependent and an independent variable.

Thanks to the technology described above, we were able to already collect a significant and reliable number of statements about reviews' *utility* that it can be considered to be our dependent variable.

Participants were not subject to an environment-controlled lab test or to a survey representing a stylized reality, and this constituted a fresh methodology for the field, that deserves further consideration, leaving room for future research.

The task that we accomplished after defining and collecting the data about *utility* [dependent variable], was the analysis of the relationship with abstractness/concreteness of the reviews.

In order to assess this pattern being sure that the judgment on the abstractness/concreteness of the reviews was nor naïve neither subjective, the analysis has been conducted with the aim of a list of verbs classified into the four Linguistic Categories (DAVs, IAVs, SVs, Adjs).

The list has been created with a cross analysis between the most common and widely used English verbs and adjectives, and the examples that have been made across literature (Please refer to **Appendix 1** for the complete list).

For sake of completeness, the formula that we used to classify the reviews in clusters can be found below.

$$Percentage\ of\ helfulness = \frac{Total\ favorable\ votes}{Total\ votes}$$

A value from 1 to 5 has been assigned to each review depending on its position along the abstractness/concreteness dimension (**figure 6**).

- 1 = low level of abstractness / high level of concreteness
  [prevalence of DAVs]

- 2 = increasing level of abstractness / decreasing level of concreteness
  [DAVs and IAVs]

- 3 = mixed language / no prevalence

- 4 = decreasing level of abstractness / increasing level of concreteness
  [SVs and Adjs]

- 5 = high level of abstractness / low level of concreteness
  [prevalence of Adjs]

Low Abstractness   High Abstractness

Figure 6: Rating assigned to each review depending on the level of abstractness-concreteness

The empirical analysis supporting this research is based on the observation that language abstractness is of one of the drivers that determines the utility of a review, thus affecting consumers' purchase intention.

In particular, we are going to take into consideration the two above-mentioned factors in different scenarios: in *Study I*, the positive pattern that links language abstractness with an increased utility of the reviews is highlighted different product categories; *Study II* will provide evidence on how utility may vary along with the abstractness-concreteness, depending on the sentiment of the review.

The present work will end with a general discussion on the main findings, while managerial implications and research limitations will be treated in the next chapter.

3.5.1 Study I

As previously stated in Hypothesis H1a and H1b, the aim of *Study I* was to determine the impact of concrete versus abstract language on reviews usefulness, that it is here considered a proxy for consumers' purchase intentions.

Indeed, the following analysis has been conducted separately for the two product categories that mostly dominate the OWOM scenario, namely *experience* versus *search goods*, on purpose.

In fact, language employed to describe the products or service features could be different and thus also the relation between language abstractness-concreteness dimensions and utility can change.

Therefore, analyzing the data without distinguishing between the two might have lead to misleading results, whose effects we could not be able to assign to one or the other product categories; thus, we organize the study to provide separate results to draw conclusions from.

Following these considerations and having in mind the literature[129], our hypothesis are structured to predict a positive linear relationship between language abstractness and usefulness of the reviews, for experience goods; when coming to search goods, instead, the linear relationship will link a more concrete language with a more useful review.

Being our analysis based on inferences on real life data, we were not supposed to perform a pretest as usually happens when coming to lab experiments or surveys-based research.

Indeed, we identified each review to be written in a more concrete or abstract language with the guidance of a list of verbs and adjectives that we already classified into the four linguistic categories of the LCM[130].

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[129] Findings from literature on OWOM and LCM have already been extensively exposed in Chapters 1 and 2.
[130] The list, as stated previously, is to be considered as non-exhaustive guide to classify reviews and to assign a value, from 1 to 5, along the abstractness-concreteness dimension.

The reviews were, in fact, organized in clusters, depending on the percentage of usefulness[131].

Then, a rating between 1 (*most concrete*) and 5 (*most abstract*) was assigned to each review and then the average of the linguistic style used was computed for each and every cluster.

A total of 918 reviews from Amazon.com were analyzed, of which 320 belonging to the experience goods categories, namely *Books*, while the remaining 598 belonging to the search goods, namely *Appliances*.

Here below you can find an example of the procedure used for the data analysis (**Figure 7**).

Author	Date	Review	Rating	Utility %	LANGUAGE	Num verbs	Verbs	Num Adjs	Adjs
Andres	on Septem	As a longti	5	100%	4	23	be,devou	13	longtime,l

As a longtime fan of both Mr. Cussler and Mr. Blake, I couldn't be happier with the Eye of Heaven. I devoured it and wish it had gone on another hundred pages. Blake's hand in the prose, plotting and action is obvious to anyone familiar with his books, and Cussler's storytelling is at the top of his game. It's such a relief after the last couple of Fargos. I was ready to give up on them, but this installment renews my faith.

The action starts on the first page with the Vikings and doesn't let up till the last. Sam and Remi seem to have more depth than the rather cardboard characters of recent vintage, but it's Janus Benedict and Lazlo who steal the show. I could read a whole series just featuring Lazlo, but maybe that's just me. Sort of a David Niven type, but with issues, and funnier than I can remember any of the sidekicks in these books.

Nice to see Mr. Cussler return to the quality that made him the benchmark for terrific adventure novels. And congrats to Mr. Blake for keeping the spirit alive

Figure 7: Example of the analysis of reviews from Amazon Books.

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[131] We remind the formula we used to aggregate the cluster based upon utility votes:

$$Percentage\ of\ helfulness = \frac{Total\ favorable\ votes}{Total\ votes}$$

The data, that were extracted through a proprietary software, as previously explained, are now classified and analyzed in clusters based on the relative usefulness associated.

Afterwards, a linear regression has been run to assess the significance of the analysis.

We chose *usefulness* as our dependent variable, being a good estimate for consumers' purchase intentions.

Consumers freely state the usefulness of each review when deciding and making a purchase online, thus we can easily consider these data not to be biased.

As independent variable, able to explain part of the utility votes determinants, we set language, classified as per LCM and given a rating between 1 to 5 along the abstractness-concreteness dimension (refer to **figure 5**).

Below a recap of the linear regression equation, with the indication of the variables that we used in our analysis.

$$Y = a + b*X$$

Where: Y = Usefulness; X = language abstractness [from 1 – least abstract to 5 – most abstract]

Results confirmed hypothesis H1a but not H1b: the **positive** relation that we assumed between the usefulness of experience goods reviews and the use of an abstract language holds also for search goods.

Evidence of that can be found below in **figures 8** and **9**.
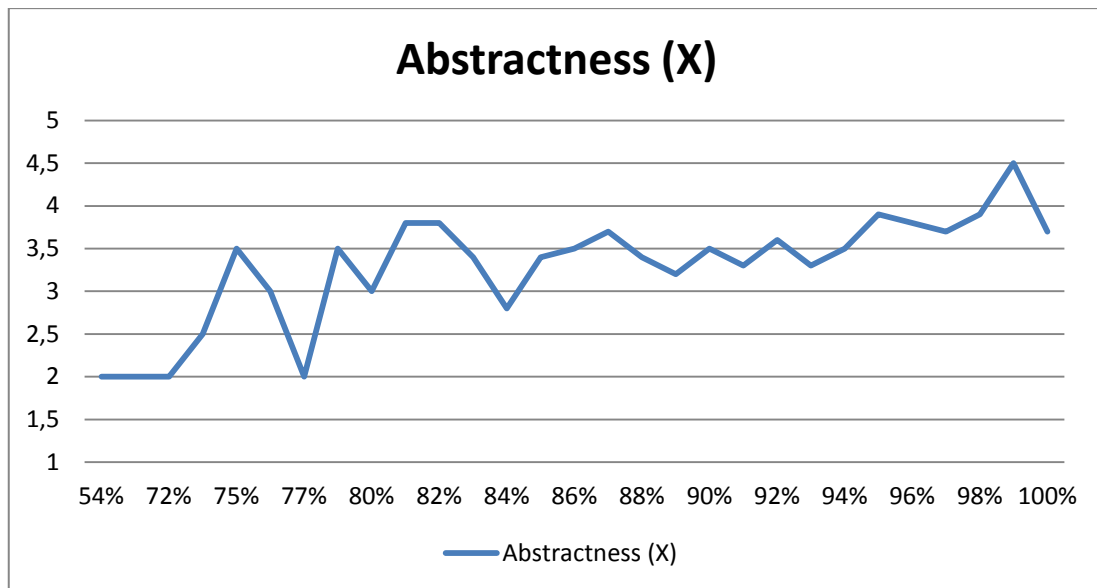
Figure 8: Trend between utility votes percentage and language abstractness, Amazon Books
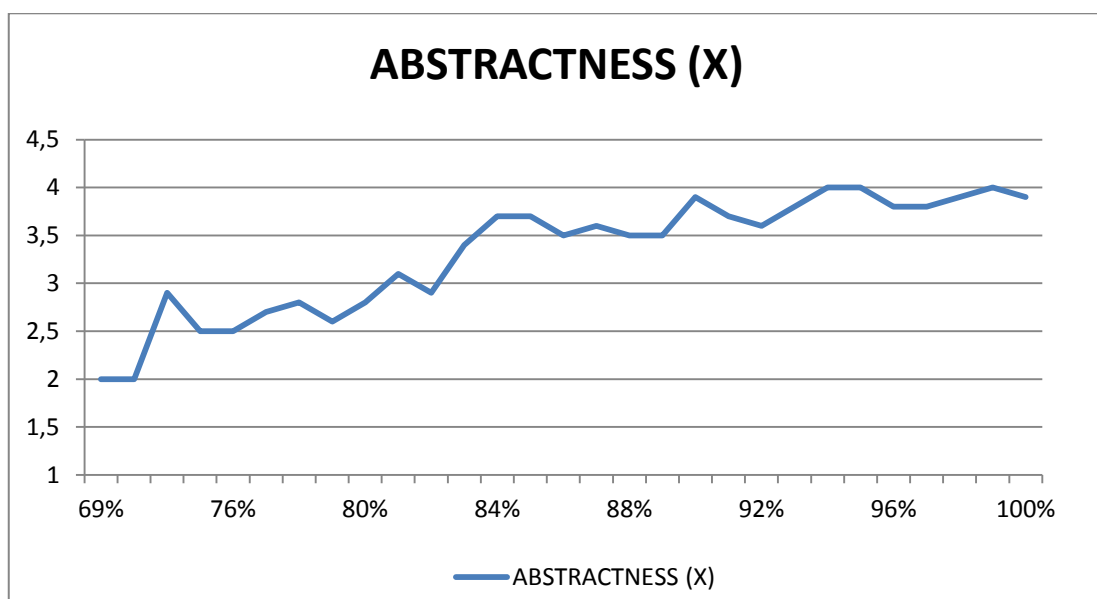
Figure 9: Trend between utility votes percentage and language abstractness, Amazon Appliances

As emerge from the previous graphs, the more the language employed in the reviews becomes abstract the more the related usefulness increases.

In order to determine the main effect of the contributions given by our independent variable in shaping consumers' utility perception and to identify if the interaction between the two considered variables is significant, we analyzed the date using the

ANOVA with a significance level equal to 99% (Please refer to **Appendices 2** and **3** for more details on computations).

From the Fisher distribution, a significant effect emerged about the language influence on reviews utility, for what concern the *experience goods* category (F $(157,09) = 7,68$ with $p < 0,01$ and 1 degree of freedom) (**Figures 10a and 10b**).
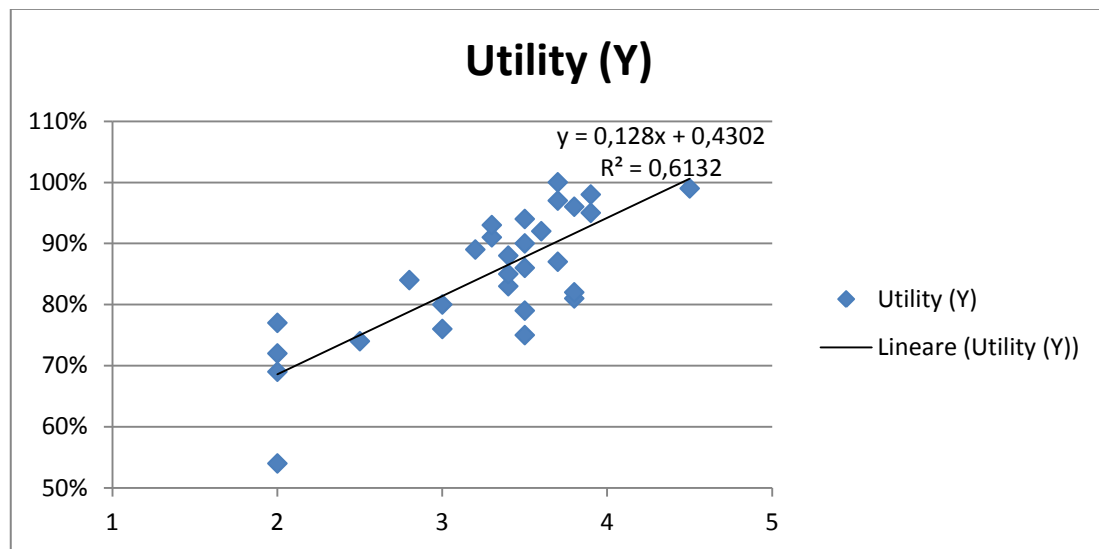
Figure 10a: Linear regression on Amazon Books
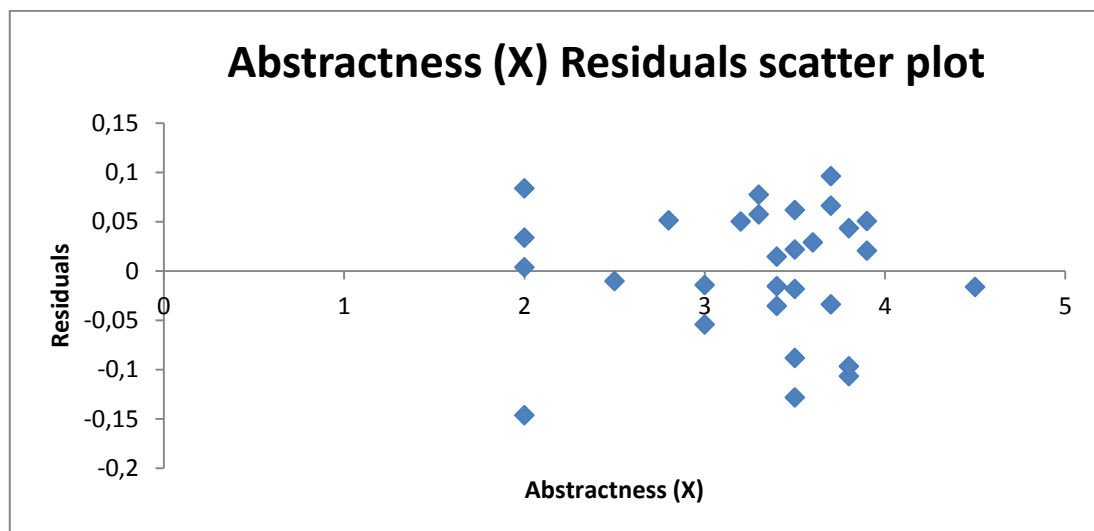
Figure 10b: Scatter plot of the residuals, Amazon Books

The same positive pattern and significance was tested by the linear regression that we run for the *search goods* as well (F $(42,81) = 7,68$ with $p < 0,01$ and 1 degree of freedom) (**Figures 11a and 11b**).
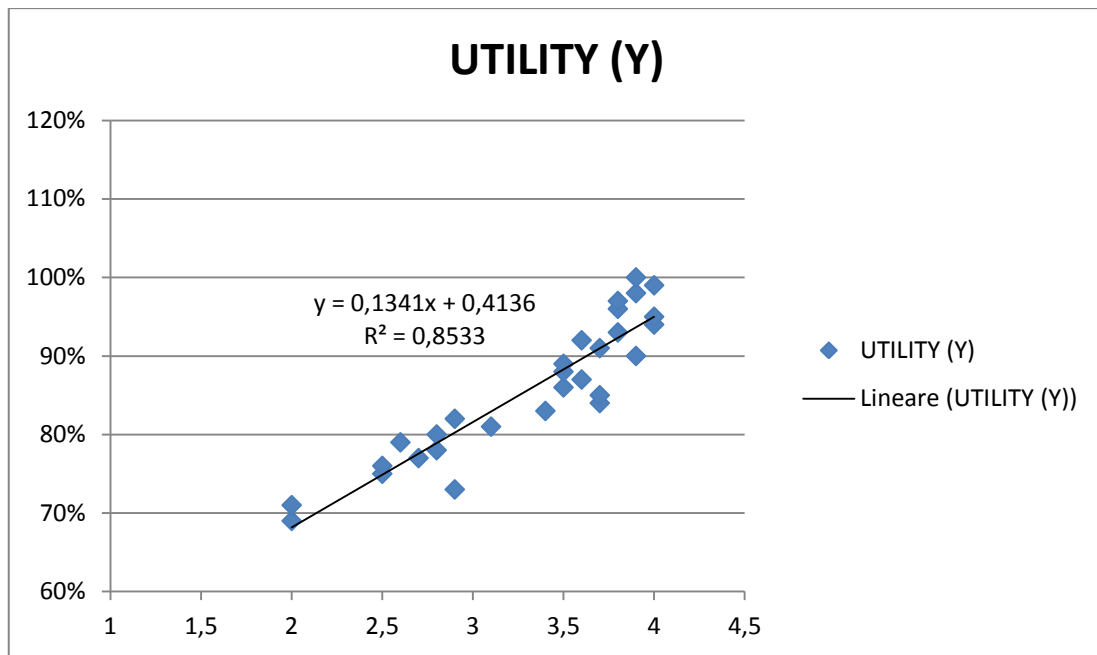
Figure 11a: Linear regression on Amazon Appliances
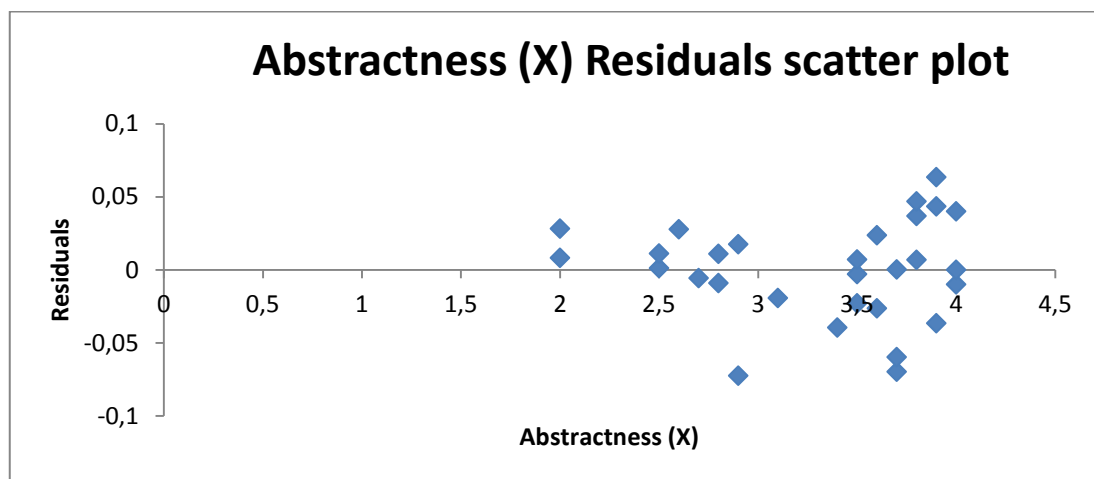
Figure 11b: Scatter plot of the residuals, Amazon Appliances.

Residuals also give us an assessment of the quality of the regression: as emerges in the two scatter plots, residuals do not show a drift but are randomly distributed around zero, thus it indicates how well the linear equation explains the data.

Indeed, in our research, the coefficient of determination is high, explaining the independent variable a good portion of the dependent one: concerning the analysis on Amazon Books, the 61% ($R^2 = 0,613$) of the variance was explained by the linear model, while for Amazon Appliances, language abstractness explains the 85% ($R^2 = 0,853$) of the variance.

3.5.2 Study II

As anticipated in section 3.2, the second hypothesis has the role to determine if the findings of H1 holds for both positive and negative reviews, meaning that the utility of the review given by language abstractness is not going to change depending on the sentiment of the review.

The pool of data that we used to test this second hypothesis is the same that we already described in previous paragraphs.

The information, though, have been aggregated in order to have, for each of the five possible rating votes [from 1 to 5 stars], an associated level of language abstractness and the average utility percentage, expressed with the same rational and method as per *Study I*.

The analysis has been run for both the product categories, in order to have evidence of existing differences.

The output that we obtained takes the form of a two ways table, of which we report below a recap with the main findings for both Appliances and Books (**Table 4a** and **4b**).

APPLIANCES					
RATING	1	2	3	4	5
LANGUAGE ABSTRACTNESS AVERAGE	3,41	3,56	3,27	3,62	3,83
UTILITY VOTES % AVERAGE	89,7%	90,1%	89,4%	92,8%	93,4%

Table 4a: Negative vs positive reviews findings, Appliances.

BOOKS					
RATING	1	2	3	4	5
LANGUAGE ABSTRACTNESS AVERAGE	3,8	3,9	3,4	2,9	3,6
UTILITY VOTES % AVERAGE	85,7%	85,3%	87,0%	90,2%	92,4%

Table 4b: Negative vs positive reviews findings, Books.

Indeed, from this second analysis emerged that the average language abstractness does not change significantly per rating categories, while the average utility percentage associated with each rating cluster diminishes as the review on the products become more and more negative.

The trend represented above implies that a negative review written in an abstract language is perceived as less useful compared to a positive one.

This finding is more remarkable when considering *experience* goods rather than *search* goods (as per data evidence in the figures above, Books have a lower utility associated to an higher abstractness level than it happens for Appliances).

Therefore, our H2 hypothesis is confirmed, for both the categories: positive reviews are more useful when written in a more abstract rather than concrete language, and evidence can be found in Appendix 4 and 5, where with an increasing language abstractness, also the associated utility increases.

3.5.3 Findings

The aforementioned results provide evidence that consumers expression of utility, as a proxy for purchase intentions, varies as a function of the language used, with different shades depending on the considered product categories.

Moreover, our second study suggested that language affects utility perception differently, depending on whether the review is positive or negative.

Although *Study I* found evidence of a really neglectable difference among product categories, we suggest companies to specifically address this topic with regard to their specific category good.

On the other hand, *Study II* supported our hypotheses, suggesting that companies should monitor the sentiment of the reviews in order to magnify the positive impact or limit the negative one, since the impact of the OWOM buzz on performance can be intense.

In particular, for those consumers who reported a negative experience with the brand, companies shall suggest a message written in a more abstract language, since it has been shown that such abstractness decreases the utility of the message, thus influencing less effectively other consumers' purchase intentions.

Overall, the results of our research mainly support our hypotheses, suggesting that, if companies want to maximize (minimize) the impact of positive (negative) reviews, they have to leverage language, also taking into consideration the rating that the client assigned to the product or service provide.

Moreover, referring also to the previous study findings, exerting a more intense control of the OWOM can be a competitive advantage for that companies that implemented a customized CRM activity[132], in order to detect clients categories that for example had a one-shot negative review or the ones that a general negative opinion about the brand or the product.

A possible explanation of the fact that a more useful negative review is to be written in a more concrete than abstract language is that a negative, more than a positive opinion, must be more convincing and less disputable and subjective, providing the receiver with more situative information.

In addition, as already mentioned during the dissertation, truthfulness can be an important variable in determining the usefulness of a review: the more the review is written in a concrete language the more is considered to be reliable, and this evidence is proved to be stronger for negative than for positive reviews.

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[132] This topic will be exploded in greater details in the next chapter.

3.6 CONCLUSION

The two discussed studies provide interesting insights in the field of the Linguistic analysis of the Online Reviews, and, generally speaking, of the OWOM, whose investigation is, for certain aspects, still *in nuce*.

On the one hand, a significant difference between the two analyzed product categories has not been found when coming to the positive relationship between language abstractness and utility, but it, for sure, deserves further studies to give significance to our results, which has been the first to investigate the issue.

On the other hand, an insight on the different utility perception between positive and negative reviews has been proved, by *Study II,* to be affected by language abstractness-concreteness.

Managerial implications will be discussed in the next chapter as well as the research limitations and the improvement that can be exploited by future studies.

CHAPTER FOUR:

MANAGERIAL IMPLICATIONS AND LIMITATIONS

4.1 INTRODUCTION

In this last chapter, the most relevant managerial indications and the main limitations are treated, considering of course the shortcoming given by current technology: in fact, the analysis that has been conducted in the present work took into consideration a sample of reviews, even if the two categories were not chosen randomly but they were a representation of the two main subsets in which the OWOM world is divided.

Nevertheless, in order to generalize these findings, further confirmatory studies have to be run in the future literature.

Some hints on what can be further investigated is given in the last section.

4.2 DISSERTATION OVERVIEW

The present research is the first to our knowledge with the aim to investigate the role of language abstractness when affecting consumers' utility perception of the OWOM environment, accounting for the differences of the two studied product categories and for the sentiment of the review itself.

Having introduced in *Chapter I* the main studies and recent findings that are related to the Offline and Online world, we presented the linguistic framework of the LCM

firstly introduced by Semin and Fiedler and the distinctive features of concrete and abstract language.

Then, in *Chapter II*, we explored the first application of the LCM framework outside the perimeter of the interpersonal behavior with the research, conducted by Schellekens, analyzing the implications of language abstraction in product experiences.

The author found, then, that a more abstract language is the symptom of a congruence between the *a priori* consumers' attitudes and the actual products experience, whereas the vice versa is verified for more concrete reviews.

In *Chapter III* we presented our hypothesis on the previous mentioned topics and we provided evidences of the results of our studies through an ANOVA analysis.

The goal of both our studies, indeed, was to assess *usefulness*, considered as a proxy for consumer purchase intentions.

In *Study I*, *usefulness* was measured as a function of language and product category.

Study II, instead, focused on the effects that language and rating ultimately have on the message *usefulness*.

While *Study II* sustained our hypothesis, *Study I* unveiled a not remarkable difference between the two analyzed product categories (search and experience goods), thus confirming H1a and rejecting H1b[133].

The reason why search goods result more useful when reviews are written in a more abstract rather than concrete language, as initially expected, can be found in their nature: more concrete details are already available online thus consumes, when reading reviews on this category, are looking for other information, namely other consumers personal experience.

In the present work, then, we demonstrated that in online (and offline environment, since the OWOM is generally accepted as a proxy for the offline WOM for its

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[133] Please refer to Chapter 3 for hypothesis formulation.

richness in details and information that make possible more accurate studies), a more *abstract* language increases the *utility* of the review, when this is conveying a positive message.

The main reasons of that pattern have been identified by previous literature[134], namely enduringness and congruence with *a priori* consumers attitude towards the product.

On the contrary, a negative message is more likely to result more useful when it is expressed in a more concrete language.

This second result, instead, is finding a mixed evidence in past studies[135]: in fact, on the one hand, a more abstract language should have been more useful both for negative and positive reviews, since the inference made by Schellekens et al. is an a priori congruence with consumers expectations (thus a negative abstract review reveals a confirmation of the a priori negative attitude or experience of the reviewer, which is a symptom of a durable and stable company/product characteristic, and not a negative spot episode, which for these reasons should be much less significant for receivers).

On the other hand, Hansen and Wanke proved that *concreteness* lead receivers to rely more on the reviews content based on an increased *truthfulness* perception, regardless of the effective reliability of the review itself.

This should have hold, also in our studies, for both positive and negative reviews.

One of the main explanation that we can give is due to psychological implications: when potential consumers are reading online reviews it means that they are looking for something they need or they want, thus they are already in a "purchasing

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[134] Please mainly refer to: Semin G. R., Fiedler K., *The Cognitive Functions of Linguistic Categories in Describing Persons: Social Cognition and Language,* Journal of Personality and Social Psychology, 1988, Vol, 54, No, 4, 558-568.
Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010.
[135] For the not-confirmatory study, we are specifically referring to: Schellekens G. A. C., Verlegh P. W. J., Smidts A., *Language Abstraction In Word Of Mouth,* Journal Of Consumer Research., Vol. 37, Aug 2010. A supportive analysis instead is the one conducted by: Hansen J., Wänke M., *Truth From Language and Truth From Fit: The Impact of Linguistic Concreteness and Level of Construal on Subjective Truth*, Personality and Social Psychology Bulletin 2010, 36.

favorable mood", condition in which they are less likely to accept negative than positive reviews, that consequently need to be more convincing, less subjective and personal.

The goal of the present research was to demonstrate the crucial importance of language when shaping a company strategy towards the effect that this have in shaping consumers' purchase intentions, especially in light of the terrific increase of OWOM, which currently represents the most powerful communication tool for both individuals and firms[136].

4.3 MANAGERIAL IMPLICATIONS

Nowadays, it is a widely used practice that companies exploit the potentials of the OWOM to communicate with the consumers reducing or not spending money at all in traditional advertising.

OWOM and specifically online consumers reviews, in fact, seems to be a straightforward solution for quite any companies that's looking for an easy-reached visibility almost worldwide.

Truth is, as specified in *Chapter I*, that the online presence has to be managed carefully, at least in order to avoid permanent damages in terms of image or revenues; it has to be managed wisely, instead, if it has to serve a strategic purpose and add value to the company business.

The aim of our study was to truly understand the complexity of the OWOM reality, disentangling one of the n-variables affecting one of the actors: reviews receivers, thus potential consumers.

In this sense, language differentiation is the key; this is the reason why we indentified cases in which it would be preferable the use of a more concrete than abstract language, and vice versa.

We believe that the present work has contributed noticeable insights for companies active in the field.

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[136] Please refer to Section 1.3, Chapter 1.

First of all, in fact, companies can shape readers' perception towards a reviewed service or product, leveraging the impact that the use of a more abstract language provoke on the receivers' side.

The utility that consumers will find in certain reviews would drive incremental traffic to the company's website over time, leading to an increase in revenues and visibility.

In the consumers' perceptions then utility would be easily transformed into stable reliability that will be transferred from the reviews to the products/company itself.

The attention to the effects of language on the receivers' side can be subsequently customized depending on the sentiment of the reviews: in fact, if consumers assigned to the product that he is going to review a negative rating, the company can suggest words or expressions that go towards a more abstract direction, in order to limit the impact of the above mentioned review.

However, more abstract suggestions can be provided by companies in order to exploit the potential of positive reviews, thus, as it has been proved in *Study II,* leading to a higher utility.

We can suggest companies to deepen these findings with specific reference to target segmentation and product categories, identifying what's more impacting the utility perception of consumers' reviews.

Companies need to leverage the fact that, on one side, consumers increasingly rely on other consumers not-referential opinions and, on the other side, potential and actual consumers, in a world that is going more and more into a 2.0 reality, are willing to share more information on these platforms.

Nowadays, the marketing trend, is totally into customized CRM: companies desperately need to understand what consumers want, what attract them, which is the path that lead them to buy or not a product, etc..

It is moreover even more crucial to collect these information when customers are actually into this process in reality, and in this sense our study provide a first, raw, tentative approach.

In fact, one of the main achievements of the present work is the first attempt to use a methodology different from surveys or lab experiments, implementing the study the other way round: reality is almost never as extreme as to have reviews that can almost be classified as using only DAVs or only Adjectives.

Reality is more complex and tend to stay in the medium: this is the reason why the results we had from the empirical analysis were in the range of 2 to 4, while 1 and 5 where less touched (the 5 language cluster was in any case more present in the overall reviews than the 1).

Companies, especially the ones providing services like Telecommunication, are already implementing a customization marketing thanks to the integration of the different social media, online media (press intelligence) and e-commerce platforms with the internal company CRM systems: they are implementing contact center on social network, press intelligence, going beyond the Web sentiment analysis.

In conclusion we can summarize the main implications for companies as follow:

- There a strong positive linear correlation between the utility of the review (dependent variable) and the abstractness-concreteness of the language (independent variable): companies can leverage the fact that the more the review is written in an abstract language, the more receivers are likely to find them useful;
- H1a was supported by our data while H1b was not confirmed, implying that there is no significant difference among experience and search goods in terms of correlation between utility perceptions and language abstractness of the reviews;
- H2a and H2b was elaborated in a way to provide evidence that, for positive reviews, the use of a more abstract language leads to a higher utility perception. On the contrary, a more concrete language has been proved to be true for negative reviews.

4.4 RESEARCH LIMITATIONS AND ROOM FOR FUTURE STUDIES

Language is only one of the possible variables affecting the way people perceive products, services, brands and companies through consumers' reviews.

This is just one field of research in the complex OWOM environment that deserves further consideration in future studies, leading also to a better knowledge of the, less likely to be studied, Offline WOM.

Other insights can be certainly drawn from the disciplines and theories cited above, each of them with the aim of studying an actor of the OWOM flow (please refer to figure 1, Chapter 1).

Indeed, a comprehensive framework for assessing utility, or other variables that impact purchase intention, shall be created for helping those managers who want to exploit the opportunities of the OWOM, understanding where and how to invest resources and expect a return.

The main limitation of the present work can be recognized in the same choice of only two factors (namely the sentiment of the reviews and the product category).

It would be necessary to study other interactions of the language and the following effects on utility. Indeed, it would be interesting to observe the conversion rate of how many helpful votes actually transformed into real purchases and collect information directly from consumers on the reason why.

Since competition in the 2.0 worlds is just one click away, gaining a substantial competitive advantage to drive more and more consumer to enter (traffic) and then actually shop in the own website is crucial.

4.5 CONCLUSION

The present work has been a first attempt to go into the folds of a modern yet still undiscovered topic: the effect of language in OWOM on final potential consumers.

Of course, we acknowledge that language might not be the only variable affecting usefulness, thus consumers' purchase intention, but this constitutes a starting point for future studies to address interactions with other variables, in order to have a complete picture.

Our conclusions can help marketers to better go into the directions of customization also concerning Online Reviews, in the sense that they can shape and provide better results depending on the product category and the sentiment of the review, as our results underlined.

This will help them increase visibility, traffic and, ultimately, purchases in their own websites.

Of course, the road is still under construction, meaning that, on the one hand, ICT companies, like the one that kindly provided the software for our analysis, are currently working on more sophisticated tools able to scan the Web and process not only semantics and sentiment analysis.

On the other hand, B2C companies are working to take advantage of these upcoming opportunities, in order to be competitive in the Online environment, understanding what is appealing and persuasive to consumers, especially when they lack the possibility to see, touch and feel the product or the service before buying it, and they need to rely on others' opinions, advices and reviews.

APPENDIX 1

List of verbs classified as per LCM

	DAVs	IAVs	SVs	Adjs
1	burn	amuse	accept	aggressive
2	buy	attack	adhor	altruistic
3	call	avoid	admire	anxious
4	catch	become	admit	available
5	cut	begin	affect	bad
6	dance	betray	afford	bad
7	dial	blackmail	agree	best
8	drink	break	amaze	better
9	drive	build	anger	big
10	eat	cheat	appreciate	big
11	feed	choose	believe	black
12	find	command	belong	blue
13	fly	consist	care	brutal
14	grow	correct	commiserate	central
15	hit	cost	commit	certain
16	hold	damage	consider	charismatic
17	hug	deceive	control	clear
18	kick	denigrate	desire	close
19	kiss	denounce	detest	cold
20	leave	deride	dread	common
21	lift	disobey	enjoy	cultural
22	meet	encourage	envy	current
23	pay	excite	esteem	dark
24	phone	fight	fear	dead
25	photograph	finish	feel	democratic
26	prepare	flatter	forget	different
27	pull	follow	forgive	difficult
28	pull aside	function	hate	early
29	push	harm	hold in contempt	easy
30	read	harrass	like	economic
31	run	help	loath	entire
32	rust	hurry	love	environmental
33	sell	hurt	mourn for	exciting
34	send	imitate	notice	fair
35	shave	inhibit	pity	fantastic

36	shout	intervene	please	final
37	shout after	keep	prefer	financial
38	sit	last	rate	fine
39	sleep	learn	recognize	fine
40	speak	lend	remember	firmly
41	stand	lie	respect	foolish
42	stare	lose	satisfied	foreign
43	stop	manipulate	satisfy	free
44	summon	mislead	surprise	friendly
45	take	restrict	suspect	full
46	take something from	save	think	general
47	talk	stay	trust	good
48	taste	tease	understand	good
49	teach	thank	worry	great
50	tell	threaten	remind	green
51	tickle	use	impressed	happy
52	touch	warn	need	hard
53	visit	win	complain	helpful
54	wake up	work	seem	high
55	walk	say	expect	high
56	wash	decide	hope	honest
57	watch	throw	recommend	hot
58	wave	remove	concern	huge
59	wear	suppose	etc..	human
60	write	change		ignorant
61	yell	notify		important
62	clean	etc..		impulsive
63	open			informative
64	etc..			etc..

APPENDIX 2

ANOVA for Amazon Books

OUTPUT

Statistica della regressione	
R multiplo	0,783101395
R al quadrato	0,613247795
R al quadrato corretto	0,59892364
Errore standard	0,066453652
Osservazioni	29

ANOVA

	gdl	SQ	MQ	F	Significatività F
Regression	1	0,189062181	0,189062	42,81214243	5,12569E-07
Residual	27	0,119234371	0,004416		
Total	28	0,308296552			

	Coefficienti	Errore standard	Stat t	Valore di significatività	Inferiore 95%	Superiore 95%	Inferiore 99,0%	Superiore 99,0%
Intercetta	0,430187033	0,065388851	6,578905	4,67311E-07	0,296020194	0,564353872	0,249015258	0,611358808
Abstractness (X)	0,127989244	0,019560952	6,543099	5,12569E-07	0,087853486	0,168125002	0,073792047	0,182186441

OUTPUT RESIDUI

Osservazione	Previsto Utility (Y)	Residui
1	0,686165521	-0,146165521
2	0,686165521	0,003834479
3	0,686165521	0,033834479
4	0,750160143	-0,010160143
5	0,878149388	-0,128149388
6	0,814154765	-0,054154765
7	0,686165521	0,083834479
8	0,878149388	-0,088149388
9	0,814154765	-0,014154765
10	0,916546161	-0,106546161
11	0,916546161	-0,096546161
12	0,865350463	-0,035350463
13	0,788556917	0,051443083
14	0,865350463	-0,015350463
15	0,878149388	-0,018149388
16	0,903747236	-0,033747236
17	0,865350463	0,014649537
18	0,839752614	0,050247386
19	0,878149388	0,021850612
20	0,852551539	0,057448461
21	0,890948312	0,029051688
22	0,852551539	0,077448461
23	0,878149388	0,061850612
24	0,929345085	0,020654915
25	0,916546161	0,043453839
26	0,903747236	0,066252764
27	0,929345085	0,050654915
28	1,006138632	-0,016138632
29	0,903747236	0,096252764

APPENDIX 3

ANOVA for Amazon Appliances

OUTPUT

Statistica della regressione	
R multiplo	0,92376153
R al quadrato	0,853335364
R al quadrato corretto	0,84790334
Errore standard	0,034591092
Osservazioni	29

ANOVA

	gdl	SQ	MQ	F	Significatività F
Regression	1	0,187969183	0,187969	157,0934575	9,11027E-13
Residual	27	0,032306679	0,001197		
Total	28	0,220275862			

	Coefficienti	Errore standard	Stat t	Valore di significatività	Inferiore 95%	Superiore 95%	Inferiore 99,0%	Superiore 99,0%
Intercetta	0,413588957	0,036029028	11,47933	6,8006E-12	0,339663499	0,487514415	0,313763944	0,51341397
Variabile X 1	0,13408866	0,010698256	12,53369	9,11027E-13	0,112137652	0,156039669	0,104447184	0,163730137

OUTPUT RESIDUI

Osservazione	Y prevista	Residui
1	0,681766277	0,008233723
2	0,681766277	0,028233723
3	0,802446072	-0,072446072
4	0,748810608	0,001189392
5	0,748810608	0,011189392
6	0,77562834	-0,00562834
7	0,789037206	-0,009037206
8	0,762219474	0,027780526
9	0,789037206	0,010962794
10	0,829263804	-0,019263804
11	0,802446072	0,017553928
12	0,869490402	-0,039490402
13	0,909717	-0,069717
14	0,909717	-0,059717
15	0,882899268	-0,022899268
16	0,896308134	-0,026308134
17	0,882899268	-0,002899268
18	0,882899268	0,007100732
19	0,936534732	-0,036534732
20	0,909717	0,000283
21	0,896308134	0,023691866
22	0,923125866	0,006874134
23	0,949943598	-0,009943598
24	0,949943598	5,64021E-05
25	0,923125866	0,036874134
26	0,923125866	0,046874134
27	0,936534732	0,043465268
28	0,949943598	0,040056402
29	0,936534732	0,063465268

APPENDIX 4

STUDY II: DETAILED COMPUTATIONS FOR APPLIANCES

APPLIANCES	AVERAGE UTILITY %
1 STAR	**89,7%**
1 LANGUAGE ABSTRACTNESS VOTE	78,3%
2 LANGUAGE ABSTRACTNESS VOTE	88,7%
3 LANGUAGE ABSTRACTNESS VOTE	89,5%
4 LANGUAGE ABSTRACTNESS VOTE	90,4%
5 LANGUAGE ABSTRACTNESS VOTE	91,1%
2 STARS	**90,1%**
2 LANGUAGE ABSTRACTNESS VOTE	88,1%
3 LANGUAGE ABSTRACTNESS VOTE	88,5%
4 LANGUAGE ABSTRACTNESS VOTE	91,3%
5 LANGUAGE ABSTRACTNESS VOTE	91,7%
3 STARS	**89,4%**
1 LANGUAGE ABSTRACTNESS VOTE	81,2%
2 LANGUAGE ABSTRACTNESS VOTE	88,7%
3 LANGUAGE ABSTRACTNESS VOTE	85,6%
4 LANGUAGE ABSTRACTNESS VOTE	91,8%
5 LANGUAGE ABSTRACTNESS VOTE	94,2%
4 STARS	**92,8%**
1 LANGUAGE ABSTRACTNESS VOTE	100,0%
2 LANGUAGE ABSTRACTNESS VOTE	90,9%
3 LANGUAGE ABSTRACTNESS VOTE	91,8%
4 LANGUAGE ABSTRACTNESS VOTE	94,3%
5 LANGUAGE ABSTRACTNESS VOTE	94,0%
5 STARS	**93,4%**
1 LANGUAGE ABSTRACTNESS VOTE	90,8%
2 LANGUAGE ABSTRACTNESS VOTE	90,9%
3 LANGUAGE ABSTRACTNESS VOTE	93,1%
4 LANGUAGE ABSTRACTNESS VOTE	93,6%
5 LANGUAGE ABSTRACTNESS VOTE	94,5%

APPENDIX 5

STUDY II: DETAILED COMPUTATIONS FOR BOOKS

BOOKS	AVERAGE UTILITY %
1 STAR	**85,7%**
2 LANGUAGE ABSTRACTNESS VOTE	80,5%
3 LANGUAGE ABSTRACTNESS VOTE	82,8%
4 LANGUAGE ABSTRACTNESS VOTE	86,4%
5 LANGUAGE ABSTRACTNESS VOTE	88,8%
2 STARS	**85,3%**
2 LANGUAGE ABSTRACTNESS VOTE	84,2%
4 LANGUAGE ABSTRACTNESS VOTE	85,0%
5 LANGUAGE ABSTRACTNESS VOTE	86,6%
3 STARS	**87,0%**
1 LANGUAGE ABSTRACTNESS VOTE	73,5%
2 LANGUAGE ABSTRACTNESS VOTE	85,5%
3 LANGUAGE ABSTRACTNESS VOTE	89,9%
4 LANGUAGE ABSTRACTNESS VOTE	85,9%
5 LANGUAGE ABSTRACTNESS VOTE	88,6%
4 STARS	**90,2%**
1 LANGUAGE ABSTRACTNESS VOTE	91,3%
2 LANGUAGE ABSTRACTNESS VOTE	86,9%
3 LANGUAGE ABSTRACTNESS VOTE	91,4%
4 LANGUAGE ABSTRACTNESS VOTE	92,4%
5 LANGUAGE ABSTRACTNESS VOTE	89,5%
5 STARS	**92,4%**
1 LANGUAGE ABSTRACTNESS VOTE	90,6%
2 LANGUAGE ABSTRACTNESS VOTE	90,7%
3 LANGUAGE ABSTRACTNESS VOTE	92,6%
4 LANGUAGE ABSTRACTNESS VOTE	92,4%
5 LANGUAGE ABSTRACTNESS VOTE	93,7%

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