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The Paradox of Choice: How Involvement Affects Our Shopping Behavior

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A mio padre Alberto.

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How Involvement Affects Our Shopping Behavior

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1. Introduction and Research Objective

"With so many options, people find it very difficult to choose" (Schwartz, 2005). During his 2005 Ted Talk presentation, Professor Barry Schwartz presented his already famous theory named *The Paradox of Choice*. This interesting and much-investigated phenomenon sees consumers – and people in general – to paralyze when choosing among similar and numerous options. Furthermore, when a choice is made, Schwartz adds, those people who seek the best option available (i.e., maximizers) do not feel as satisfied with their choice as those who look for a satisfactory offer (i.e., satisficers), making their shopping behavior less likely to happen (Schwartz, et al., 2002). After *The Paradox of Choice* was introduced almost 20 years ago, much research was conducted by numerous academic and business figures – Schwartz included. Indeed, Professor Schwartz focused his early work on studying the relationship between maximizers and satisficers; thus, observing how the two types of customer's goals affect their feelings and behaviors when facing a difficult choice situation (Schwartz, et al., 2002). In the meantime, Schwartz has also focused his studies on *The Paradox of Choice* by observing the number of options available to users which would consequently activate the paralysis of choice (Schwartz, 2009). Similarly, other studies, conducted before Schwartz's research, foster the Professor's work. For instance, people facing complex choice situations will consequently feel either positive or negative – or mixed – thoughts and feelings (Mitchell, V. W. et al. 1999); hence, the emotional state of consumers has much importance in the observation and explanation of the Paradox. In light of what has been studied, *The Paradox of Choice* is certainly important to be furthered observed, as literature has been discovering new interesting facets of the phenomenon which remarks its importance in the academic field and business area.

Indeed, this phenomenon could be extremely relevant to several stakeholders. For instance, businesses have to manage the number of items displayed and offered so as to foster sales and profit. Likewise, customers will engage in a favorable approach behavior when the options available are clear, distinctive, and easy to pick. More importantly, *The Paradox of Choice* phenomenon is much applicable to several markets and fields; the Paradox can be encountered and manipulated when dealing with consumer goods, website displays, persuasive scenarios, or B2B offers. Considering this broad application, the actual research is designed to add thoroughness to the existing plethora of information and research conducted on the matter.

2. Literature Review and Conceptual Model

A wide range of papers was meticulously analyzed so as to identify possible gaps to address concerning *The Paradox of Choice* literature. Arun Sharma and Shreekumar K. Nair's paper, "Switching behavior as a function of number of options: How much is too much for consumer choice decisions?" (2017), proposes an investigation of the Paradox from the customer's involvement perspective. Specifically, how the relationship between the number of options and the choice paralysis is influenced by the individual's involvement to choose (or buy). Thus, this present research seeks to address this interesting gap and answer two distinctive yet closely related questions:

i) *Does a low number of options available positively influence (facilitate) the activation of choice?*
ii) *How does a high involvement level from consumers, compared to a low one, moderate this relationship?*

On the one hand, the first question investigates how the number of options available to consumers will affect the choice behavior. Although researchers have already investigated this relationship for their studies, it is still crucial to observe and adapt the number of options to the research respondents, as its perception can change depending on the context. For example, the way items are displayed can influence the choice behavior. On the other hand, the level of customer involvement was hardly considered with *The Paradox of Choice*. In the specific, the involvement level refers to the capability, effort, and willingness from customers to spend time, resources, and energy on a piece of information, item, or service – such as buying groceries vs. buying a house (Sharma, et al., 2017). Therefore, the present research wants to address a

remarkably relevant gap in the consumer behavior literature: how customer involvement will impact their choices depending on the number of options proposed.

Even before Prof. Barry Schwartz introduced and named the phenomenon, other academic figures conducted reviews, papers, and studies related to this surprisingly simple yet intriguing behavior. Much related to the occurring Paradox is the early study conducted by Mitchell and Papavassillou in 1999, where it was pointed how consumer behavior is shaped and impacted by feelings arising from the shopping experience. Confusion, for instance, is driven by three sources: "overchoice of products and stores; similarity of products; ambiguous, misleading or inadequate information conveyed through marketing communications" (Mitchell, V. W. et al. 1999). Interestingly, positive and negative feelings developed the basis for Schwartz's *The Paradox of Choice*; truly, one of the majors Professor's studies dealt with the several feelings provoked by difficult shopping experiences. As previously mentioned, customers want to pick the options which can fulfill their needs and wants. However, the Professor identified that those people who look for the best offer (i.e., maximizers) spend significant energy and time in searching, comparing the options, elaborating, and choosing. This behavior increases the expectations customers form before buying, ultimately ending not satisfied with the final choice (Schwartz, et al., 2002). Closely related to these papers, Pandey and Desai (2020) published an analysis regarding the choice paralysis in the online context – being much more relevant today, as the COVID-19 pandemic has influenced consumers to buy more online (Roggeveen and Sethuraman, 2020). The research highlights that most respondents currently prefer an online shopping behavior, especially when purchasing apparels and electronics. Nonetheless, customers encounter a paralysis of choice when dealing with similar options. For instance, online shops such as Amazon provide a colossal number of similar items available. When these options are much alike in terms of appearance, price, and utility, most respondents felt overwhelmed by the shopping experience and quit the website (Pandey, et al., 2020).

To observe how many options would generate a choice paralysis, Professor Schwartz, together with Oulasvirta and Hukkinen (2009), manipulated the number of options presented to observe when this phenomenon has a high probability to happen. "The existence of this effect [*The Paradox of Choice*] was demonstrated in an experiment where users (N = 24) […] were required to choose the best result item within 30 seconds" (Oulasvirta, et al., 2009). The study pointed that "having to choose from six results yielded both higher subjective satisfaction […] and greater confidence" (Oulasvirta, et al., 2009). Arguably, different control variables could influence the paralysis, including the kind of item presented, the social context, or its related

utility – as ultimately suggested by the research itself. Thus, a preliminary pre-test of the number of similar options that would activate the paralysis is crucial so that the variable can be adapted and contextualized. Böckenholt and Goodman (2015), in fact, have stressed that "the question of whether and when large assortments impede choice remains open." The two researchers identified four chief factors which moderate the assortment size impact on overload of choice; choice set complexity, decision task difficulty, preference uncertainty, and decision goal (Böckenholt and Goodman 2015). In light of these four factors identified, the research strongly supports the discussion made by Professor Schwartz in his 2009 study – there is not an exact, absolute number of items that either activates the choice paralysis or ease the shopping experience (Oulasvirta, et al., 2009).

Nonetheless, numerous studies highlight how a large number of similar items presented to shoppers would possibly prevent the likelihood of making choices. For instance, having large choice sets can increase the probability of making 'no choice' (Park, J. et al. 2013); reduce the satisfaction of the decision made (Iyengar, S. et al., 2000), prevent the likelihood of making a decision (Redelmeier, D. A., et al., 1995; Iyengar, S., et al., 2006), and decrease the quality and optimality of the decision (Payne, J. W. et al. 1993; Tanius, B. E. et al., 2009; Schram, A. et al. 2011; Besedes, T. et al., 2012). Furthermore, it was found that a negative relationship between assortment size and satisfaction is present when people are less familiar with the choice (Mogilner, et al., 2008); that *The Paradox of Choice* states the more choices available, the less likely a shopper is to decide (Silverman, A., 2019); that, given the online proliferation of options and the anywhere/anytime nature of shopping via mobile devices, this paralysis has touched many retail businesses (Silverman, 2019); and that maximizers are better off for a low number of options (Álvarez, F. et al., 2014). In light of all these findings, the first hypothesis is formulated:

> **H1.** *A low number of similar options available to consumers strengthens the activation of choice more than a high number of options available.*

Álvarez and Sanchis (2014), indeed, claimed that the "paralysis effect refers to situations in which the overload is perceived so important that consumers choose not to choose." Those customers who seek for a good deal perceive their shopping behavior as important. Surprisingly, their choice becomes less and less important when the situation gets trickier and more complex.

Much in line with Mitchell's (1999) and Schwartz's (2002) findings, researchers have found that more similar choices available can lead to negative consequences such as a decrease in satisfaction (Chernev, 2003b; Iyengar, 2010; Iyengar, Wells, & Schwartz, 2006); an increase in regret (Sagi & Friedland, 2007; Schwartz, 2003); and a lack of motivation or commitment to choose (Huberman, et al. 2007; Iyengar, 2010; Sharma, et al., 2017). Gorokhov and Kirill (2015) have indeed connected the two main topics, claiming that "larger assortments lead to higher choice difficulty" and that "choice difficulty can be a predictor of dissatisfaction and frustration with the choice-making process." Therefore, once again, it can be stressed how *The Paradox of Choice* is mostly impacted by the number of similar items shown to customers and the feelings they may have before, during, and after the shopping experience.

However, research lacks a crucial aspect of consumer behavior applied to the Paradox. Sharma and Nair (2017) have indeed highlighted that current literature needs to investigate how customer involvement moderates the relationship between the number of options presented and the choice paralysis. Supporting literature was identified so as to claim that consumer involvement can be a moderator in this relationship. For instance, "involvement is characterized as the degree of an object's interest or importance to an individual" (Zaichkowsky J. L., 1994), which means that the consumer interest in making the right choice is influenced by the extent to which they are willing to spend time and energy for the shopping activity. To further support the thesis, Knox's research (2003) suggests that involvement affects the consumer's buying process; the more a customer is involved to make a purchase, the more likely they will encounter cognitive and behavioral responses (Knox, S. et al., 2003). Furthermore, O'Cass (2000) and Chen (2008) see the involvement level as a "construct linked to an individual's interaction with an entity" – i.e., the "intensity of the cognitive structure of a customer to an object" (O'Cass, A., 2000) – and that "the environment and temporary situational changes encountered by a consumer do not change in or affect involvement levels" (Chen, C. F. et al. 2008). In the wake of these findings, involvement will be adopted as a moderator to examine its influence on the number of options and choice activation.

Continuing, once it has been proven that the involvement level can work as a moderating variable in the relationship between the number of items presented and the choice paralysis, a second hypothesis is proposed:

H2. *A low (high) number of similar options available to consumer strengthens the activation of choice more with low (high) level of customer involvement compared to high (low) level of customer involvement.*

Research was conducted to observe the phenomena and develop the above-mentioned hypothesis H2. Findings supporting the hypothesis include that a "low involvement decision-making challenges the cognitive orientation of consumers" (Kassarjian, H., 1981); that high-involvement-type items will cause consumers post-purchase dissonance if they are hesitant about their purchases (Jain, M. et al. 2019); that information is received holistically and choices are made without awareness under low involvement (Kassarjian, H., 1981); and that the importance of a purchase decision "include product involvement and the nature of the task involved in the purchase" (Clarke, K. et al., 1979). To summarize these findings, a high-involvement item is expected to cognitively activate customers, who would, thus, spend much more energy and time during their shopping activities. A larger number of similar high-involvement items is, therefore, expected to trigger much more cognitive effort and result in a higher likelihood of choice proneness. Following the same reasoning, a low-involvement item would not be as much processed as a high-involvement one, as Kassarjian claims (1981). Therefore, it is expected that when customers are not involved during their choices, a high number of similar items would indeed not ease their shopping process and, thus, generate a choice paralysis.

Considering the research questions, hypotheses, and analyzed literature, the following conceptual model (see Figure I) is developed to create the basis for the current research.

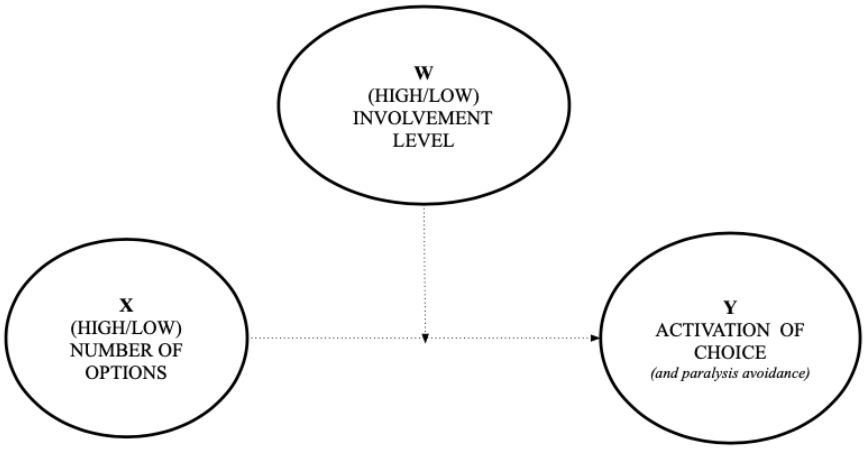


Figure I – The Research Conceptual Model

3. Study

1.1. Research Method

The aim of investigating *The Paradox of Choice* from the customer involvement perspective is to add depth to the present marketing literature and provide business-related suggestions. Data were gathered to observe (1) how respondents behave in different shopping situations – i.e., with a low number vs. a high number of similar options available and with low-involvement items vs. high-involvement items – and (2) how these findings can be used in the future to improve the overall customer choice experience. The collected data concerns the direct relationship between the independent variable (X) and dependent variable (Y), and how this relationship is impacted by the moderating variable (W) – as shown in the conceptual model (Figure I). To achieve such a study, primary data was collected using traditional marketing research methods; more specifically, this study exploits online surveys only, due to the restrictions and regulations imposed by the current outbreak. Observing the direct relationship between X (i.e., number of similar options available to consumers) and Y (i.e., choice paralysis activation) is vital, as several studies have proven how the number of options may or may not activate the choice paralysis in consumers. To make the study up to date, the proposed scenarios are internet-based: respondents were given the possibility to choose among similar items on a fictional website named *Play* since most customers have shifted their purchasing behavior toward e-commerce (Roggeveen and Sethuraman, 2020).

1.2. The Pre-Test: Manipulation of the Independent Variable

The relationship between the number of similar options available (X) and choice paralysis (Y) must be observed by first setting a threshold on the number of similar items which would activate the paralysis in consumers. As Barry Schwartz highlighted, the number of options that activates the paralysis may differ depending on the context (2009). Therefore, a pre-test was conducted to observe whether different numbers of items offered are perceived as too low, indifferent, or too high in order to be certain that a correct manipulation of the independent variable is achieved.

First off, conditions were set before developing the pre-test. During the 2005 Ted Talk, Schwartz proposed a scenario where customers had to choose one pair of jeans among many similar other pairs, with neither price tags nor brand logos proposed. Although this scenario does not provide a real-life instance, it still replicates a normal shopping experience. For the sake of clarity and simplicity, the pre-test displayed different scenarios where respondents had

to choose among similar white t-shirts – using the same conditions posed by Prof. Schwartz during his 2005 Ted Talk. Furthermore, the proposed item belongs to the same product category used by Schwartz, since apparels and electronics are the most preferred items by customers to purchase both offline and online (Pandey, et al., 2020).

METHOD

To observe how the number of options is perceived (X), the pre-test was developed by sending an online-based survey made on Qualtrics and used a between-subject design, with 4 different scenarios which were randomly displayed to respondents: one respondent was shown one and only one of the 4 scenarios. The scenarios displayed either 3, 5, 7, or 10 white t-shirts. The survey was sent to a sample of 54 LUISS University students from the Management and Business Department. Of the 54 students reached, only 42 surveys were considered due to incomplete answers. Demographic insights were collected, asking respondents their gender and age. Results show that 77% of respondents ranged between 21 and 25, while 23% of them between 18 and 20 (age M = 23.88 years, SD = 4.01). Furthermore, 45% are men and 55% are women. Respondents' participation was unpaid and voluntary. Students were chosen since most of their shopping takes place online, especially for apparel and technology – meaning an accessible and frequent shopping behavior (Pandey et al., 2020). The student sample was selected using a simple random probability sampling technique. The survey took Iyengar's research for the pre-validated scale, asking "*Picking among the displayed white t-shirts, do you think the selection should have included more options?*" to respondents (Iyengar, et al., 2000). A 7-point Likert scale was proposed (1 = I felt that I had too few to choose from; 4 = I had the right number of choices to choose from; 7 = No, I had too many to choose from). The survey was completed in less than two minutes on average.

ANALYSIS

The pre-test analysis was conducted using IBM SPSS Statistics V 25. An independent t-test was elaborated to compare whether the group means were differential and, thus, significant for the research purposes. The level of significance was set at 5%. Comparisons were implemented using Bonferroni correction. As previously stated, the pre-test aims to observe the numbers of items which would be perceived as too high and too low from customers. Therefore, out of the 4 scenarios included, only the first and last scenarios were

considered for this analysis – i.e., respectively, the scenarios with 3 and 10 white t-shirts. In the wake of this, only 21 respondents were counted in the analysis.

RESULTS

Results show what was expected: the 3-option scenario was felt differently from the 10-option scenario. Participants' ratings displayed that the 3-option-scenario was felt having too few similar options by 67% of people (M = 2.25, SD = 2.05) – against the right amount (25%) and too many (8%) selections. The 10-option scenario was the one which provided the best outcome. 89% of respondents felt the scenario presented far too many options, while 11% felt they were the right amount and none of them thought there were too few options (M = 6.67, SD = 1.00). Therefore, the pre-test shows that respondents feel 10 options as troublesome, making customers questioning which item is either the best or satisfactory one. The independent t-test indeed registered a differential result in the group means; thus, it cannot be assumed that the two numbers of items are perceived similarly, making the pre-test significant ($t(19) = -5.93$, $p < .05$).

DISCUSSION

For the sake of completeness, included are the questionnaire ratings for the 5-option and 7-option scenarios, which were both felt as having the right quantity offered to consumers. Hence, customers who would have to pick either 5 or 7 white t-shirts would feel at ease in making their choice in either condition. In the 5-option scenario, 27% of respondents felt there were few options, 64% felt the option number was right, and 9% felt they were too many. The 7-option scenario followed a similar pattern – 10% of respondents felt the options were too few, 60% felt they were right, and 30% felt they were too many. This trend displays that there is a slight increase toward the "too many options" answer though the presented options felt right to the majority of respondents.

Results from the above-mentioned 4 scenarios were nothing but expected. Although Oulasvirta claimed the number of similar items is not fixated (2009), Schwartz provided some compelling arguments during his Ted Talk intervention, with his audience fully agreeing with him, claiming that the higher the number of identical jeans presented, the more likely the paralysis of choice from customers (Schwartz, 2005). Besides, results coming from the pre-test are strongly supported by *The Paradox of Choice* literature – much investigated in the section before (Park, J. et al. 2013; Redelmeier, D. A., et al., 1995; Iyengar, S., et al., 2006; Payne, J.

W. et al. 1993; Tanius, B. E. et al., 2009; Schram, A. et al. 2011; Besedes, T. et al., 2012; Mogilner, et al., 2008 Silverman, A., 2019; Álvarez, F. et al., 2014).

Nonetheless, the pre-test does not observe whether it could essentially activate the customer choice or not; it does not predict the impact of the independent variable on the outcome. Rather, it served as a manipulation check for the following analysis of the model – making the whole research more thorough and solid.

1.3. Main Test: The Impact Customer Involvement Has

Concerning the main test, online surveys were developed using the Qualtrics platform to study the effect the number of similar options available (X) has on the choice activation (Y) while moderated by the Involvement customers have (W) (see Figure I). The involvement level is related and measured using the effort levels to make choices, as highlighted in consumer behavior literature (Wayne D. H. et al. 2018). In order to measure the involvement level of customers, the research adopted two different items so as to observe the relationship affected: pairs of jeans and TVs (i.e., respectively, low and high involvement levels).

As previously declared, this research wants to adapt its findings to an online setting. Thus, these items were displayed in the fictional e-commerce store named *Play.* A 2x2 matrix was set; hence, a 4-scenario type of research was conducted so that subjects were randomly exposed to one and only one scenario. The proposed scenarios were manipulated by changing the number of similar items displayed (i.e., either 3 or 10 items – as observed on the pre-test) and the type of product (i.e., either pairs of jeans or TVs). All these items were displayed with no information but the same product descriptions; the pairs of jeans were portrayed as "Blue jeans – 100% cotton", while the TVs as "TV LCD – 48"."

METHOD

A between-subject design was used to study the whole conceptual model and answer hypotheses H1 and H2. Respondents were selected using a simple random probability sampling method, with one and only scenario shown – using the same approach adopted for the pre-test. 246 out of 281 responses were recorded due to incomplete answers. Respondents' demographic variables included gender – *Male* (38%)*, Female* (52%)*, Third gender / Non-binary* (4%)*,* and *Prefer not to say* (6%) – and age (M = 33.69 years, SD = 12.72).

To test the conceptual model moderated by the involvement level (Y), Mittal's Purchase-decision Involvement Scale (1989) was used and adapted to fit the current research

purposes. A 7-point Likert scale was proposed to respondents, being 1 = "strongly disagree," 4 = "neither agree nor disagree," and 7 = "strongly agree." The scale measures the purchase intentions from customers when being influenced by their involvement level. To measure the involvement level construct, the scale uses 8 variables which, for the sake of clarity, were labeled as follows: *purchase intention, product similarity, decision importance, product outcome, life importance, product importance, product meaning, life-relationship* (see Table I).

In selecting among these products:
I would care as to which one I buy (*purchase intention)*
I think that these various products are all very alike *(product similarity)*
It is vital to make a right choice when buying this product *(decision importance)*
I would be extremely concerned about the outcome of my choice *(product outcome)*
The purchase of this product will be very important in my life *(life importance)*
This type of product is very important to me *(product importance)*
This type of product does not matter in my opinion *(product meaning)*
This type of product is an important part of my life *(life-relationship)*

Table I – Revised; Mittal (1989), Purchase-decision Involvement 7-point Scale

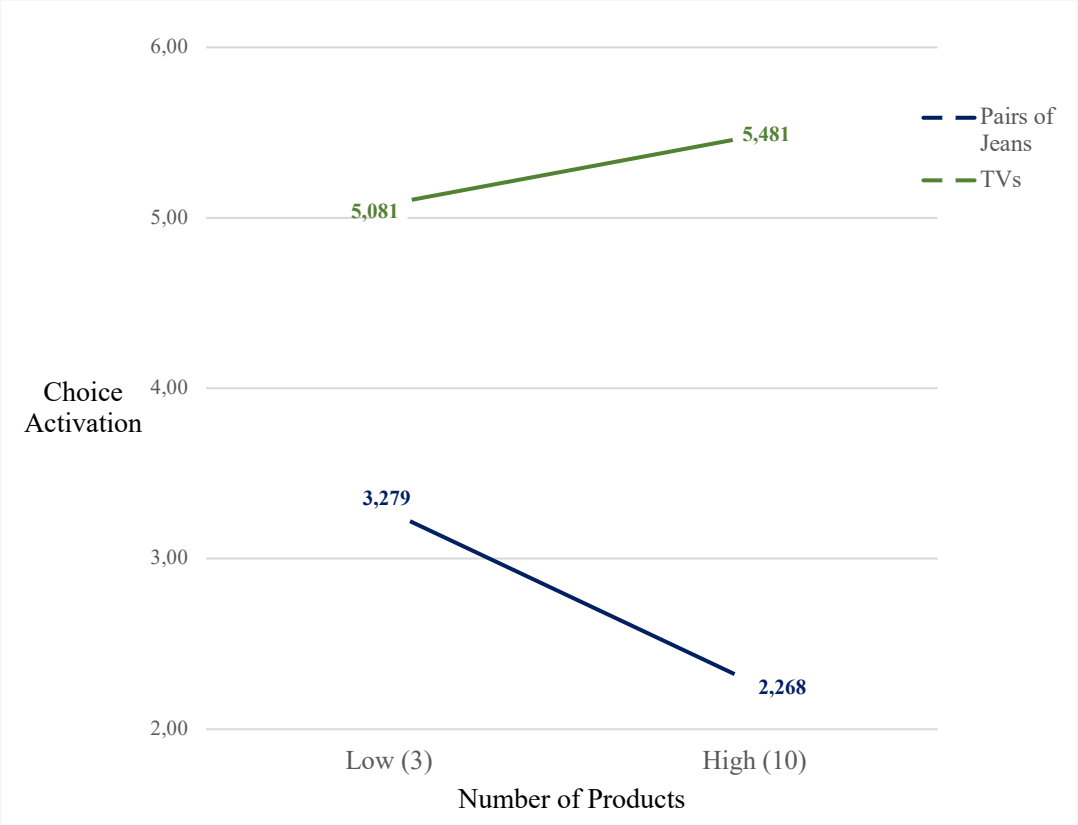
ANALYSIS

The analysis was conducted using IBM SPSS Statistics V 25, using a level of significance alpha = .05. First off, the factor and reliability analyses were conducted so as inspect whether the adopted Mittal's scale can be valid and reliable. The scale's validity was studied using the maximum likelihood extraction method. The factor matrix pointed negative values for the *product similarity* (-.615) and *product meaning* (-.816) variables. Therefore, the reliability analysis was conducted by reducing the number of items from 8 to 6, resulting indeed in an optimal Cronbach's alpha level (.938).

The main test was brought further with a 2-way analysis of variance (ANOVA): the between-subject factors were the *number of products* (i.e., low = 3 items and high = 10 items) and *product type* (i.e., pairs of jeans and TVs). More in-depth, the analysis observed how the number of products (low or high) interacted with the type of product (jeans and TVs) (2x2 design). Once the ANOVA assumptions were confirmed, the analysis was brought forward. The level of significance was set at 5%. Comparisons were corrected using Bonferroni.

RESULTS

The results from the questionnaires analyzed are encouraging as expected, strongly supporting the hypotheses H1 and H2 previously developed. The ANOVA with factors number of similar items (*NumberProducts*; either 3 or 10 items) and type of product (*ProductType*; pairs of jeans and TVs) revealed a significant model. The two variables (X and W) have an effect on choice activation ($F(3, 242) = 139.01$, $p < .05$), showing a differential effect. Furthermore, the model accounts for 63% of the variability in the dependent variable (R Squared = .633), proving a solid and reliable conceptual model for the analysis. The main effect analysis is significant as well, displaying that the number of similar products ($F(1, 242) = 5.73$, $p < .05$) and the type of product ($F(1, 242) = 387.17$, $p < .05$) resulted in a differential effect on choice activation (Y). Survey ratings record that a lower number of similar items (M = 4.18, SD = 1.23) would generally stimulate customers to make a choice and, eventually, buy the product offered; on the contrary, with a higher number of alike options (M = 3.88, SD = 1.97), customers would avoid the choice situation and, hence, paralyze. Nonetheless, the type of product poses an opposite effect, supporting what is formulated in H2 (see Graph I). A low-involvement item (e.g., pair of jeans) does not impact the two choice situations (M = 2.77, SD = 1.15). A high-involvement item, on the contrary, alters the effect in a negatively related fashion (M = 5.28, SD = .97). Thus, a significant interaction between the effect of the number of items and the type of product displayed on choice activation (Y) ($F(1, 242) = 30.63$, $p < .05$) was recorded. The type of product (W) is a moderating effect between the number of products showed (X) and the activation of choice (Y). Indeed, respondents were more inclined in making a choice with 3 pairs of jeans displayed (M = 3.28, SD = .790) rather than 10 pairs of jeans displayed (M = 2.26, SD = 1.25). Contrarily, respondents were even more attentive in making their choice, with 10 TVs displayed (M = 5.48, SD = 1.02) rather than 3 TVs displayed – although still significantly higher than a low-involvement item (M = 5.08, SD = .896).



Graph I – Estimated Marginal Means of Choice Activation (Y)

DISCUSSION

The investigation conducted highlights expected yet noteworthy results. On the one hand, it can be observed, once again, that a small number of options does help customers making choices during their purchasing process, even online – thus, supporting hypothesis H1 and Schwartz's theory (2002). On the other hand, it was found that the type of product does influence the way customers choose. The higher the involvement for a specific product, the more energy and time spent in choosing it (Zaichkowsky J. L., 1994; Knox's, 2003). Indeed, the interaction effect on the direct relationship is shown by the higher means for the high-involvement item (i.e., TVs). However, the higher the number of options available, the more committed customers are in selecting the product. Thus, the type of product seems to have quite an influence and somewhat opposes *The Paradox of Choice* foundations. Findings show that the more involved a customer with one product, the more interested in making a sound, reasoned choice when challenged by difficult shopping situations such as having to pick one product among many. In light of these findings, the actual study contributes to answering the two research questions proposed at the beginning.

Although these findings may seem to pose a counterargument to *The Paradox of Choice* literature, several pieces of literature have discussed and suggested that involvement shapes the way information is perceived, elaborated, and retrieved by individuals (Kassarjian, H., 1981; Clarke, K. et al., 1979). Thus, low-involved customers would take less time in choosing an item which does not require much information processing and somewhat stands out among the alternatives. Nonetheless, when high-involvement offerings are too many and too similar, customers would still be focused on making a sound and reasoned purchase – perhaps due to the value they confer to that specific product. Otherwise, customers could experience post-purchase dissonance if they are hesitant about their purchases (Jain, M. et al. 2019).

4. Managerial and Scientific Relevance

The Paradox of Choice is a remarkably interesting and important phenomenon which contributes to the business and academic fields. On the one hand, figures such as product and inventory managers, retailers and assortment planners, distributors and suppliers, marketers, and product designers should be extremely concerned about the Paradox. All these figures are responsible to ease consumer choice and shopping behavior – considering the important role feelings have in the buying process, it is vital to make their experience as easy and relaxing as possible, as has been emphasized by many pieces of literature (Chernev, 2003b; Iyengar, 2010; Iyengar, Wells, & Schwartz, 2006; Sagi & Friedland, 2007; Schwartz, 2003). For instance, designers should develop intriguing packaging which can stand out the most among the other offers and can lead the consumer to purchase. Similarly, assortment planners should make the available offers in noticeable, well-divided places such that customers will not feel confused and, consequently, paralyze. Most importantly, especially when dealing with low-involvement items, retailers ought to assort only a few similar items together yet in a way they can stand out. Nonetheless, as the results suggest, similar items which require high involvement from customers are processed with much more cognitive workload – thus, are less sensitive to the choice paralysis phenomenon. Customers should care about the Paradox as well since should want to both maximize their utility and make sounder choices. Spending time and energy in making research and collecting the necessary information for their choice would almost certainly prevent the paralysis. Other reasons why these stakeholders should care include the increase of sales and profits; improvement of the supply chain management; the betterment of the assortment planning and inventory management; improvement of customer satisfaction and

loyalty. Furthermore, stakeholders can advise companies on how to increase ROI and make more focused marketing investments.

On the other hand, *The Paradox of Choice* is academically and scientifically relevant, too. Though the papers observed address the issue investigated from several points of view, we can still contribute to filling existing gaps that were either not addressed or merely covered in the past. Numerous are the gaps identified in the papers, including where consumer involvement should be manipulated to better understand the underlying mechanisms of choice overload for high versus low involvement decisions (Sharma et al., 2017) – the one chosen to be addressed. Other remarkable gaps identified include to be using assortment groups with wider differences (Sharma et al., 2017); considering the amount of time spent to choose, measured for each assortment type, to gain more results on choice difficulty (Gorokhov, Kirill et al., 2015); and identifying factors (e.g., consumers' affective states) which influence the likelihood that consumer will experience choice overload (Chernev, A. et al., 2015). In the post-pandemic scenario, consumer behavior will be unquestionably impacted and changed. As Roggeveen and Sethuraman (2020) have observed, the outbreak influenced consumers to avoid physical shopping as much as possible, shifting toward a higher online shopping trend. Similarly, *The Paradox of Choice* will require further research and be applied to new contexts.

5. Conclusions and Future Studies

This research proves that literature regarding Professor Barry Schwartz's Paradox has several aspects which can be studied and are still untouched by academics. *The Paradox of Choice* is a remarkable phenomenon which, as we read, has been studied for more than 20 years. During the '90s, consumers could choose among numerous brands offering values; though, they were overwhelmed by mass advertising coming from multiple media such as TVs, billboards, and newspapers. Therefore, such stimuli have been an interfering entity in the life of the general buyer (Argo, et al., 2005), leading to "the struggle of choosing among identical pairs of jeans" (Schwartz, 2005). Today, consumer behavior has changed due to the development of the internet and e-commerce websites. Therefore, it is undeniably relevant that the Paradox – and marketing in general – has been changing and adapting to the consumer needs and wants. However, the internet has provided alternative yet complementary methods to shopping, providing countless additional offers to consumers. Furthermore, many brands which could not afford mass marketing techniques can now advertise their products or services online. In the wake of these changes, this scenario has somehow worsened the overall shopping

experience and *The Paradox of Choice* itself. Customers have now multiple ways to purchase products or services, which are even more than before. With the pandemic, as well, the situation changed as people would generally purchase more online (Roggeveen and Sethuraman, 2020). With so many options available and so many sites where shopping can happen, customers may struggle even more than in the years when the Paradox was born.

Involvement coming from consumers as their willingness to spend time and energy to process information about an option (Zaichkowsky J. L., 1994; Sharma, et al., 2017) is something extremely relevant as well to today's scenario. Specifically, the new habits produced both by the online environment and the current outbreak have surely impacted the way consumers process information. *The Paradox of Choice* literature lacks this simple yet noteworthy aspect to consider. Consumer involvement plays an essential role when individuals have to choose an option to purchase for their personal use. When purchasing a so-called low-involvement item as the pairs of jeans provided by Schwartz's Ted Talk (2005), customers seem to follow the same pattern described by the Paradox. However, the actual research highlights a noteworthy finding. High-involvement products such as cars, homes, health insurance (Sharma, et al., 2017) seem to produce a different effect from that described in *The Paradox of Choice.* These types of products and services make consumers cognitively attentive and involved – i.e., they want to know as much as possible in what they are spending time and money for. With that, products are processed with much more attention and are, thus, less susceptible to the Paradox phenomenon. When respondents had to choose among similar TVs, the general means were much higher than those appertaining to the pairs of jeans. This can be explained by the fact that many respondents felt TVs to be needing more cognitive processing. The findings related to the type of product – and, hence, the level of customer involvement related to that type of product – confirms the variable as a moderator, as it had an impact on the overall research model.

Besides, the phenomenon additionally changes when the number of options escalates to 10 items. On the one hand, low-involvement items produce the same response described in the Paradox – with a higher likelihood of choice paralysis. On the other hand, TVs stimulated higher cognitive processing from respondents, making them even more willing to choose properly. The inverse relationship caused by the moderating variable (see Graph I) was merely touched by past studies and literature. Although common sense may suggest the more difficult a choice, the less the willingness to choose, high-involvement products stimulate a remarkable response, posing a counterargument to the Paradox.

This preliminary study poses a base to keep on observing *The Paradox of Choice* related to involvement. The actual research solely used online surveys as a traditional method. Findings could be fostered by adding supplementary traditional methods such as interviews and focus groups. Through these, larger rating samples would be registered so as to add thoroughness to the research findings.

Furthermore, supplementary research could broaden *The Paradox of Choice* findings as countless aspects have been merely, if ever, covered. It could be fascinating to compare how the general consumer behavior has been impacted during the transition from a pre-pandemic scenario to the current outbreak, which has been pushing the overall shopping habits online (Roggeveen and Sethuraman, 2020). Data can be compared and observed to discover whether consumers are now either more choice-prone or more choice-averse than before, given that e-commerce websites provide a greater number of items to users. On the contrary, future studies could observe the proposed conceptual model in an offline environment. Specifically, how involvement influences the customer shopping experience during a store visit. Furthermore, the model could be widened as well, proposing additional mediating and moderating variables. For instance, gender and nationality could play an important role in influencing the outcome of the study. The items proposed, indeed, could be more appealing to women rather than men or vice versa, while different shopping habits may arise depending on the country respondents are from. Another approach would be to include a larger assortment group, using wider differences (Sharma et al., 2017). Additionally, the amount of time spent to choose a product, measured for each type of product, could deepen the conceptual study (Gorokhov, Kirill et al., 2015; Chernev, A. et al., 2015).

Future research could approach alternative methods to observe *The Paradox of Choice.* For instance, several reasons push toward a neuroscientific approach as traditional methodologies present several flaws. Such reasons primarily include the different biases which might arise using traditional methods, where the recorded responses from questionnaires or interviews can be somehow manipulated by our conscious brain – thus, results could be less reliable and immediate. Most common cognitive biases include anchoring, framing, recency, and isolation effects. Secondly, if respondents are familiar with the product category presented, the choice is aided and would therefore impact the recorded ratings. Ultimately, brain areas cannot be observed when a choice paralysis arises. Thus, possible neuroscientific methods include webcam facial coding and eye-tracking, so that bottom-up and top-down attention, as well as effort and engagement levels, could be studied. GSR and EEG are two additional and insightful methods which, however, are difficult to adopt due to the current limitations imposed

by the pandemic restrictions. Nonetheless, should it be feasible, these last two methods would provide information about the mental workload of respondents (via frontal-theta waves) and emotional arousal. Indeed, frontal-theta waves studies on the phenomenon would be deeply insightful to broaden Professor Schwartz's Paradox, as past research highlighted the importance of thoughts, feelings, and emotions in the shopping experience (Schwartz, et al., 2002; Schwartz, 2009; Mitchell, V. W. et al. 1999; Chernev, 2003b; Iyengar, 2010; Iyengar, Wells, & Schwartz, 2006; Sagi & Friedland, 2007; Schwartz, 2003).

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A tutti voi che amo, grazie.

Summary

The current thesis deals with *The Paradox of Choice,* a phenomenon named and studied by the Professor of Social Theory and Social Action Barry Schwartz. The thesis uses an experimental scheme so as to explore new possibilities to the literature concerning Schwartz's phenomenon.

The idea was taken considering Professor B. Schwartz's Ted Talk in 2005, where he disserted his theory which claims people to be paralyzing when needing to pick among numerous yet similar options offered. In that specific case, the Professor explained the Paradox making a simple instance. When customers want to purchase something like a pair of jeans, they tend to block their decision process due to the numerous options available. Do I need skinny jeans? Do I need a large pair? Should I purchase something bluer or go with a lighter color? "With so many options, people find it very difficult to choose" (Schwartz, 2005). Indeed, options which are too similar make the purchase behavior difficult, with customers feeling stressed and, ultimately, unwilling to choose. The actual thesis used this simple yet fascinating concept to provide new insights to *The Paradox of Choice.* Nonetheless, the Paradox was actually named before the 2005 Ted Talk. Professor Schwartz started his studies at the beginning of the 2000s, observing the different behaviors resulting from customers who seek to satisfy their needs and wants. Schwartz has found that customers could be categorized into two sets; those who tend to look for the best option available to optimize their utility – called maximizers – and those who want to pick the satisfactory option, which still satisfy their needs and wants but does not necessarily represent the best offer for them – named satisficers. Indeed, Schwartz observed how the shopping behavior differed between the two groups, with maximizers that do not feel as satisfied with their choice as satisficers, making their shopping behavior less likely to happen (Schwartz, et al., 2002). This was the starting point which lead the Professor to develop *The Paradox of Choice.*

Although this thesis was developed by chiefly considering and analyzing Schwartz's *The Paradox of Choice*, additional pieces of literature and research were considered, which discussed the phenomenon even before the Professor named it. For instance, Mitchell found that customers who face complex choice situations will accordingly feel positive or negative thoughts and feelings (Mitchell, V. W. et al. 1999). Hence, the emotional state of consumers has much importance in the observation and explanation of the Paradox. In fact, Professor Schwartz brought forward his studies taking different points of view from the several researchers who have observed and studied the phenomenon. Professor Schwartz focused his early studies on the relationship between maximizers and satisficers; thus, observing how the

two types of customer's goals affect their feelings and behaviors when facing a difficult choice situation (Schwartz, et al., 2002). Schwartz has also focused his studies on *The Paradox of Choice* by observing the number of options available to users which would consequently activate the paralysis of choice (Schwartz, 2009).

The Paradox has a remarkable importance in the academic and business area. This is demonstrated by the vast number of findings which have been publishing during the years. These findings are much applicable to the business area as well. Indeed, the phenomenon could be relevant to several stakeholders. For instance, businesses have to manage the number of items displayed and offered so as to foster sales and profit. Likewise, customers will engage in a favorable approach behavior when the options available are clear, distinctive, and easy to pick. More importantly, the Paradox can be encountered and manipulated when dealing with consumer goods, website displays, persuasive scenarios, or B2B offers. Considering this broad application, this thesis was meant to add thoroughness to the existing vast pieces of information and research conducted on the matter.

Schwartz has been studying how the number of similar options influence the choice behavior in consumer. The Professor and other researcher have, nevertheless, pointed the fact that there is not an exact number which either paralyze or help customers in making a choice. This was the starting point for the thesis. Furthermore, the second step was to identify one factor which could influence the relationship between the number of similar option (i.e., the independent variable, the one which was manipulated) and the choice activation/paralysis (i.e., the outcome variable). One interesting observation was made by researchers Arun Sharma and Shreekumar K. Nair. The two Professors indicated how customer involvement could play such a crucial role in the relationship above mentioned in their research, named "Switching behavior as a function of number of options: How much is too much for consumer choice decisions?" (2017). Specifically, how the relationship between the number of options and the choice paralysis is influenced by the individual's involvement to choose (or buy). The involvement level refers to the capability, effort, and willingness from customers to spend time, resources, and energy on a piece of information, item, or service – such as buying groceries vs. buying a house (Sharma, et al., 2017). Hence, the level of involvement coming from customers was added to the conceptual model as the moderating variable (see Figure I).

The thesis sought and attempted to answer the two research questions that were based on the gap highlighted by Sharma's research (2017); does a low number of options available facilitate the choice activation? How does a high involvement level from consumers, compared to a low one, moderate this relationship? Before this venture, however, numerous academic

papers and research were meticulously analyzed in order to identify a relevant literature gap and make a solid case. Much related to *The Paradox of Choice* is the research conducted by Mitchell and Papavassillou (1999). They mainly pointed how consumer behavior is shaped and impacted by feelings arising from the shopping experience. Confusion, for instance, is driven by three sources: "overchoice of products and stores; similarity of products; ambiguous, misleading or inadequate information conveyed through marketing communications" (Mitchell, V. W. et al. 1999). Positive and negative feelings developed the basis for Schwartz's *The Paradox of Choice*. In fact, one of the majors Professor's studies dealt with the several feelings provoked by difficult shopping experiences, where customers want to pick the options which can fulfill their needs and wants. However, the Professor identified that those people who look for the best offer (i.e., maximizers) spend significant energy and time in searching, comparing the options, elaborating, and choosing. This behavior increases the expectations customers form before buying, ultimately ending not satisfied with the final choice (Schwartz, et al., 2002). Closely related to these papers, Pandey and Desai (2020) published an analysis regarding the choice paralysis in the online context – being much more relevant today, as the COVID-19 pandemic has influenced consumers to buy more online (Roggeveen and Sethuraman, 2020). The research highlights that most respondents currently prefer an online shopping behavior, especially when purchasing apparels and electronics. Nonetheless, customers encounter a paralysis of choice when dealing with similar options. For instance, online shops such as Amazon provide a colossal number of similar items available. When these options are much alike in terms of appearance, price, and utility, most respondents felt overwhelmed by the shopping experience and quit the website (Pandey, et al., 2020).

A second line of research was identified to discuss about and bring support to the manipulation of the independent variable. To observe how many options would generate a choice paralysis, Schwartz, Oulasvirta, and Hukkinen (2009) manipulated the number of options presented to observe when this phenomenon has a high probability to happen. The study pointed that "having to choose from six results yielded both higher subjective satisfaction [...] and greater confidence" (Oulasvirta, et al., 2009). Böckenholt and Goodman (2015) have stressed that "the question of whether and when large assortments impede choice remains open." Nonetheless, numerous studies highlight how a large number of similar items presented to shoppers would possibly prevent the likelihood of making choices. Studies such as Park's, Iyengar's, Redelmeier's, Payne's, Tanius', Schram's, Besedes', and Mogilner's highlight a basic yet crucial princilple; *The Paradox of Choice* states the more choices available, the less likely a shopper is to decide. Therefore, the first hypothesis H1 was formulated: a low number

of similar options available to consumers strengthens the activation of choice more than a high number of options available. After a third line of literature was analyzed, the second hypothesis H2 was introduced to observe the moderating role it plays in the model; a low (high) number of similar options available to consumer strengthen the activation of choice more with low (high) level of customer involvement compared to high (low) level of customer involvement. Findings supporting the hypothesis include that a "low involvement decision-making challenges the cognitive orientation of consumers" (Kassarjian, H., 1981); that high-involvement-type items will cause consumers post-purchase dissonance if they are hesitant about their purchases (Jain, M. et al. 2019); that information is received holistically and choices are made without awareness under low involvement (Kassarjian, H., 1981); and that the importance of a purchase decision "include product involvement and the nature of the task involved in the purchase" (Clarke, K. et al., 1979). To summarize these findings, a high-involvement item is expected to cognitively activate customers, who would, thus, spend much more energy and time during their shopping activities. A larger number of similar high-involvement items is, therefore, expected to trigger much more cognitive effort and result in a higher likelihood of choice proneness. Following the same reasoning, a low-involvement item would not be as much processed as a high-involvement one, as Kassarjian claims (1981). Therefore, it is expected that when customers are not involved during their choices, a high number of similar items would indeed not ease their shopping process and, thus, generate a choice paralysis.

The two hypotheses were tested in an experiment which was set in online environment to make the findings more relevant to today's trends. Indeed, it has been stressed that most today's shopping takes place online in response to the current outbreak of COVID-19 (Roggeveen and Sethuraman, 2020). The aim of investigating *The Paradox of Choice* from the customer involvement perspective is to add depth to the present marketing literature and provide business-related suggestions. The collected data concerns the direct relationship between the independent variable (X) and dependent variable (Y), and how this relationship is impacted by the moderating variable (W) – as shown in the conceptual model (Figure I). To achieve such a study, primary data was collected using traditional marketing research methods; more specifically, this study exploits online surveys only, due to the restrictions and regulations imposed by the pandemic. Observing the direct relationship between X (i.e., number of similar options available to consumers) and Y (i.e., choice paralysis activation) is vital, as proven by the several studies mentioned before.

Before analyzing the main model, a pre-test was developed in order to make sure a correct manipulation of the independent variable was made and, thus, observe whether different numbers of items offered were perceived as either too low or too high. Conditions were set before developing the pre-test. During the 2005 Ted Talk, Schwartz proposed a scenario where customers had to choose one pair of jeans among many similar other pairs, with neither price tags nor brand logos proposed. Although this scenario does not provide a real-life instance, it still replicates a normal shopping experience. For the sake of clarity and simplicity, the pre-test displayed different scenarios where respondents had to choose among similar white t-shirts – using the same conditions posed by Prof. Schwartz during his 2005 Ted Talk. Furthermore, the proposed item belongs to the same product category used by Schwartz, since apparels and electronics are the most preferred items by customers to purchase both offline and online (Pandey, et al., 2020). To observe how the number of options was perceived (X), the pre-test was developed by sending an online-based survey made on Qualtrics and used a between-subject design, with 4 different scenarios which were randomly displayed to respondents: one respondent was shown one and only one of the 4 scenarios. The scenarios displayed either 3, 5, 7, or 10 white t-shirts. The survey was sent to a sample of 54 LUISS University students. Results from the independent t-test were as expected. Participants' ratings displayed that the 3-option-scenario was felt having too few similar options by 67% of people. The 10-option scenario was the one which provided the best outcome. 89% of respondents felt the scenario presented far too many options, while 11% felt they were the right amount and none of them thought there were too few options. Therefore, the pre-test has shown that respondents felt 10 options as troublesome, making customers questioning which item is either the best or satisfactory one. Nonetheless, the pre-test does not predict the impact of the independent variable on the outcome. Rather, it served as a manipulation check for the following analysis of the model.

Concerning the main test, online surveys were developed using the Qualtrics platform to study the effect the number of similar options available (X) has on the choice activation (Y) while moderated by the Involvement customers have (W) (see Figure I). The involvement level is related and measured using the effort levels to make choices, as highlighted in consumer behavior literature (Wayne D. H. et al. 2018). To measure the involvement level of customers, the research adopted two different items to observe the relationship affected: pairs of jeans and TVs (i.e., respectively, low and high involvement levels). These items were displayed in the fictional e-commerce store named *Play*. A 2x2 matrix was set; hence, a 4-scenario type of research was conducted so that subjects were randomly exposed to one and only one scenario.

The proposed scenarios were manipulated by changing the number of similar items displayed (i.e., either 3 or 10 items – as observed on the pre-test) and the type of product (i.e., either pairs of jeans or TVs). All these items were displayed with no information but the same product descriptions; the pairs of jeans were portrayed as "Blue jeans – 100% cotton", while the TVs as "TV LCD – 48"." A between-subject design was used to study the whole conceptual model and answer hypotheses H1 and H2. Respondents were selected using a simple random probability sampling method, with one and only scenario shown – using the same approach adopted for the pre-test. Respondents' demographic variables included gender – Male (38%), Female (52%), Third gender / non-binary (4%), and Prefer not to say (6%) – and age (M = 33.69 years). To test the conceptual model moderated by the involvement level (Y), Mittal's Purchase-decision Involvement Scale (1989; see Table I) was used and adapted to fit the current research purposes. The results from the questionnaires analyzed were encouraging as expected, strongly supporting the hypotheses H1 and H2. The ANOVA with factors number of similar items and type of product revealed a significant model. Survey ratings recorded that a lower number of similar items would stimulate customers to make a choice and, eventually, buy the product offered; on the contrary, with a higher number of alike options, customers would avoid the choice situation and, hence, paralyze. Nonetheless, the type of product poses an opposite effect, supporting what is formulated in H2 (see Graph I). A low- involvement item (e.g., pair of jeans) does not impact the two choice situations. A high-involvement item, on the contrary, alters the effect in a negatively related fashion. Thus, a significant interaction between the effect of the number of items and the type of product displayed on choice activation (Y) was recorded. The type of product (W) is a moderating effect between the number of products showed (X) and the activation of choice (Y). Respondents were more inclined in making a choice with 3 pairs of jeans displayed rather than 10 pairs of jeans displayed. Contrarily, respondents were even more attentive in making their choice, with 10 TVs displayed rather than 3 TVs displayed – although still significantly higher than a low-involvement item.

In light of these relevant findings, considerations should be made on the possible applications of this research to the business and academic areas. Figures such as product and inventory managers, retailers and assortment planners, distributors and suppliers, marketers, and product designers should be extremely concerned about the Paradox. All these are responsible to ease consumer choice and shopping behavior – considering the important role feelings have in the buying process, it is vital to make their experience as easy and relaxing as possible, as has been emphasized by many pieces of literature (Chernev, 2003b; Iyengar, 2010; Iyengar, Wells, & Schwartz, 2006; Sagi & Friedland, 2007; Schwartz, 2003). For instance,

designers should develop intriguing packaging which can stand out the most among the other offers and can lead the consumer to purchase. Similarly, assortment planners should make the available offers in noticeable, well-divided places such that customers will not feel confused and, consequently, paralyze. Most importantly, especially when dealing with low-involvement items, retailers ought to assort only a few similar items together yet in a way they can stand out. Nonetheless, as the results suggest, similar items which require high involvement from customers are processed with much more cognitive workload – thus, are less sensitive to the choice paralysis phenomenon. Customers should care about the Paradox as well since should want to both maximize their utility and make sounder choices. Spending time and energy in making research and collecting the necessary information for their choice would almost certainly prevent the paralysis. Other reasons why these stakeholders should care include the increase of sales and profits; improvement of the supply chain management; the betterment of the assortment planning and inventory management; improvement of customer satisfaction and loyalty. Furthermore, stakeholders can advise companies on how to increase ROI and make more focused marketing investments.

On the other hand, *The Paradox of Choice* is academically and scientifically relevant, too. Though the papers observed address the issue investigated from several points of view, we can still contribute to filling existing gaps that were either not addressed or merely covered in the past. Numerous are the gaps identified in the papers, including where consumer involvement should be manipulated to better understand the underlying mechanisms of choice overload for high versus low involvement decisions (Sharma et al., 2017) – the one chosen to be addressed. Other remarkable gaps identified include to be using assortment groups with wider differences (Sharma et al., 2017); considering the amount of time spent to choose, measured for each assortment type, to gain more results on choice difficulty (Gorokhov, Kirill et al., 2015); and identifying factors (e.g., consumers' affective states) which influence the likelihood that consumer will experience choice overload (Chernev, A. et al., 2015). In the post-pandemic scenario, consumer behavior will be unquestionably impacted and changed. As Roggeveen and Sethuraman (2020) have observed, the outbreak influenced consumers to avoid physical shopping as much as possible, shifting toward a higher online shopping trend. Similarly, *The Paradox of Choice* will require further research and be applied to new contexts.

This research proves that literature regarding Professor Barry Schwartz's Paradox has several aspects which can be studied and are still untouched by academics. *The Paradox of Choice* is a remarkable phenomenon which, as we read, has been studied for more than 20 years. During the '90s, consumers could choose among numerous brands offering values;

though, they were overwhelmed by mass advertising coming from multiple media such as TVs, billboards, and newspapers. Therefore, such stimuli have been an interfering entity in the life of the general buyer (Argo, et al., 2005), leading to "the struggle of choosing among identical pairs of jeans" (Schwartz, 2005). Today, consumer behavior has changed due to the development of the internet and e-commerce websites. Therefore, it is undeniably relevant that the Paradox – and marketing in general – has been changing and adapting to the consumer needs and wants. However, the internet has provided alternative yet complementary methods to shopping, providing countless additional offers to consumers. Furthermore, many brands which could not afford mass marketing techniques can now advertise their products or services online. In the wake of these changes, this scenario has somehow worsened the overall shopping experience and *The Paradox of Choice* itself. Customers have now multiple ways to purchase products or services, which are even more than before. With the pandemic, as well, the situation changed as people would generally purchase more online (Roggeveen and Sethuraman, 2020). With so many options available and so many sites where shopping can happen, customers may struggle even more than in the years when the Paradox was born.

Involvement coming from consumers as their willingness to spend time and energy to process information about an option (Zaichkowsky J. L., 1994; Sharma, et al., 2017) is something extremely relevant as well to today's scenario. Specifically, the new habits produced both by the online environment and the current outbreak have surely impacted the way consumers process information. *The Paradox of Choice* literature lacks this simple yet noteworthy aspect to consider. Consumer involvement plays an essential role when individuals have to choose an option to purchase for their personal use. When purchasing a so-called low-involvement item as the pairs of jeans provided by Schwartz's Ted Talk (2005), customers seem to follow the same pattern described by the Paradox. However, the actual research highlights a noteworthy finding. High-involvement products such as cars, homes, health insurance (Sharma, et al., 2017) seem to produce a different effect from that described in *The Paradox of Choice.* These types of products and services make consumers cognitively attentive and involved – i.e., they want to know as much as possible in what they are spending time and money for. With that, products are processed with much more attention and are, thus, less susceptible to the Paradox phenomenon. When respondents had to choose among similar TVs, the general means were much higher than those appertaining to the pairs of jeans. This can be explained by the fact that many respondents felt TVs to be needing more cognitive processing. The findings related to the type of product – and, hence, the level of customer involvement

related to that type of product – confirms the variable as a moderator, as it had an impact on the overall research model.

Besides, the phenomenon additionally changes when the number of options escalates to 10 items. On the one hand, low-involvement items produce the same response described in the Paradox – with a higher likelihood of choice paralysis. On the other hand, TVs stimulated higher cognitive processing from respondents, making them even more willing to choose properly. The inverse relationship caused by the moderating variable (see Graph I) was merely touched by past studies and literature. Although common sense may suggest the more difficult a choice, the less the willingness to choose, high-involvement products stimulate a remarkable response, posing a counterargument to the Paradox.

This preliminary study poses a base to keep on observing *The Paradox of Choice* related to involvement. The actual research solely used online surveys as a traditional method. Findings could be fostered by adding supplementary traditional methods such as interviews and focus groups. Through these, larger rating samples would be registered so as to add thoroughness to the research findings.

Furthermore, supplementary research could broaden *The Paradox of Choice* findings as countless aspects have been merely, if ever, covered. It could be fascinating to compare how the general consumer behavior has been impacted during the transition from a pre-pandemic scenario to the current outbreak, which has been pushing the overall shopping habits online (Roggeveen and Sethuraman, 2020). Data can be compared and observed to discover whether consumers are now either more choice-prone or more choice-averse than before, given that e-commerce websites provide a greater number of items to users. On the contrary, future studies could observe the proposed conceptual model in an offline environment. Specifically, how involvement influences the customer shopping experience during a store visit. Furthermore, the model could be widened as well, proposing additional mediating and moderating variables. For instance, gender and nationality could play an important role in influencing the outcome of the study. The items proposed, indeed, could be more appealing to women rather than men or vice versa, while different shopping habits may arise depending on the country respondents are from. Another approach would be to include a larger assortment group, using wider differences (Sharma et al., 2017). Additionally, the amount of time spent to choose a product, measured for each type of product, could deepen the conceptual study (Gorokhov, Kirill et al., 2015; Chernev, A. et al., 2015).

Future research could approach alternative methods to observe *The Paradox of Choice.* For instance, several reasons push toward a neuroscientific approach as traditional

methodologies present several flaws. Such reasons primarily include the different biases which might arise using traditional methods, where the recorded responses from questionnaires or interviews can be somehow manipulated by our conscious brain – thus, results could be less reliable and immediate. Most common cognitive biases include anchoring, framing, recency, and isolation effects. Secondly, if respondents are familiar with the product category presented, the choice is aided and would therefore impact the recorded ratings. Ultimately, brain areas cannot be observed when a choice paralysis arises. Thus, possible neuroscientific methods include webcam facial coding and eye-tracking, so that bottom-up and top-down attention, as well as effort and engagement levels, could be studied. GSR and EEG are two additional and insightful methods which, however, are difficult to adopt due to the current limitations imposed by the pandemic restrictions. Nonetheless, should it be feasible, these last two methods would provide information about the mental workload of respondents (via frontal-theta waves) and emotional arousal. Indeed, frontal-theta waves studies on the phenomenon would be deeply insightful to broaden Professor Schwartz's Paradox, as past research highlighted the importance of thoughts, feelings, and emotions in the shopping experience (Schwartz, et al., 2002; Schwartz, 2009; Mitchell, V. W. et al. 1999; Chernev, 2003b; Iyengar, 2010; Iyengar, Wells, & Schwartz, 2006; Sagi & Friedland, 2007; Schwartz, 2003).